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# EFFECT OF STORAGE SYSTEMS ON THE ORGANIZATIONAL PERFORMANCE: STUDY OF HOLDINGS WITHIN KISUMU CITY.

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**ABSTRACT:** This work is about storage systems and organizations performance. Storage systems be researched by knowing the effect of various storage systems available within the organization. The objective of the research was to ensure efficient storage systems meant for improving the performance of organizations'. To collect data the researchers used questionnaires, oral interviews and observation. The research study analyzed the storage systems considered to be efficiency in activating organization to its effectiveness. Other resources for study include; determining the types of storage system, to determine the indicators of organizational profitability, to determine the relationship between the storage systems and organizational profitability. From the problems identified and conclusions drawn, appropriate recommendations were made and an approach considered looking into the circumstances leading to inefficiency in the organization's performance and storage systems hence effective solutions be made promptly. The research was carried out as a comparative study two supermarkets in Kisumu City. The researchers analyzed data, listing data sources, sampling procedures, sample frame, sample size, data collection instruments, questionnaire techniques, the person interviewed and how the data was analyzed. The findings contained different storage systems implemented by the supermarket holdings visited, that is; open storage system, closed storage system, random access storage system and automated storage system. The research was therefore concluded by establishing the data; establishing and identifying different storage systems course that the firms should offer and adopt for their organizations in different operations to enable them meet set goals and objectives. Recommendations that firms should adopt the storage systems program to enable their organizations to increase output through efficiency practices.

**KEYWORDS:** Storage System types, Central Storage System, Closed Storage System, Open Storage System and Automated Storage System.



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## INTRODUCTION

According to Marc Goetscharcky, (2012), systems for storage can be engineered with other function so as to store materials that is to hold materials until they are needed. The materials come in different varieties from consumer products such as TVs in local distribution centers, in hospital emergencies drug doses for battling a biological attack on a city etc. Storage systems are an essential component of every supply organization. The main functions of storage systems are to put materials into storage, then holding the materials in fixed position inside the storage system and finally remove materials from storage and are often called order picking.

According to Saleemi, (2001), a good storage system is one wherein the functions of stores department have been carefully planned and coordinated to achieve the objectives of storekeeping successfully. A storage system should aim at smooth functioning of the whole enterprise, perfect coordination between different functionaries in the department as well as between other department in the organization, avoidance of all types of delays, wastages and spoilage, reduction of operational cost at all levels including in time and effort in the accomplishment of a job and it should also aim in separating purchasing functions from the materials organization. It should be looked after by an independent executive separately responsible for his assignment and answerable to the chief executive.

According to Marc Goetscharcky, (2012), the performance of storage systems depends on four internal characteristics and their interrelations; storage capacity or equivalent storage density, ease of access to storage locations, complexity of the internal structure and level of information technology. According to Corina Gavrea, (2011), the years eighties and nineties were marked by the fact that the identification of organizations objectives was more complex than initially considered, managers begun to understand that an organization is successful if it accomplished its goals (effectiveness) using a minimum of resources (efficiency). In this context profit became one of the many indicators of performance.

In Kisumu city the researchers carried out their research at Nakumatt and Naivas supermarket holdings that have been in operation for a period of 2 years, have been using both closed and open methods of storage systems which mostly lead to increase in efficiency. The researchers found the need to highlight the storage systems practices that relate specifically with minimization of the resources usage.



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Storage systems of the holdings have not been taken care of by many past researchers albeit complains of increasing resources utilization by the same resources. Most holdings storage systems in the recent days have taken a lot of care and considerations into need of automated storage systems and abandon others non-automated systems. Other organizations do not perform their activities efficiently due to poor storage. The efficiency of an organization is the main concern of every management of the organization. This has really affected the efficiency of most of the organizations like the Naivas supermarket, and that is why the researchers undertook the concern of investigating how storage system affects organizational efficiency.

**Storage System types**

According to Saleemi,,(2006), storage system is one of the physical distribution functions of marketing and warehouse in the tool with which this function is performed. The existence of storage system enables the organization to hold stocks at points convenient for different regional distribution thus storage systems become part and parcel of the organizational efficiency. Preserving of the goods for future is a pervasive human desire even in the dim and distant past when man's food supply consisted of grains, roots and wild fruits; there is ample evidence to believe that they were preserved from the time of its maximum availability to time of great need. Thus storage system shall be governed by random access storage system.

***Central Storage System***

According to Jessop, (2009), a central storage system is generally recognized as one which acts as a wholesale supplier to the unit, departmental or sub-stores operating on critical basis issuing goods directly to users. This is not to say that central stores never make issues to users because, in appropriate circumstances, they may be required to perform this function in addition to replenishing their subsidiary storehouses. There are two main types of central stores. That's where there is a large factory or process plant more or less within one perimeter fence, a central store serves departments in various places within the factory, using internal transport.

Central storage of this type, normally stocks tools, fixtures and general stores, but the extent to which they hold raw materials or pick parts depends on how many of those items have a common use in several sections of the factory.As a general rule, work in progress is not held centrally where the organization consists of a number of establishment engaged on similar work and within daily travelling distance of a central point, a central storage may be set up at that point.Where the organization is widespread throughout the country or is international a central storage may be used to hold the bulk


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stocks or common spares for machines manufactured by the industry for assembly or service in different locations.

***Closed Storage System***

According to Fearson, (1989), closed storage system is one in which all materials are physically stored in a closed or controlled area. The general practice of this storage system is to maintain physical control by locking the storage area, materials enters and leaves the area only with one accompaniment of authorizing document. This system is designed to offer maximum physical, maximum security and a tight accounting control of inventory material. This storage system enables an organization to ensure clear and complete identification of all materials on the engineering bill of materials. For the materials incurred, a single company – wide inventory numbering system is a must when this system is used. Under this storage system, the bill of materials goes first to the inventory record section, where the total requirement for each material needed on a job is deducted from the current inventory balance. The required amount is set aside and will not be allocated for use on another job before the content requirement materializes in the shop. The apportioning system can be used to assure material availability for specific jobs regardless of the method used to authorize stores withdrawals. Thus the closed system is widely used among firms with job shop type operation to ensure that organizations efficiency is maintained.

***Open Storage System***

According to Aguillar, (1992), open storage system represents the second major type of stores system. Its widest use is in highly represents the second major type of stores system. Its widest use is in highly repetitive, production in masses, types of operations that exhibit a continuous and predictable and high volume usage to make profit. The open storage system is most applicable in situations where a repetitive production operation produces standardized products and in just in time type of operation. Materials handled in an open system should not be easily damaged. If production requires delicate or pilferage items, they probably should be controlled in a closed store room. Generally speaking an open system is most likely to function successfully if it is not applied to a large number of items thus organizational applying such a system to several numbered items typically experience better organizational profitability that most applying it to several thousand items.

***Automated Storage System***

According to Roodbergen K.J, (2008), automated storage system is a technique where no space is needed to allocate particular items and facility in the form of bar coded which


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allows accurate and rapid items identification. Operation managers know the quality and location of every unit. Its information can be used with human operators to load unit anywhere in the storehouse. Accurate inventory required quantities and exact locations mean the potential utilization of the whole facility because space does not need to be stocked for certain storekeeping units as explained by Hessen *et.al* (2001). For a growing number of firms, the automated storage system is now a reality. Nowadays a number of stores stock, work are replaced with automated storage system that are mounted either on captive floor rails that reduces injuries hence increase in safety. Even though a satisfactory identification system is developed, safety of materials in the store room may still be a problem. The step in minimizing this problem is to record the storage location in the inventory catalog.

When a storeroom is properly laid out even storage location has a numerical items designation using a conventional system (now random access) each inventory item should be assigned specific storage location. De Boer, (2002) says these locations can be noted in the catalog or in storage location index so that anyone can locate any material with ease hence increases safety.

***Organizational efficiency***

According to Corina Govrea et al, (2011) continuous performance is the objective of any organization because only through better performance organizations may be able to grow and progress. According to Baker P., (2010), the stores and receiving jobs are closely related. Therefore, the storage activities usually are placed under the supervision of the store's manager. As most carriage means in a majority of holdings, industries and firms, stores either report to the purchasing and supply department or is grouped with purchasing in a materials management. The stores activity is materials oriented activity and therefore should report to a department whose primary interest and expertise also, that is in supply operations. Supervisory personnel that will recognize and be equipped to deal with materials and supply problems encountered in receiving and stores. Receiving is the last step in materials on the accounting of materials. Materials are usually put into production without the use of a document. No perpetual inventory records are kept in an open system

**Output level**

According to Vanik, M (2004), the operation efficiency of an organization can be increased more by linking that production planning computer system with the automated storage control computer. The required production materials are automatically located and mechanically placed from storage by a computer command initiated by a computer



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released production schedule in the production planning departments.

Because of high outputs these storage systems in the organization utilize warehouse space well, which is a welcome news to any financial manager concerned about the cost of buildings and real estate, hence reducing the warehouse labor requirements and high operation costs which can lead to low outputs. This type of organization required a large initial investments acquisition process and stores is the last step in the material supply process from the aspect of the materials control the activities should be included with the rest of the materials activities from an operating point of view; such as material organization facilities coordination between the related material activities in making the decision.

Management primary concern should be fulfillment of three basic objectives; to optimize the effectiveness of the total procurement and supply process by utilizing and assessing individual's ability to ensure that materials are in good conditions and are available where and when needed to meet operating requirements as scheduled, to accomplish these objectives and resulted activities at an optimal cost.

***Safety levels***

According to Mullar M., (2002), safety can be conducted in an orderly and relaxed manner which is conducive to an accurate user; it helps in easy detection and elimination of basic causes of errors that might otherwise continue throughout the year. Safety facilitates efficient utilization of stores personnel. Many plants attempts to centralize as much materials as is practical to enable them to handle bulky materials that are costly to handle thus reducing high risk of reaching easily whenever the need arises. Any staff member is allowed to pick the materials and use it for repairs and use it for repair within the organization. It ensures availability of spare parts in a production unit.

In a central store system, the branches make requisition which is directed to the central stores manager who later issues the products. This type of storing is commonly found in county government and public procuring entities. It's slow, time wasting due to the long process followed. Its advantage if that it fulfills that needs of the materials as per the requisition letter.

***Conclusion of review***

It has been discovered that a closed storage system is best suited with high valued goods which prevent the regular loss of materials in many organizations. Therefore organizations dealing in high valued products should embrace this system of storage



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according to Vanik, M. (2004). The store manager should issue the properties when requested to avoid duplication. In open storage system, the materials are kept in places which can be demanded for the same materials. In plants using the open storage system, no storeroom as such exists; each material is stored as close to its point of use as is physically possible.

According to Vanik M,(2004), materials are stored in bins, on shelves, racks on pickets and to the boxes. However the storage configuration of each work station is arranged to fit the available space storage facilities are completely free and a worker has access to any storage facility. The open system is designed to expedite production activities.It places little emphasis on the physical security of materials in ideal applications, there is considerable justification for this approach because the material is used relatively quickly and it is not subject to a high rate or deterioration, obsolescence or theft. An automobile assembly plant offers the clearest example of an open storage system. The daily production is high and damaged parts and sub- assemblies turn into the plant in a steady stream. For higher cost bulky items, deliveries from supplies may be scheduled several times a day. As a result average inventory is extremely low relative to plant output; such systems plant usually exact demand for close cooperation on performance in production control, purchasing and the supplier and carrier organizations. Gupta M.,(2003), realized that open system also places emphasis or conventional wheels. The tall mastered vehicles have a lifting platform with a shuttle that stores and retrieved palletized containerized loads on both sides of the aisle. These vehicles normally are controlled remotely by a computer although they can be controlled manually. Hence, this type of operation is simply an extension of the random access storage concept to include computer direction on mechanized vehicles used in actual storage and retrieval of materials.

Corina *et al*, (2011) says an automated storage system is able increase operating efficiency even more by linking the production planning computer system with the control computer system. In the case required production materials are automatically issued and mechanically ‘pricked’ from storage by computer command initiated by computer released production structure in the production planning department. This system utilized storehouse space exceptionally well, which is good news to any financial manager concerned about the cost of buildings and real estate and thus drastically reduce warehouse labor requirements and operating costs.

**Minimum Obsolescence**

According to Dolfer (1994), it is common practice, particularly when dealing with materials that tends to become obsolete to issue old materials that tends to become



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obsolete to issue old materials ahead of new materials. Numerous schemes can be devised for accomplishing this in stacked materials, as material is withdrawn, it is taken from the left end of the stacks, moving progressively to rule end.

**Stores Organization**

This involves dividing the work of an organization according to importance and then grouping them into one. A good stores organization according to importance is one wherein the functions of stores department have been carefully planned and coordinated to achieve the objectives of store keeping successfully.

Therefore a stores organization should aim at the following functions in order to achieve the organizations efficiency: Smooth functioning of the whole enterprise, perfect coordination different functional departments as well as between other departments in the organization avoidance of all types of delay, wastage and spoilage and reduction of operational costs at all levels including reduction in time and effort in the accomplishment of a job. Purchasing function should be invariably being separated from materials organization and should be looked after by an independent executive separately responsible for his assignment and answerable directly to the chief executive. The whole materials holdings organization should be looked after by an independent executive separately responsible for his assignment and answerable directly to the chief executive. Division of the holdings materials organization would be too broad but clearly distinguishable categories; Top functionaries designated as top materials management and operating staff

In order for the storage systems to functions efficiently, the storekeeper must be in place and in the manner prescribed; to issue the stores and proper authorization and to proper persons following the correct procedure and of course, within least possible time, to maintain complete, up – to – date and correct records, to preserve the materials for maintaining their original value and quality, to replenish the stock and to advise the management on day to day affairs of the stores department, particularly regarding obsolete, unserviceable and slow moving items according to .

According to Jessop, (2009), the above duties, the store keeper should also ensure that the responsibilities are achieved. Therefore the storekeeper should be responsible for the materials which he receives. It ensures that all the materials are received on a proper authorization and checked with reference to the specification given in the order form. Materials should be kept in the right place and in the right prescribed manner.Stores verification is essential for the purpose of valuation. Issues of stores are the most



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important thing which involves comparatively greater responsibility. This is ensured by comparing the code number and correct nomenclature of the part that only the right type of part is issued.

**Preservation of Materials in Stores**

This is the protection of materials from all kinds of damage so as to maintain the original value of the materials which have been carried into the store. It ensures that all the stores are protected from fire, rust, corrosion, dust, theft, bad weather and cold with the aim of maintaining their original value and quality. The following are the aims of preservation; to maintain materials safe from all kinds of damage and spoilage, to see that the materials which have been carried into the stores are made available whenever they are required in a perfect and serviceable condition.

Preservation simulates in itself the function of mankind available the materials not only in serviceable condition but according to the requirement of the department which has requisitioned them. It helps store keeping in its smooth and efficient functioning and therefore is meant to promote efficiency. It helps to lower the investment rate and volume. This is to ensure that materials in the storeroom are preserved keeping in view the following factors; components for manufacturing of articles, the degree of temperature required for its preservation and the duration for which as item should be preserved. Therefore arrangements should be made according to the individual requirements of the articles.

**Conceptual framework**

This chapter is to find out whether there is a relationship between storage system and organizational efficiency.



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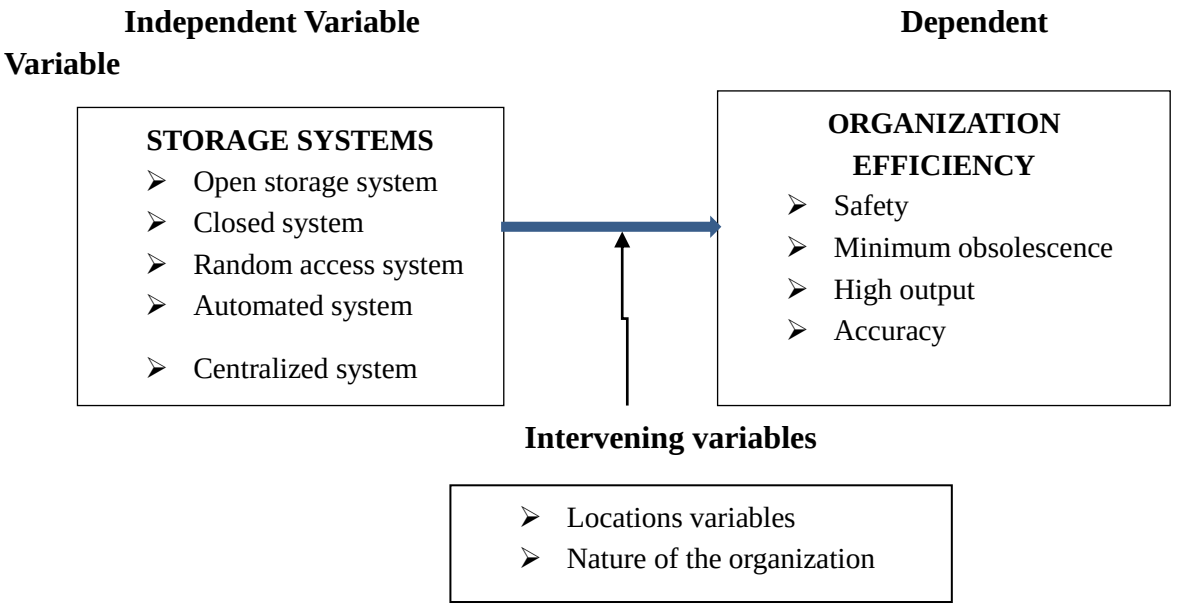


Figure 1: Proposed conceptual model

The model that links the relationship between the storage systems and the organization efficiency is as depicted in the above figure 1. It explains how proper storage system can lead to organizational efficiency. It shows that efficiency is achieved, high output, obsolescence reduced, and accuracy achieved.

## METHODOLOGY

The researchers chose to carry out a comparative study to evaluate effects of various storage systems in the Naivas and Nakumatt holding. They wanted to highlight the various types of storage systems that are available, the importance of each storage systems and how they are likely to affect the organization's performance. The comparative research was specifically meant to give the conclusive in nature as opposed to exploratory research, this based on the fact that the two holdings have been in operations at different length periods. They gathered quantifiable information that was used for statistical inference on the targeted population through data analysis.

### Target Population

The research was conducted in the following firms in Kisumu city; Naivas and Nakummatt supermarket holdings. The study targeted the employees of these firms at all levels of the organization that uses the services of storage systems.



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Table 3.1: Target Population

| Supermarket holdings | POPULATION | SAMPLE SIZE (30%) |
|---|---|---|
| Naivas | 119 | 35 |
| Nakumatt | 183 | 50 |
| Total | 312 | 85 |

**Source: (Pilot Survey from field, 2015)**

In the above named two organizations, Naivas Supermarket Limited had a population of one hundred and nineteen and only a sample of thirty percent was taken as supported by Mugenda and Mugenda, (2003) for social sciences. While the Nakummatt a population one hundred and eighty three and only a sample of fifty was taken which equals thirty percent of the total population.

**Sampling Techniques**

Selection of the sample was done through stratification of the respondents. Kothari, (2004), recommends stratified sampling because it is accurate, easily accessible, divisible into relevant strata and enhance better comparison, hence representation across strata. A sample only provides an estimate of a population characteristics and accuracy of the system. The method also had demerits. The respondent at times becomes suspicious about the questions and may not be ready to give out some information.

**Data Collection Instruments**

Data was collected from both primary and secondary sources by the researchers. For the success of the research carried out, the following data collection methods were used;

**Questionnaires**

Questions were prepared on a piece of paper and spaces or answering choices are provided. It enables the researchers to get the option of the future reference expressed in the research. This method had the following advantages; there was always time for the respondent to get a reasonable reply, the data collected could be kept for future reference, no biasness in the data collection and the method was simple.

**Book Reference Analysis**

This was where the information as per the subject was obtained from purchasing and inventory management books. The information obtained from these books enable the researchers to obtain and compile the research report.



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**Observation**

The researchers visited the two holdings as specified during their research. They collected data by observing the storage methods and how efficient the methods were for the holdings operations. This method had the following advantages; the expressions and situations could be seen easily to draw the conclusions. The method was simple and less time consuming.

**Data Analysis and presentations**

The data was collected from primary data and secondary sources were directly from research work conducted in the two holdings. The data collected was analyzed using descriptive statistics which dealt on ideas and opinions in summary forms. Ideas were given from different respondents in line with their understanding of the issues. Hence they were able to develop ideas which enable the researchers to achieve his objective. Opinions were also given by different respondents according to their questions, and then the data was analyzed. Discussions, conclusions and recommendations were made upon final results obtained from the analyzed data. The data was lastly summarized and analyzed by the use of percentages. Results from data analyzed were presented using tables and pie charts to provide a clear understanding.

**PRESENTATION OF FINDINGS**

The researchers presented excess questionnaire to the two organizations to reduce the effect of questionnaires not returned on the sample size. They presented 40 questionnaires to Naivas instead of 35 and 55 questionnaires to Nakumatt holdings instead of fifty.

**Table 4. 1: Presentation of Findings According to Research Questions**

| **Holdings visited** | **No.of questionnaires** | **Questionnaires returned** | **Questionnaires not returned** | **Percentage of returned.** |
|---|---|---|---|---|
| Naivas Supermarket | 40 | 34 | 6 | 85% |
| Nakumatt holdings | 55 | 50 | 5 | 90.91% |
| **Totals** | **95** | 84 | **11** | |

**Source: (Field data, 2016)**

The table shows that by producing excess questionnaires the researchers were able to achieve their targeted objectives of collecting information from the anticipated 30% of the population.



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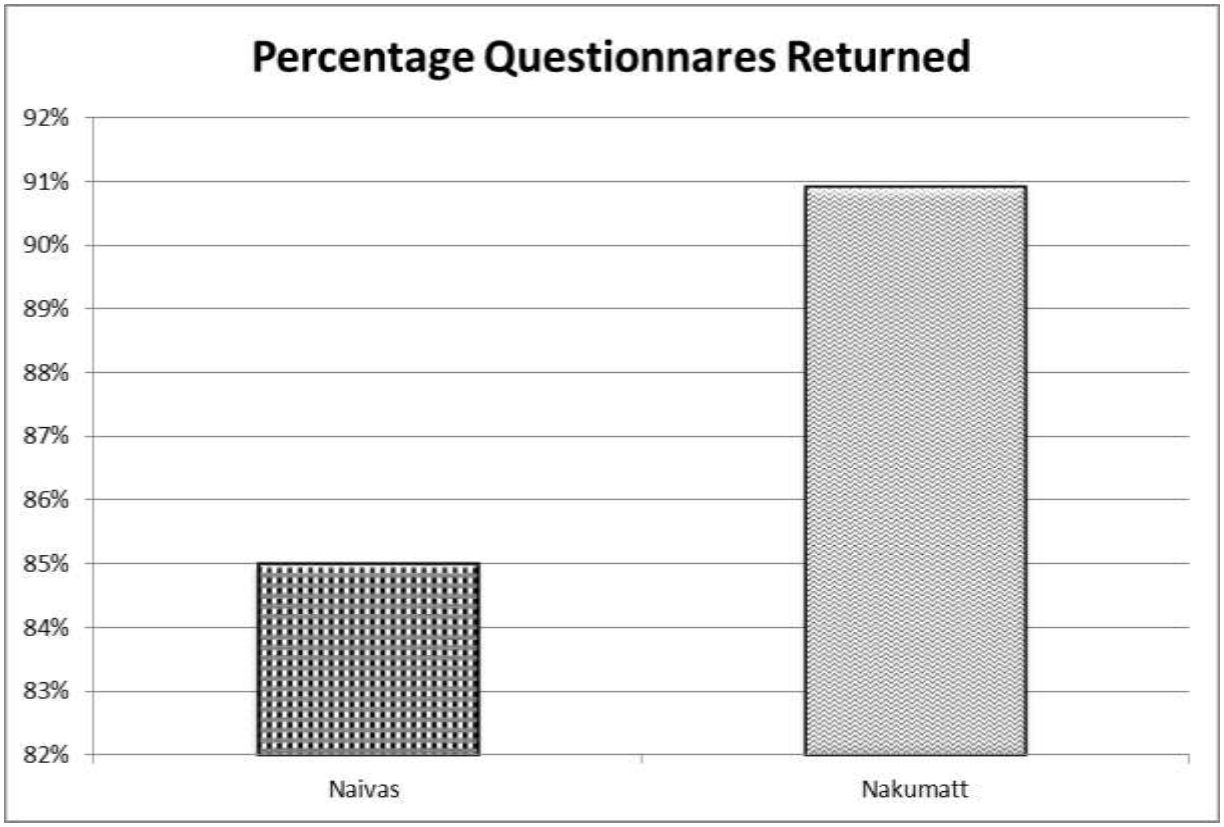


Figure 4.1: Percentage of questionnaires returned
**Source: (Field data, 2016)**

The graph shows that Naivas supermarket returned only 85% of the questionnaires while Nakummatt 90.19% of the questionnaires returned.

**Gender**
At Naivas Supermarket 12 respondents which are 35% of the participants were female while 22 respondents which represented 65% of the participants were male.

**Table.4.2.Gender – Naivas Supermarket**

| Gender | No of respondents | Percentage respondents |
|---|---|---|
| Male | 12 | 35% |
| Female | 22 | 65% |

**Source; Field data, (2016)**


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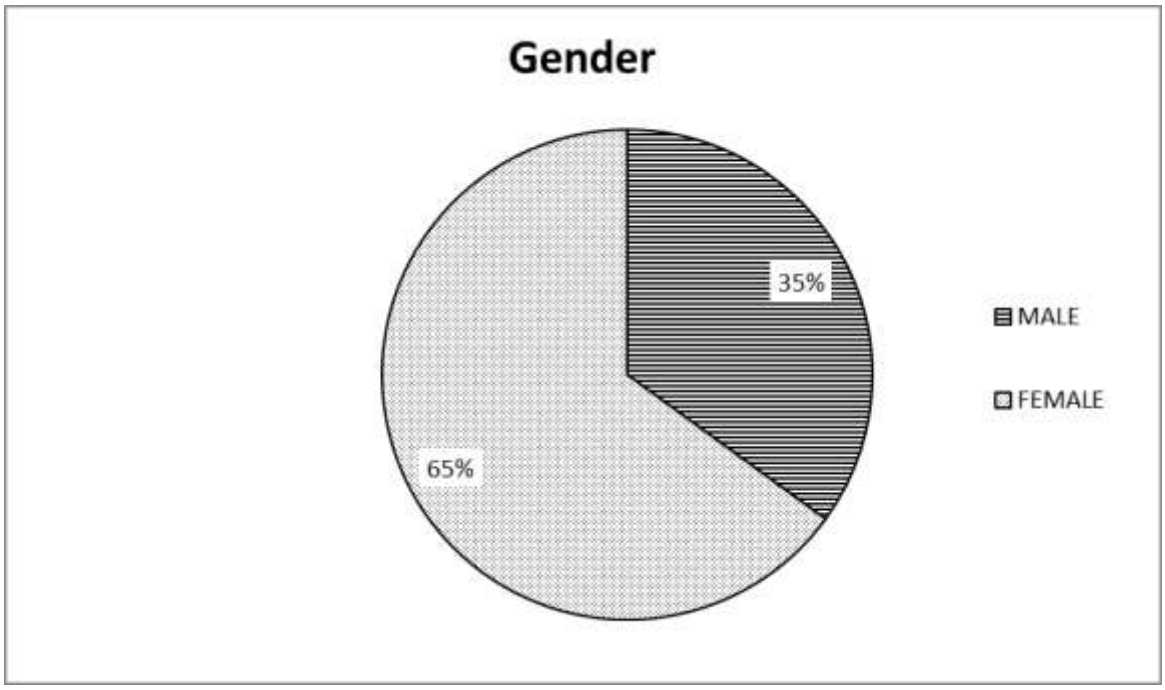


Fig **4.2: Gender – Naivas Supermarket holdings.**
**Source; (Field data, 2016)**

At Nakummatt supermarket 39% of the respondents which equals 20 participants were female while 61% of the participants which is 30 were male.

**Table 4.3: Gender – Nakummatt holdings**

| Gender | No of respondents | Percentage respondents |
|---|---|---|
| Male | 20 | 39% |
| Female | 30 | 61% |

**Source; Field data, (2016)**


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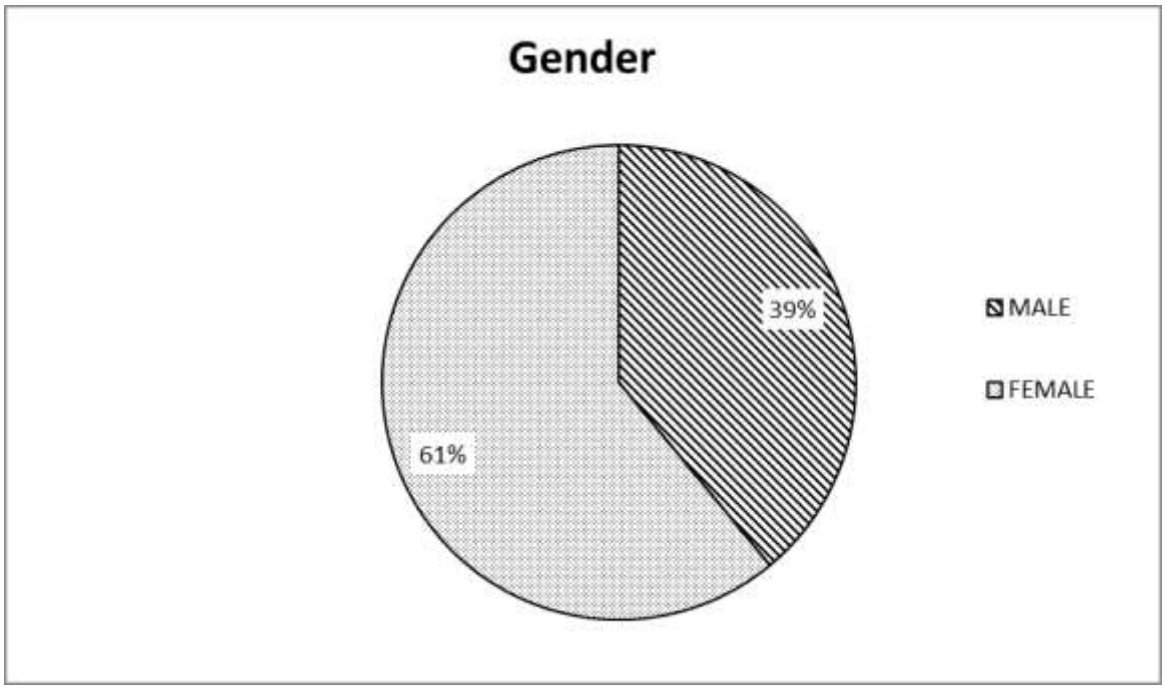


Table 4.3: Gender – Nakumatt supermarket
Source; **Field data,** (2016)

**Level of Education**

**Table 4.4: Level of Education - Naivas supermarket holdings**

| Level of education | Number of employees | Percentage |
|---|---|---|
| O – level | 12 | 36% |
| A – level | 1 | 3% |
| Certificate | 9 | 26% |
| Diploma | 8 | 24% |
| Degree | 4 | 11% |
| **Totals** | **34** | **100%** |

**Source; Field data, (2016)**

Findings showed that 36% of the respondents at Naivas Supermarket were form four leavers (O –levels), 26% percent were certificate holders, 24% percent were diploma holders, 11% were degree holders, while 3% were A – level certificate holders


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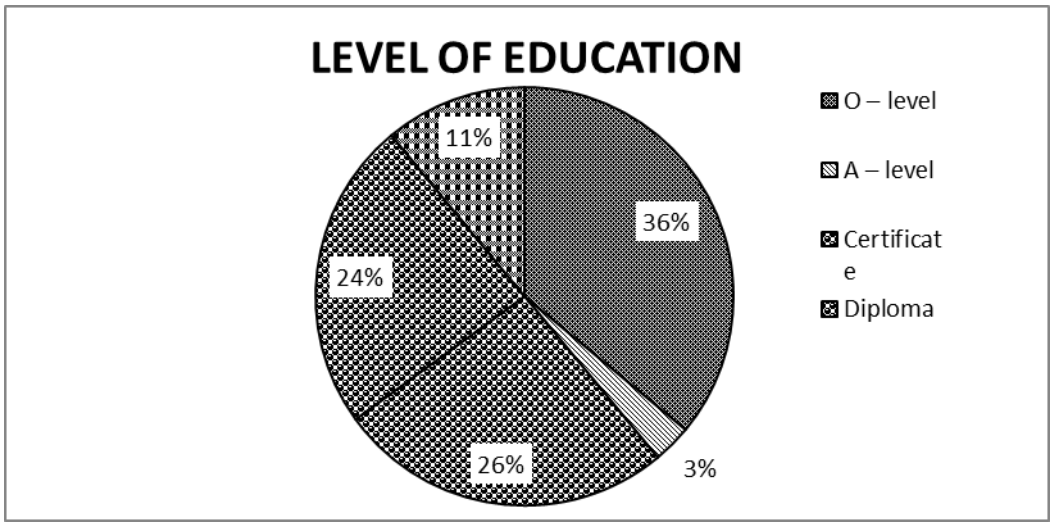


Figure 4.4: Level of Education – Naivas
Source; Field data, (2016)

**Level of Education at Nakumatt Supermarket Holdings:**

**Table 4.5: Level of Education – Nakumatt supermarket**

| Level of education | Number of employees | Percentage |
|---|---|---|
| O – level | 5 | 10% |
| A – level | 4 | 8% |
| Certificate | 14 | 28% |
| Diploma | 18 | 36% |
| Degree | 9 | 18% |
| **Totals** | **50** | **100%** |

**Source: (Field data, 2016)**

Findings showed that 10% of the respondents at Nakummatt holdings were for O – levels), 28% percent were certificate holders, 36% percent were diploma holders, 18% were degree holders, while 8% were A – level certificate holders.


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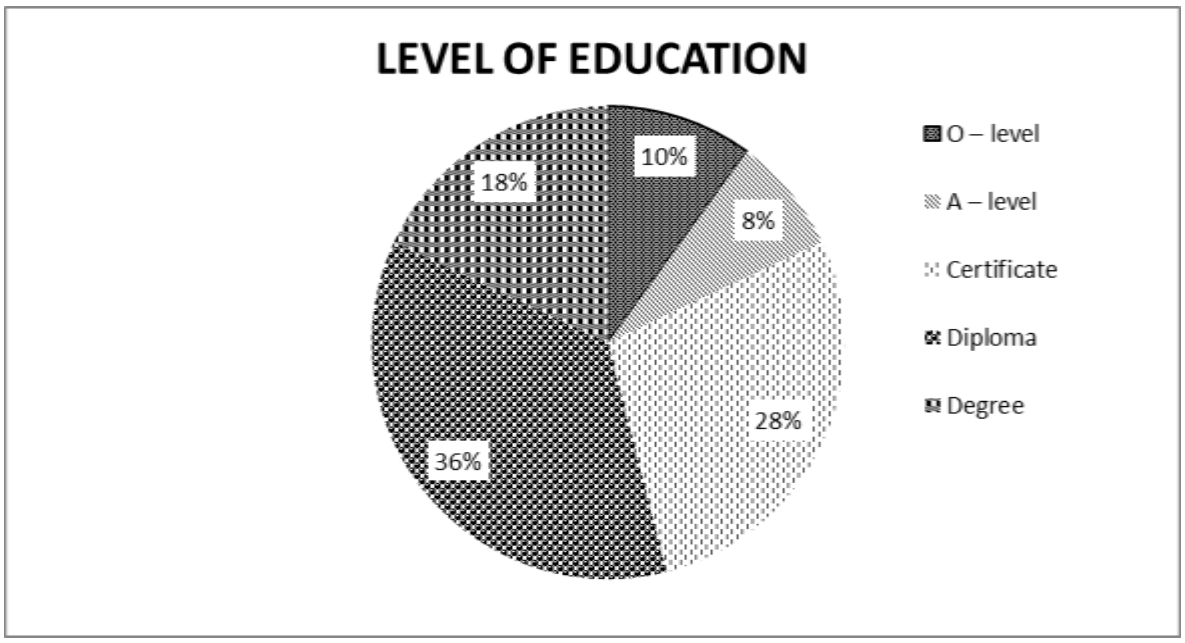


Figure 4.5: Level of Education – Nakummatt holdings
**Source: Field data, (2016)**

**Storage Systems and Frequency of Use**

Findings showed that at Naivas Supermarket holding the most frequently used storage system was the open storage system with an average of 60% usage, followed by closed storage system with an average of 30% and random access storage with 10%. They were not using automated storage system.

**Table 4.6: Storage systems used and frequencies – Naivas Supermarket**

| STORAGE SYSTEMS | PERCENTAGE USE |
|---|---|
| Open storage | 60% |
| Closed storage system | 30% |
| Random – access storage | 10% |
| Automated storage | 0% |
| **Total** | **100%** |

**Source: Field data, (2016)**



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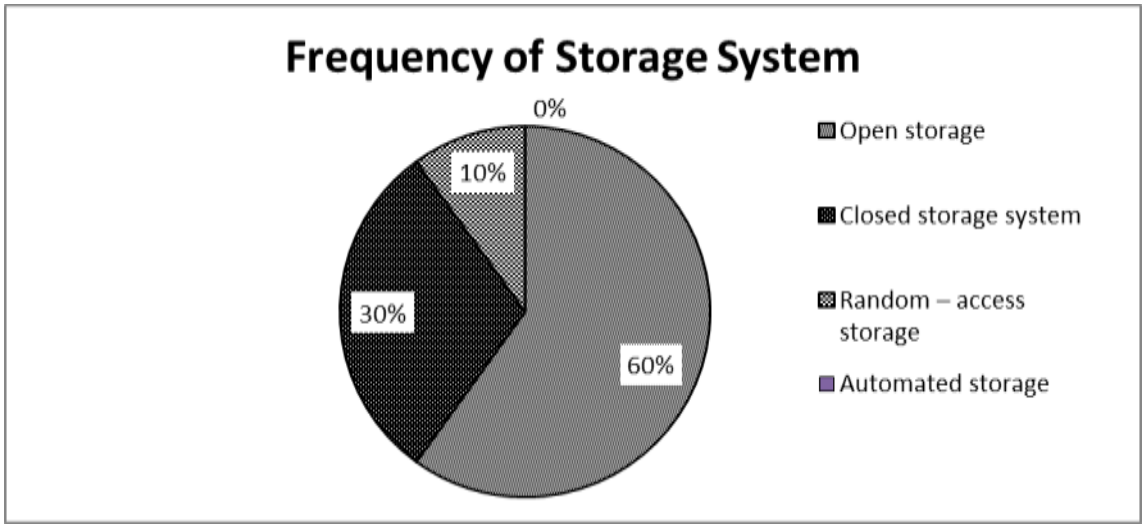


Figure 4.6: Storage systems used and frequencies – Naivas Supermarket
**Source: Field data, (2016)**

Findings showed that at Nakummatt supermarket holdings, closed storage system was mostly used with an average of 80% usage, followed by 15% open storage system with15% and random access storage with 5% while automated storage system was not being used at all.

**Table 4.7.: Frequency of storage system use – Nakummatt supermarket**

| **STORAGE SYSTEMS** | **PERCENTAGE USE** |
|---|---|
| Open storage | 80% |
| Closed storage system | 15% |
| Random – access storage | 5% |
| Automated storage | 0% |
| **Total** | **100%** |

**Source: Self Conceptualized, (2016)**


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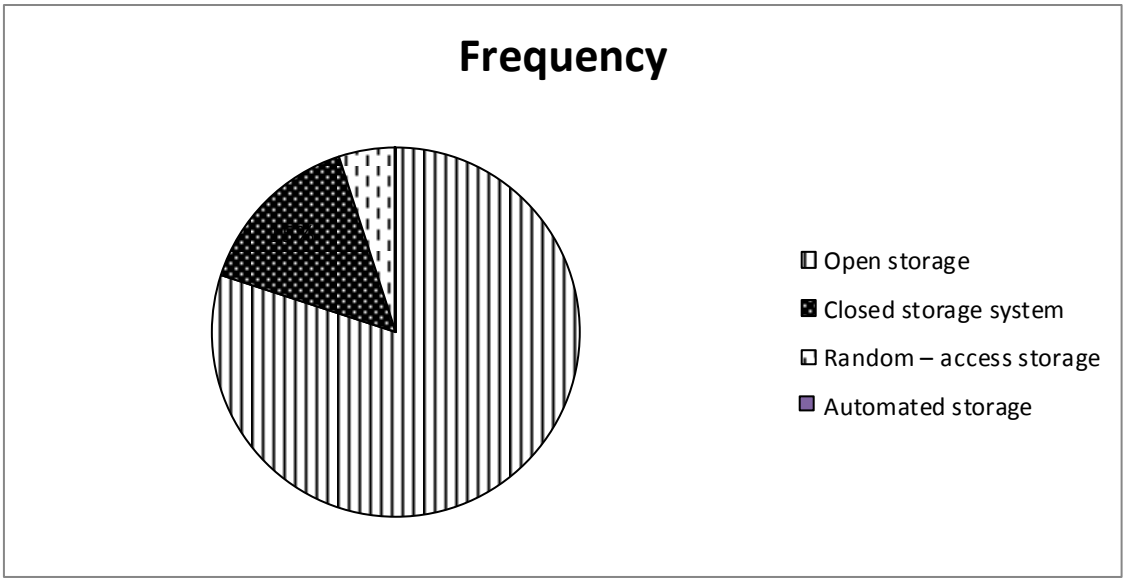


Figure 4.7 Storage systems used and frequencies – Nakummatt Supermarket
**Source: Field data, (2016)**

**Response on organizations improved performance for the storage system used**
According to the research findings at Naivas Supermarket 5 respondents (14.7%) were for increased safety, 14 (41.17%) were for minimum obsolescence, high output 6 (117.65%) of respondents, improved accuracy represented by 4 (11.76%), while 1 (1.7%) representative.

**Table 4.8: Response on organizations improved performance for the storage system used**

| Performance | FREQUENCY | FREQUENCY IN PERCENTAGE |
|---|---|---|
| Safety | 5 | 14.70% |
| Minimum obsolescence | 14 | 41.17% |
| High Output | 6 | 17.65% |
| Accuracy | 4 | 11.76% |
| None | 5 | 14.70% |
| **TOTAL** | **34** | **100%** |

**Source: Field data, 2016)**


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The information can further be presented in the pie chart below;

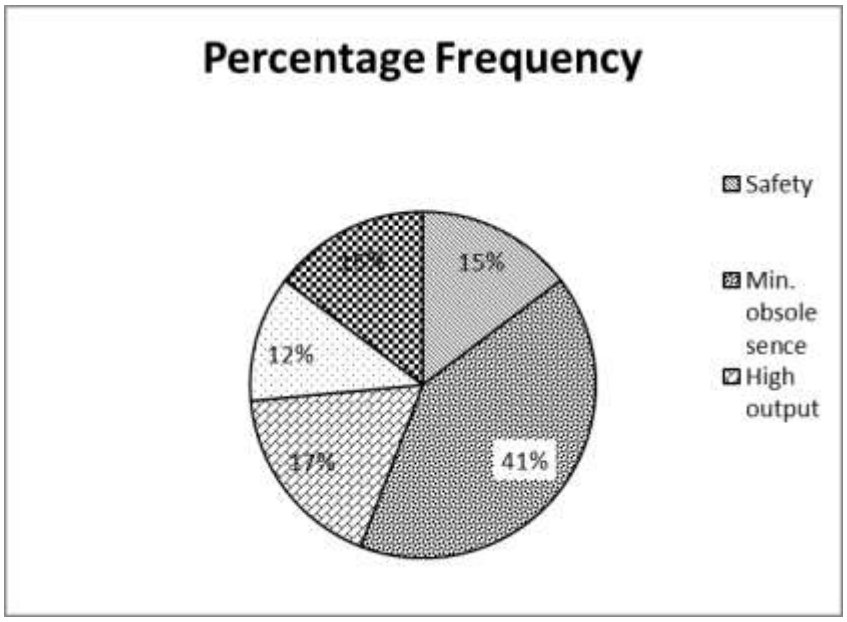


Figure 4.8: Response on organizations improved performance for the storage system used
**Source; (Field data, 2016)**

According to the research findings at Nakummatt 11 respondents (22%) were improved safety, 13 (26%) were for minimum obsolescence, High output had 10 (20%) of participants accuracy represented by 13 (26%), none had 3 (6%) representative.

Table 4.9: **Response on organizations improved performance for the storage system used**

| **Performance** | **FREQUENCY** | **FREQUENCY IN PERCENTAGE** |
|---|---|---|
| Safety | 11 | 22% |
| Min. obsolescence | 13 | 26% |
| High output | 10 | 20% |
| Accuracy | 13 | 26% |
| None | 3 | 6% |
| **TOTAL** | **50** | **100%** |

**Source: field data, (2016)**

The information can further be presented in the data below;


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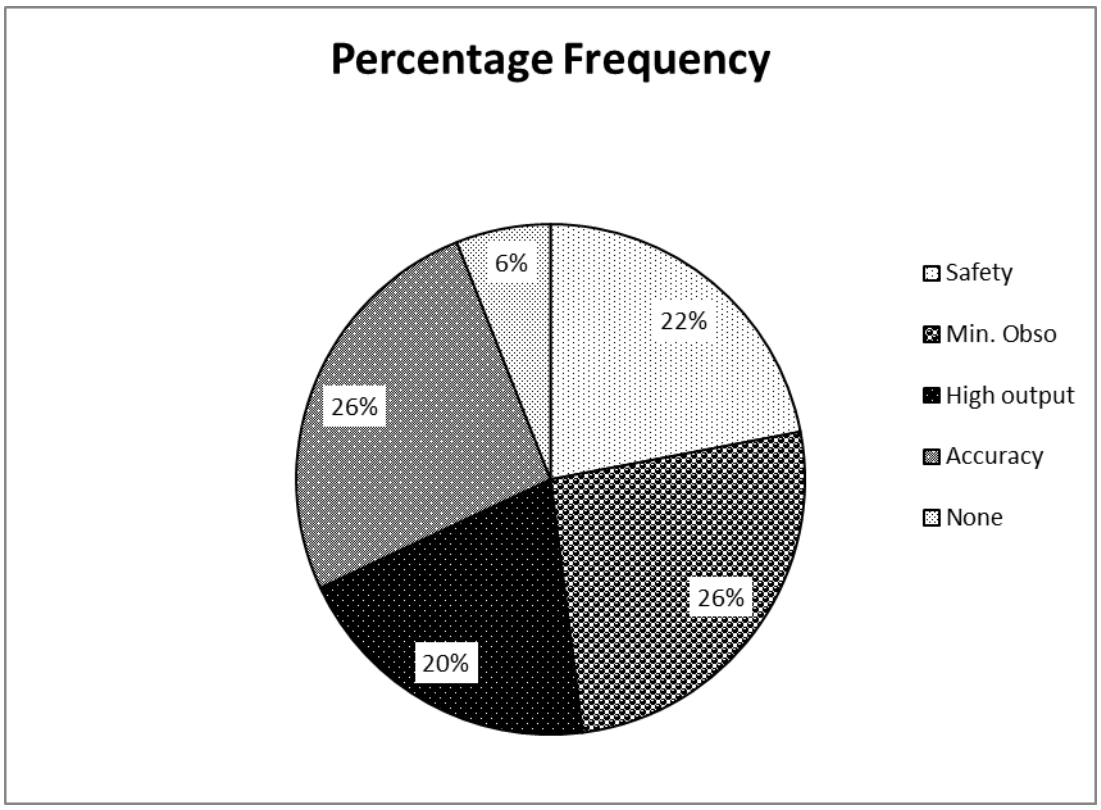


Figure 4.9: Departments involved
**Source: Field data,( 2016)**

**Presentation of Respondents Interviewed on the highest ranked system in performance**

The table below shows the ranks and number of respondents interviewed in all the two organizations. The information clearly shows that middle level management gave more information as compared to other levels of management interviewed in the organization visited.

**Figure 4.10: System with highest efficiency in the holding.**

| **Rank interviewed** | **No. of respondents interviewed Form Naivas** | **Respondent interview from Nakummatt** | **%frequency interview of-respondents** |
|---|---|---|---|
| Open system | 10 | 15 | 29.76% |
| Closed system | 10 | 25 | 41.67% |
| Random system | 7 | 5 | 14.29% |
| Other systems | 7 | 5 | 14.29% |
| **Total** | **34** | **50** | **100%** |


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**Source: Field data,( 2016)**

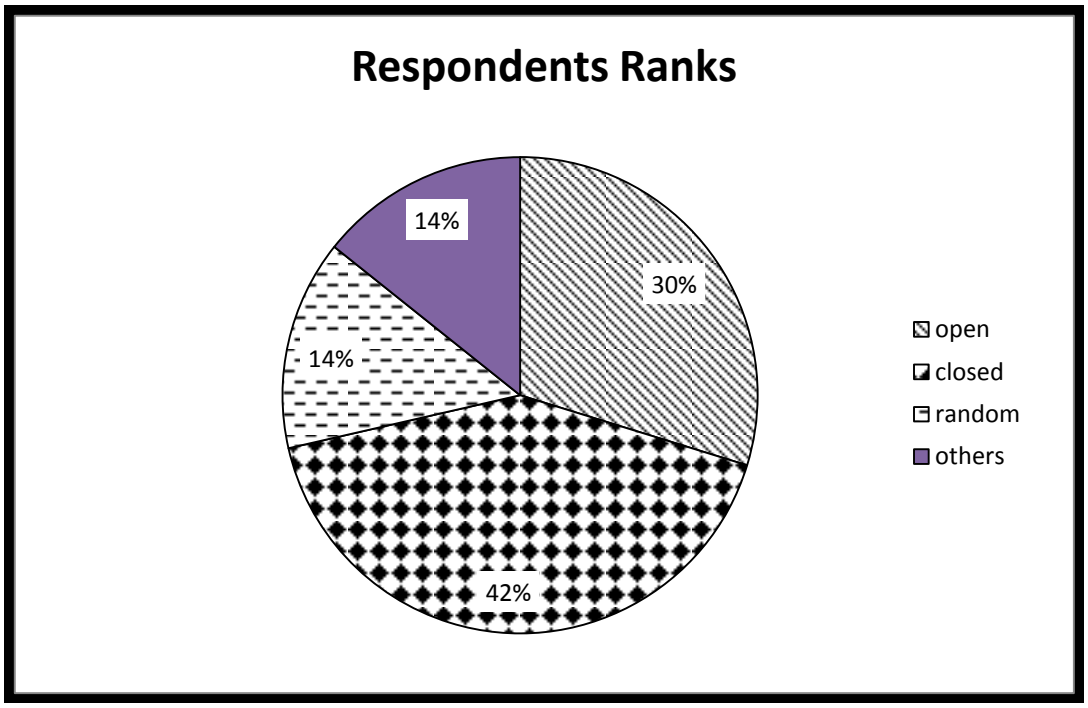


Figure 4.10: Storage system adopted
**Source: Field data, 2016)**

From the above graph it is clear closed system was most popular 42%, followed by open system at 30%, then random at 22% the least being other systems being the least

**Response on whether to adopt automated or manual storage system.**

The table below shows the ranks and number of respondents interviewed in all the two organizations. The information shows the level of preference of automated and manual systems the organization visited


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Table 4.11: **Response on whether to adopt automated or manual storage system.**

| System | No. of respondents interviewed Form Naivas | Respondent interview from Nakummatt | %frequency interview of-respondents |
|---|---|---|---|
| Manual system | 12 | 15 | 32.14% |
| Automated system | 22 | 35 | 67.86% |
| **Total** | **34** | **50** | **100%** |

**Source :( Field data, 2016)**

From the above table it is clear automated system was most popular 67.86%, followed by manual system at 32.14% least preferred.

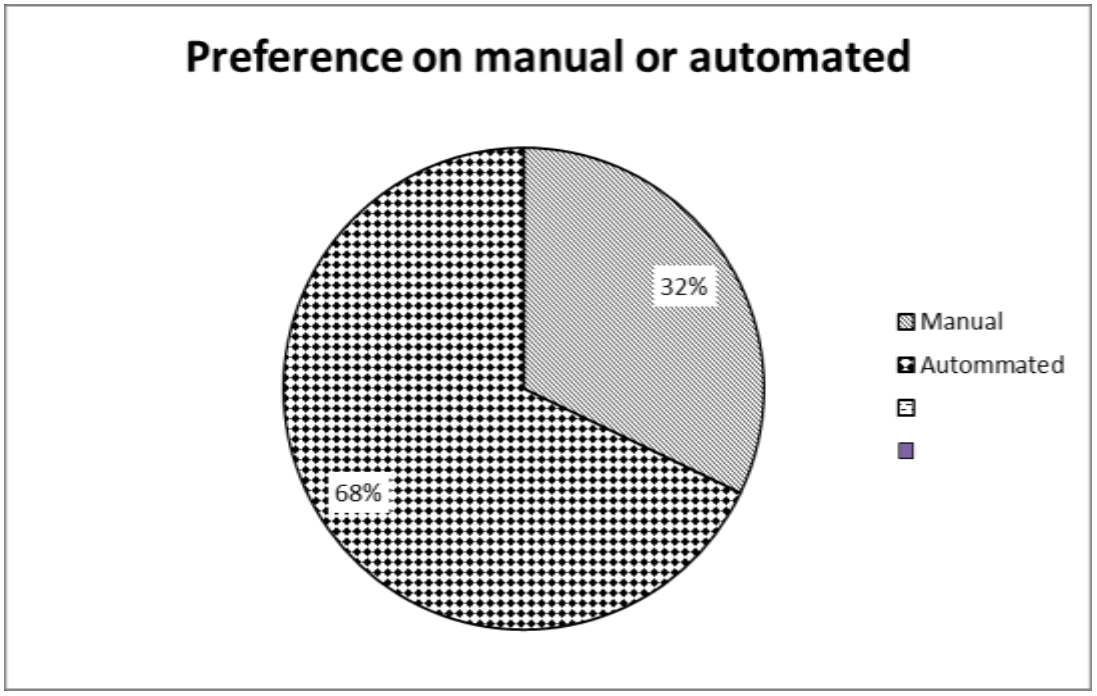


**Fig 4.11 preference on manual or automated storage systems.**
**Source: (field data,2016)**



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**Summary of Data Analysis**

The researchers presented the questionnaires two different organizations i.e Naivas Supermarket and Nakummatt supermarket ltd.

The researchers collected information on the types of storages used and the closed storage system and Open storage were the most used storage methods by the two organizations. The researchers learnt that most of the products were and essential items were stored using closed storage system while most of the common equipment was stored in the open storage systems.

Considering the number of respondents interviewed and their ranks in the organization, the researchers realized that the middle level management gave more information or participated more as compared to other levels of management interviewed in the organizations visited.

The researchers also learnt that most (90%) of the employees appreciated the use of storage systems while only a few 10% had bad attitude towards storage systems in both the organizations. Out of whom 68% were in need of automated systems and only 32% favoring the manual systems.

In the interviews conducted, the researchers realized that most of the employees at all levels of management strongly agreed that storage systems has led to ease in customer service hence increased customer satisfaction, reduction in stock outs in the organization while they agreed that storage systems has led to increased organizational profitability.

Participants in both the organizations agreed that the organizations have realized steady increase in profitability for the past five years hence improved performance.

**Summary of Major Finding**

The findings of the storage systems and organizational efficiency based on the two organizations revealed that various types of storage systems are used in the organizations. These were; open storage system, closed storage system, centralized storage system and random access storage. The two organizations also maintain good public relations with the institutions and other managements.

**Storage Methods**

The organizations practice the two main basic storage methods, that is ;- Open storage method and closed storage method. From the statistical pie charts drawn, it is clear that most organizations pay much attention to closed storage methods unlike open storage method. The idea behind this is that the closed storage method is less costly in the long run and the organizations prefer it.



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Open storage method creates an ease in finding the products stored, and is suited for storing items which are less costly and low valued items while closed storage systems is best suited for items which are high valued and having high risk to the environment and therefore only authorized personnel are allowed to operate.

**Productivity**
All the organizations consider storage productivity as a major aspect of organizational efficiency. When goods are stored well, their value is maintained.

## CONCLUSION

From the literature review, interviews and data analysis on storage systems and organizations efficiency, there is need for implementing storage systems. Organizations need to take on storage systems seriously and follow the guidelines to enable the organizations to follow the set rules pertaining the team in the organization so as to enhance efficiency. Data collected from both the organizations recalls that much attention on storage systems is given to the organizations than other functions.

The benefits achieved through properly established storage systems were reduced storage costs, minimum deterioration, avoid misuse of space hence enable the organization to achieve its organizations efficiency.

**Recommendations**
From the analytical point of view, the researchers recommended the following;
Most firms should adopt the closed storage system because once implemented, there is a corresponding increase in output, fewer accidents are realized, low spoilage of materials and improved efficiency. Closed storage system is much secured than open storage system.
The storage system should be established once the organization is set.
Further research should be carried out to find out if both organizations and storage systems are benefitting from the set storage systems assessment within organizations should be strictly followed as the policy requires.
Well-equipped systems should be maintained in organizations to realize effective and efficient business operations

**Further studies**
This research can be extended in two ways; the study can be repeated in one or two years


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which will offer the possibility to do findings comparative analysis to see how the analyzed firms evolved over time and improved their storage systems. In order to increase the validity of the research the future research to adopt combination the first hand data collected through questionnaires and interviews with second hand data from various literatures.

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