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Theoretical Perspectives on Warehouse Operations: A Review of Four Key Aspects

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Abstract

Purpose: The aim of the research is to understand the overview of warehouse management. The existing warehouse operations are linked to four aspects: infrastructure, labor, work procedures, and activity implementation.
Research Methodology: This study uses a qualitative research method by conducting a survey to describe, explain, and interpret the phenomenon that occurs in an object. FIFO and FEFO are linked with four aspects: means, infrastructure, power work, standard operational procedures, and implementation activities.
Results: Infrastructure refers to the challenges faced by warehouse operations with facilities, such as frequently finding damaged pallets, resulting in a buildup of damaged pallets in the warehouse. The workforce is sufficient at 10, and staff can communicate effectively through pre-employment training. Good, Work in accordance with the procedure which applies, can solve problems, and can work professionally. The work procedures implemented by the company met the criteria.
Conclusions: The study highlights the importance of infrastructure, workforce, work procedures, and activity implementation in warehouse operations. While the system is functional, infrastructure issues like damaged pallets need attention. The workforce is well-trained, and procedures ensure operational accuracy.
Limitations: The study is limited to a single warehouse at PT. Akusara Indonesia Abadi, so the findings may not be applicable to other settings. It also doesn't explore the role of technology in warehouse management.
Contributions: This research provides valuable insights into warehouse management, emphasizing the need for improved infrastructure, proper staff training, and adherence to standardized procedures to enhance operational efficiency.

Keywords: *FEFO, FIFO, Infrastructure, Warehouse Process*

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1. Introduction

Warehouse Operations Management must be optimally managed so that goods stored in storage areas or warehouses can be stored according to the type, size, weight, and nature of the goods (Baruffaldi et al., 2019; Popović et al., 2021). This is required so that the goods are not disturbed in the warehouse. And when the delivery of the goods is carried out, they can be removed effectively and efficiently, so also on

the contrary with receiving (Andiyappillai, 2019; Arunyanart et al., 2019). The means And infrastructure can make things easier for the warehouse officer in handling goods to be stored and checking goods carefully and correctly (Atieh et al., 2016; Setyawati & Aristiyanto, 2021). The rapid development of technology has made competition in the business world increasingly intense and demands companies For Keep going do repair efficiency operation they with objective reach profitability (Faber et al., 2018; Torabizadeh et al., 2020).

Therefore, the FIFO (First In First Out) and FEFO (First Expiry First Out) systems are important to ensure the achievement of objectives, namely, operational effectiveness and efficiency. Facilities and infrastructure are crucial for managing warehousing and distribution of goods to ensure that the stored goods are in good condition (Kuncoro & Harahap, 2021; Pikora et al., 2021). However, during the implementation in the field, several deficiencies were found by officers, such as damaged AC and temperature gauges or supporting equipment for temperature measurement caused by a lack of monitoring and maintenance of all equipment (Heriyanto, 2021; Khan et al., 2018; Nugraha & Apriliani, 2021). Deficiencies that occur in operational activities occur because they are based on several factors, such as natural factors, officer factors, supervisory factors, because temperature is so important for goods like Drugs animal, a process storage something goods No off from order method in storing the goods both in terms of the method used used to lift the goods up to the way transportation goods the until with method compilation And or storage goods the to ensure safety and maintain quality (Kashyap, 2020; Sukasih et al., 2020).

Storage room temperature mapping was performed by warehouse officers during the validation and temperature mapping processes (Powell et al., 2019). Thermometers were placed at hot and cold points and near the door of the storage room. The temperature must be checked and monitored three times a day and recorded on a temperature-monitoring card to maintain all parts of the storage area at the specified temperature (Katz & Firstenberg, 2018). Infrastructure that must be considered and meet the requirements includes the building/room for the warehouse as a place to store goods, room temperature and humidity, and the material handling equipment (Edalati et al., 2020). If the infrastructure and facilities are inadequate, the Veterinary Drug Technical Officer will propose to the Management to fill the gaps. The systematic arrangement of goods in storage is adjusted to the needs; for example, goods that have an expiration date (have entered the ED period) are collected separately and given clear signs so that they can always be monitored. Fast-moving goods are placed in easily accessible areas (Angelides et al., 2021; Pyatigorskaya et al., 2018).

2. Literature Review

According to Saderova et al. (2021), a warehouse is a storage function for various types of products that have storage units in large or small quantities for a period of time when the product is produced by a factory and when the product is needed by a customer or a workstation in a production facility. A warehouse is burdened with the task of storing goods that will be used in production until the item is requested according to the production timetable (Reyes et al., 2019; Weidinger & Boysen, 2018). In system warehousing, the system is capable of utilizing space for storage in an effective way, Which No increase room storage, which is not sufficiently effective, resulting in many products that are not accommodated in the warehouse. According to Bahrami et al. (2019) and Kamali (2019), a warehouse is an area separated for keeping material standards, parts, and Also supplies. A good warehouse is not one that has a very large area. A warehouse with a limited area can also have a maximum capacity if supported with an order location, which good. The effectiveness and efficiency of the process of incoming and outgoing goods is a matter that needs to be considered in warehouse layout (Mao et al., 2018; Martins et al., 2020). This effectiveness and efficiency can be achieved, for example, by arranging goods so that the available space is optimally utilized. A warehouse is a facility intended for the storage

of goods (Lee et al., 2018; Mirzaei et al., 2021). goods as request buffer so that the request Which happen can fulfilled. In addition, the warehouse also functions as a delivery point where all goods are received and shipped as quickly, effectively, and efficiently as possible (Hamel et al., 2020).

The objective of the existence of place storage and the function of warehousing in a general way is (Saderova et al., 2021):

1. A production warehouse is needed to support production, where the goods produced usually have different characteristics so that they can be grouped based on goods that can be consumed immediately and goods that must be stored first.
2. Reducing transportation and production costs warehouse facilities also aim to reduce transportation costs and production, due to with existence role from warehouse the as storage of production inventory.
3. Coordination between offers and requests. Request market No always Can ensured accurately while the supply must continue to run, so that with the warehouse it can coordinate between offers and requests. Therefore, warehouses can store goods when production volumes increase and demand decreases.
4. Market needs to supply goods that are not disconnected, so a necessary warehouse is needed to maintain the inventory of goods to meet the demand for goods that consumers must always have.

Type of warehouse based on the type of goods, there are several types of warehouses:

1. Warehouse Material Standard
   This warehouse is used to store raw materials after production is complete. The warehouse location is not... will be far from the production site because once production is complete, these items will be brought to building storage material standards. A number of material standards that are usually stored here include iron ore, rubber, concrete materials, and so on (Lorenc et al., 2020).
2. Warehouse as Place Finished Goods Storage
   Warehouse which used for keep goods results production. Goods Which Already Ready-to-distribute goods will first be stored in this building. These items are then shipped based on consumer needs (Yan et al., 2018).
3. Warehouse as Center Consolidation as well as Transit
   Warehouse Which One This own function as place For transit and consolidation. Goods The goods obtained from the center are then combined. The goods are then forwarded to consumers (Yan et al., 2018).
4. Warehouse as Transshipment
   This warehouse is used as a storage location for various large items. After the goods... the finished done distribution or process sort with share it to amount Which smaller, then the item is ready to be sent to the consumer (Lorenc et al., 2020).

According to He et al. (2018), Shyshkin et al. (2020), and Voit et al. (2021), the benefits of a logistics warehouse can be viewed from two perspectives: economic and service.

1. Benefit economy Benefit warehouse from aspect economy that is if overall cost logistics experienced a decline due to the presence of utilization One or a number of facility warehouse.
2. Benefits of service obtained by utilization of warehouse in logistics Possible reduction in cost, However, service can be improved by reducing delivery times and site capabilities.

3. Methodology

The research method used is qualitative, by conducting a survey to describe, explain, and interpret a phenomenon (Chivanga & Monyai, 2021) that occurs in an object that is related to four aspects, namely, infrastructure, workforce, work procedures, and implementation of activities.

4. Results and Discussion

The results of the discussion were seen from four aspects of the results of field observations, interviews with airline company employees, and the following results were obtained:

1. Facilities and infrastructure get answer infrastructure which must noticed and fulfil the requirements include a building/room for the warehouse as a place to store goods, room temperature and humidity, and material handling equipment (Keke et al., 2021; Wei et al., 2019).
2. Workforce, according to the results of observations or observations, the company's evaluation is the availability of helmets (safety) for all warehouse employees in order to achieve Safety, Health, Work (Abd Karim & Sejati, 2021).
3. Work procedures, work procedures that contain the steps of the inbound to outbound process must be followed according to the applicable SOP in the warehouse, namely, safety for handling goods and workers. That Alone, so that with procedure Work Which Already implemented all over objective company can be achieved (Huei, 2018; Smith & Srinivas, 2019).
4. The first activity in the warehouse is receiving, which is the activity in which the goods sent by the customer are until on part operational, and the goods are checked so that the goods are scanned to enter the warehouse. This happens by scanning the goods through pallet his ID. Furthermore, the activity is value-added, where it is performed when goods are received in the warehouse. This is done by entering data on received goods into the existing system. The next activity is put away, which is when all the received goods are moved to different locations. There are two ways to do this: direct scanning or manual scanning. The system will keep the data location based on the area where the item is accepted. This is done by part operation. Furthermore, inbound is inventory management. This is done when goods in the warehouse are controlled by admins and managers. This will be performed based on the unit ID. All transactions in the warehouse are recorded in real time (Agusinta et al., 2021; Kulińska & Giera, 2019).

5. Conclusions

Infrastructure means that there is a constraint on the means in the implementation of the operation warehouse. The problem is that the pallets used are often damaged, resulting in a buildup of damaged pallets in the warehouse area. The workforce at PT. Akusara Indonesia Abadi is sufficient with 10 people and through pre-employment training, staff can communicate well, work according to applicable procedures, can solve problems and can work professionally. The work procedures implemented already fulfil the criteria, and this also becomes a benchmark or reject measuring staff for taking steps that are appropriate in activity Work, Implementation activity already walk with Good, Because There 100% guarantee of accuracy in every activity in the warehouse.

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Author Contributions

FF was responsible for the conceptualization of the study and interpretation of the research data. RFS was responsible for data collection, field observations, and analysis of cargo handling processes in airline operations. LS contributed to the literature review, research methodology design, and manuscript preparation. LS participated in reviewing and finalizing the manuscrip

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this study. This research was conducted independently, and no financial or personal relationships influenced the results or interpretation of the findings.

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