

WAREHOUSE MANAGEMENT AND WASTE DISPOSAL: A CASE OF CHOPPIES CHAIN STORES

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Abstract

In a supply chain, warehousing function is very critical as it acts as a node in linking the material flows between the supplier and customer. In today's competitive market environment, companies are continuously forced to improve their warehousing operations. Many companies have also customized their value proposition to increase their customer service levels, which has led to changes in the role of warehouses. This paper highlights the findings of the study carried out in Choppies Group of Companies to evaluate performance levels and enhance productivity of the manual warehouses by developing a Warehouse Management System framework and cost benefit analysis.

Problems in waste management have become more and more complex during recent decades. The increasing volumes of waste produced and social environmental consciousness present prominent drivers for environmental managers towards the achievement of a sustainable waste management scheme. However, in practice, there are many factors and influences – often mutually conflicting – criteria for finding solutions in real-life applications. This paper presents a review of the literature on multi-criteria decision aiding in waste management problems for all reported waste streams. Despite limitations, which are clearly stated, some of the published work in this field is reviewed. The present review aims to provide environmental managers and decision-makers with a thorough list of practical applications of the multi-criteria decision analysis techniques that are used to solve real-life waste management problems.

Introduction and Background

This paper is a Case study, in this instance, Choppies Chain Stores in Botswana. It further interrogates the very purpose of the study, objectives as well as research questions.

The Chopdat family founded Choppies group of companies in 1986, when the first store Wayside Supermarket (Pty) Limited was opened in Lobatse. Following this, Lobatse again witnessed the opening of the second store in 1993. In 1999, the third store started its operations in Gaborone; this commenced the start of a rapid and very successful roll out of stores in Botswana. In 2008, the first store of Choppies was opened for the public of South Africa at Zeerust. Over the years, Choppies has grown to be the most preferred home brand in the retail sector in Botswana. Fuelled by explosive growth, Choppies presently enjoys a market share of over 32% in the retail sector of Botswana.

Choppies owns the largest supermarket chain in Botswana, with a footprint extending to rural locations, which have been traditionally serviced in the retail sector. The group created a paradigm shift in Botswana retail markets by taking stores to population centers and maintaining shop hours convenient the consumer.

More recently, the group extended its operations to South Africa, with a network of stores in the provinces of North West, Limpopo and Free State. The company was listed in the Botswana Stock Exchange on 26 January 2012, in what is generally considered one of the largest and most successful listing in the exchange of the non-banking sector. Since listing, the share price increased to three-fold in value for shareholders in the span of over 18 months.

Currently the group is one of the largest employers in Botswana. Around 8500 people in Botswana and 5000 in South Africa are in the payroll of the organization.

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Customer Profile

The core customer segment visiting the store falls in the lower and middle-income segment of the society. Recently, Choppies is witnessing a change in this profile with upper middle class sect of consumers also frequenting their stores.

Product Portfolio

Choppies stocks and distributes around 45000 SKUs. World's leading FMCG Brands find their presence in their stores. The group success lies in making these brands available to the vast population across both the countries in operates through a wide network of stores.

Supermarkets

Choppies stores are categorized into super stores and hyper stores, based on the size of the floor area. In Botswana, each store functions as an individual subsidiary, and operates under a separate trade name. Choppies Supermarkets extended operations in many African countries; South Africa, Namibia, Zambia, Zimbabwe, Kenya, Tanzania, Mozambique. Latest information (Mmegi reporter 4th August 2020) states that Choppies would like to close its operations in four African countries; South Africa, Kenya, Tanzania and Mozambique and concentrate in Botswana, Zambia, Zimbabwe and Namibia only.

Distribution and Supply

The group operates four distribution and supply centers that function as the central sourcing point for Choppies stores. The KVI (Known Value Items) products find their way to the stores from these distribution points, while the others are delivered direct to the stores. Safrosh (Pty) Limited is the Group's 100% owned meat distribution business in Botswana. A distribution center catering to the South African Choppies stores was opened in Rustenburg on 15 September 2012 and was operational by August 2013. This distribution Centre, its infrastructure and the Head Office setup is capable of handling operations of 100 stores in South Africa going forward. This is also one of the reasons of heavy costs structure in South African operations initially.

Logistics

The Group operates a logistics company, Welldone (Pty) Limited, that supports the day-to-day operations of the stores in Botswana. Welldone comprises a fleet of 565 trucks and support vehicles that ensures the efficient distribution and supply of products to the stores. This is essentially a 24-hour operation, under the full control of the Group. The South African division also has efficient logistic infrastructure, which supports the effective working of the stores. The fleet is branded with the Choppies logo, which serves as a promotional tool for the brand.

Problem Statement

Waste disposal is a very important activity and needs careful operations in view of maintaining hygiene situations both inside and outside the premises of the warehouse. It is of the view that the waste disposal have a direct impact on the employees working in and around the warehouse. As previously stated, the aim of the study is to investigate into the warehouse waste management operations and suggest measures to Choppies Group of Companies on the best strategy to adopt to improve on its Warehouse Management and Waste Disposal.

Research Objectives

- To identify a place within Choppies premises where goods can be disposed off.
- To examine the effect of waste disposal at warehouse of Choppies.
- To examine the effects of Warehouse management on the organization as a whole.

Literature Review

Information collected to address the research topic will be sourced from published books and journals on Warehouse Management and Waste Disposal, its practices, pitfalls and success within the services industry as well as internal management reports. Great emphasis will be on the Warehouse Industry, specifically the Western and Choppies Warehouse sector. From the said publications, recommendations will be deduced and prescribed to the Management team of Choppies Group of Companies on best practice to adopt in relation to Warehouse Management and Waste Disposal.

"The first thing you will want to get right is your floor plan. Ideally, this is done at the very beginning, but even if you're already running a fully operational setup, the potential efficiency savings could mean that rearranging your layout is still worth considering" (Matt Grierson (2014) There are a lot of shelving options, two-tier or mezzanine, fixed or mobile. (Grierson 2014), If you can squeeze your rows of shelving together, and only open them up when access is required, you can save 50% of your floor space."

Successful warehouses often employ full-time warehouse managers, but professionals can be hired in to assess your requirements. Dexion offers a simulation tool, which tracks all movements and gives insight into who is travelling where, what's most popular and what changes would improve efficiency. Once your goods are in the optimal location it's important to keep detailed records with a good inventory control system, which is a process for managing the location, stock on hand and movement history of all items in the warehouse.

Environmental supply chain management can result in improved environmental performance by reducing collection, recovery and disposal of used products; but also in improved economic performance (Ilgin & Gupta, 2010). These initiatives are typically used to achieve one of four main outcomes: environmental outcomes, economic outcomes, cost reductions, and intangible outcomes (Eltayeb et al., 2010). There are different motivations behind why private industries incorporate environmental considerations into supply chain management including increasing profits and being required to comply with regulations (Hage, 2007). In environmental supply chain management, there are several different initiatives, which may be used, including: Eco-design or design for environment, green purchasing, supplier environmental collaboration, customer environmental collaboration, and reverse logistics (Eltayeb et al., 2010).

Educational and promotional tools such as staff education, event promotion and training are essential for the successful implementation of a waste management plan (CCME, 1996). Raising awareness about different waste management programs can have positive effects, but there are several methods, which can be used to change behaviour to improve participation or correct problems (Timlett & Williams, 2008). Once new initiatives are introduced, people will need time to adjust until the new plan becomes normal behaviour, but once this behaviour is established, it is difficult to break (Timlett & Williams, 2009).

Waste collection is a critical component to waste management.. Waste generators require waste collection with minimal inconvenience, while collectors must be able to collect waste in a way that is compatible with the planned treatment and processing methods if the waste management system is to be sustainable (McDougall et al., 2001).

Research Methodology

The Research Strategy will provide insight on the current Warehouse Management data and Waste Disposal, enabling expert interviews to be carried out within Choppies Group of Companies, especially with the senior management teams as well as ordinary staff members within the Warehouse of Choppies. Moreover, a survey – questionnaire is consistent with the study because the views of a group of people from a target population will be used to capture observations and beliefs of the senior management team of Choppies Company, and ordinary staff would be given the questionnaire to fill up. Both primary and secondary data was collected as well as engaged with Choppies Group of Companies, Senior Management team for strategic insight.

Warehouse Management and Waste Management Disposal?

The warehouse manager in Choppies described warehouse management as a planned space for the storage and handling of goods and materials, focal points for product and information flow between sources of supply and beneficiaries. Further, it was said that Waste management as a collection, transportation, and disposal of garbage, sewage, and other waste products. Waste management encompasses management of all processes and resources for proper handling of waste materials, from maintenance of waste transport trucks and dumping facilities to compliance with health codes and environmental regulations.

Policies and Procedures

The policies contain hard and fast rules and regulations that define the general conduct of the warehouse operation. Choppies specifically focuses on various requirements prior to the management of the warehouse and waste disposal; organizational specific warehouse management policy and procedures guideline outline, health and safety, human resources management, security, pest control, warehouse maintenance and cleaning, quality control, record keeping and reporting, reverse logistics – Return of goods and exit strategy in the event of downscaling or shutting down operations, disposal of obsolete and damaged goods etc.

Warehouse Management and Waste Disposal Problems when Managing the Warehouse

Warehouse Layout

Having a logical warehouse layout is paramount to the success of any warehouse solution. Think of a warehouse like an architectural blueprint - an easy-to-navigate system where each section is clearly defined. Choppies has established a naming convention for lines so that the warehouse staff can find things quickly and easily, thus creating a logical sequence to bring people to where they need to be. The lines and layout in the warehouse are named in such a way that when someone looks at a line tag, they will know how to find the line. Higher moving products are placed near picking lanes that are close to shipping areas, bulk areas are in a location to facilitate bin replenishment, and there is a logical area for items that require cage, cooler, and vault storage. Management and staff are aware of how products are moving so that they periodically rearrange their location in the warehouse as needed.

Assigning and Training Personnel

One of the most important components of developing a logical warehouse is the staff. The number of warehouse personnel will play a crucial role in operational effectiveness. With a large warehouse staff, Choppies has considered organizing employees into smaller or specialized groups and assign specific employees to specific areas. Each situation is unique based on the products the warehouse is moving and the size of the staff. Once a warehouse solution has been selected, tested, and implemented, employees are trained on every component of the system to best maximize the warehouse solution investment and ensure that warehouse inventory is being moved and tracked in the most efficient manner. Whether it is bar code and radio frequency (RF) data collection, returns, order management, or other software that is leveraged for warehouse management, personnel are trained and become comfortable using this technology. “The key to successfully implementing a warehouse solution and ensuring streamlined operations, automated processes, top efficiency, and reduced costs is to make sure that the most important assets—products and staff—are well prepared and organized in all areas of warehouse operations” (Choppies warehouse manager Mr Rajeev).

Get Rid of Unwanted Inventory

The management usually donate unwanted inventory to a non-profit gifts in kind organization to get a tax benefit, clear the warehouse and help others. As soon as inventory is about to expire is removed from the lanes for further sorting in the cage for disposal.

Research Findings

The main objective of the study was to examine warehouse management and waste disposal in Choppies. This study targeted 8 respondents; questionnaires were distributed to all targeted respondents. However, out of 8 questionnaires distributed only 7 respondents fully filled and returned the questionnaires. This constituted an 87.5% response rate.

The study made use of graphs, pie charts and figures to present data.

Objective 1: To identify a place within Choppies premises where goods can be disposed off.

5 in 8 (62.5%) of the Choppies ordinary staff members who do not hold any influential position in the company have indicated that reverse logistics for stock is done in the warehouse, where stock is sorted before being disposed off or remanufactured, it is smelly and thus the employees have named the place as “Gamodubu”. The smelly stock can take up to a week before its disposed off which can easily cause health hazard to the staff. Moreover, new employees had it hard when they have to locate stock due to mix-ups. A space area should be located outside the warehouse where damages for reverse logistics can be sorted and disposed off. Products should be disposed off within 2 days of waiting being the latest to avoid infestation of rodents and diseases. Employees should be trained especially recently hired staff for ease identification of products in the lines.

Objective 2: To examine the effect of waste disposal at Choppies warehouse within the employees.

All waste disposal employees of Choppies Warehouse uses capacity in doing their job diligently to meet the obligation of the organization. 5 in 8 (62.5%) of the employees where in unionism of the fact that their welfare as ordinary staff of Choppies is neglected whereas 3 in 8 (37.5%) said otherwise, the following effects are some of what may be transpiring at Choppies.

- In the field of waste management, employment benefits may be particularly significant due to the high labour-intensity of processes for collection, sorting and recycling of wastes;
- Employment in waste management is often unskilled and low paid, with poorer quality jobs in waste replacing higher quality jobs elsewhere as in the case of Choppies where a lot of employee turnover takes place;
- There are significantly higher risks associated with certain waste-related occupations, such as hand-sorting, and such activities should not be encouraged although it's practiced at Choppies.

Choppies can provide or start using advanced technologies, waste minimization measures which may be encouraged through the implementation of high standards for waste treatment, and handling, these can have significant business benefits.

Objective 3: Effects of Warehouse management on the organization as a whole.

3 in 8 (37.5%) management employees said that they have a perfect warehouse management system in Choppies whereas 5 in 8 (62.5%) ordinary employees disagreed with the said notion.

The warehouse is very hot as there is no cooling system like air conditioners and the lighting is very poor. The space area is small and causes congestion of stock and harder for movement of staff with pallet jacks and fork lists. There are many rodents in the warehouse, which can cause diseases and damage to edible stock. Shortage of pallet jacks, pulling trolley, forklift that causes an inconvenience when the stock has to be pulled, as they have to borrow from other departments in the warehouse.

Lack of safety wear like gloves, helmets, mouth masks especially for those employees who handle management and hazardous products. The purchasing department of Choppies has taken a bold step of creating procurement policies

that emphasize sourcing and purchasing goods and services that are less environmentally damaging than comparable alternatives (green procurement) so said the management who responded to the questionnaire.

Conclusion

The warehouse managers have to react constantly to market changes because customers have been gaining more power to influence the market structure (Chen and Wu, 2005). Characteristics of a demand-driven organization are high product variety, small order sizes, and reliable short response times throughout the supply chain (Chen and Wu, 2005).

This literature can help Choppies try to improve on their warehouse management and eventually run efficiently and effectively to match today's markets. Hence, there is a great need for sophisticated techniques that provide a dependable basis for adequate planning and control of warehouses in such complex environments (van den Berg, 1999).

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Waste collection is a critical component to waste management... Waste generators require waste collection with minimal inconvenience, while collectors must be able to collect waste in a way that is compatible with the planned treatment and processing methods if the waste management system is to be sustainable (McDougall et al., 2001).

Recommendation

It was observed that a proper Cooling system should be provided especially for stock which is sensitive to heat like pharmaceuticals which needs to be stored at a certain room temperature, even the staff needs to work in a controlled room temperature to make working bearable especially in summer.

A second warehouse should be opened to control congestion. The pest control people should be called in every 3 weeks to try control and exterminate the population of rodents. Supervisors should be responsible enough to make sure that scanners are in proper condition, as we know "Time Value of Money".

A space area should be located outside the warehouse where damages for reverse logistics can be sorted and disposed of. Products should be disposed of within 2 days of waiting being the latest to avoid infestation of rodents and diseases.

Proper lighting should be provided which improves any operation and helps a rectangular rack rows and circular fixtures, visibility and light distribution suffers. Good housekeeping must be of immense value and Poor workplace conditions lead to waste, product damages and safety issues: as time spent to avoid obstacles and time spent searching for things and delays due to defects, machine failures or defects.

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