Research Paper

Impact of Inventory Management and Operational Performance of Selected Restaurants in Pagsanjan, Laguna

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Abstract
Business owners find it challenging to handle inventory, whether dealing with insufficient or excessive resources. Without proper monitoring, this can lead to the degradation of raw materials meant for transforming into profitable goods. The present study explores the impact of inventory management on the operational performance of selected restaurants in Pagsanjan, Laguna. Utilizing a questionnaire method with 35 participating restaurants.

The study established a positive correlation between effective inventory management practices and enhanced operational performance. Key aspects such as storage, minimizing food wastage, purchasing, and controlling were evaluated, showing highly effective results. The overall weighted mean for inventory management effectiveness in storage, food wastage, purchasing, and controlling ranged from 3.35 to 3.49. Operational performance, measured in quality, productivity, and cost efficiency, demonstrated strongly agreeable results with weighted means ranging from 4.34 to 4.39.

The findings underscored the vital role of Inventory management in contributing to improved restaurant operations. The study rejects the null hypothesis, emphasizing the empirical relationship between business profile factors, inventory management practices, and overall operational performance. This research not only provides valuable insights for the local restaurant industry in Pagsanjan but also offers broader implications for enhancing practices across various business sectors, promoting increased efficiency and profitability.

I. Introduction

Managing inventory is difficult for business owners, whether there are too few or too many resources accessible. And without sufficient monitoring, it will result in the deterioration of the raw materials that are intended to be converted into profitable goods. Continuous operations must be ensured through appropriate inventory management and control since interruptions forced on by a shortage of resources can be expensive and time-consuming. Materials need to be utilized as efficiently as possible while also being protected against deterioration and theft. This is most concerning to businesses that have limited resources, to begin with.

The purpose of this study is to investigate the impact of Inventory management and operational performance of selected restaurants in Pagsanjan, Laguna. The study will focus on effectiveness of inventory management to improve the efficiency of operations and reduce costs for selected restaurants. The findings of this study will provide valuable insights into the benefits of Inventory management and how it can be leveraged and enhance the operational performance of selected restaurants in Pagsanjan, Laguna. This research can help restaurant owners and managers to make informed decisions regarding the usage of inventory management practices and methods and to improve the overall efficiency and performance of their restaurants.

II. Theoretical Background

The theoretical framework that adopted for this study is the operating cycle theory, The operating cycle theory specifically examines the current asset account side of working capital and provides income statement metrics of a firm's operating activities, which are related to production, distribution, and collection. Inventory turnovers depict the frequency with which firms convert their cumulative stock of raw material, work-in-process, and finished goods into product sales. Adopting purchasing, production scheduling, and distribution strategies that require more extensive inventory commitments per dollar of anticipated sales produces a lower turnover ratio (Sawaya & Giauque, 2003). Furthermore, Cannon (2008) discovered that expanding a firm's inventory will lower the risk of illiquidity and ultimately improve profitability while enhancing the positions of gross inventories of the mentioned Nigerian firms that did not engage in improving the profitability of these companies. Relating to the current study, it is safe to assume that a business could find it difficult to make timely debt payments as a result of poor inventory management as shareholder's desire to maximize their wealth may vary for each company, depending on industry, business risk, and tax environment.

III. Research Questions or Problem Statement

The problem addressed in this study is to determine the impact of Inventory Management and the Operational Performances of selected restaurants in Pagsanjan, Laguna. Specifically, to answer the following questions about the business profiles, the effectiveness of the inventory management to the selected restaurants in terms of their Purchasing, Storage, in Minimizing the food wastage, and their inventory management controlling. Moreover, to analyze the inventory management how it affects the Operational Performance.

IV. Data and Methods

The quantitative descriptive correlational research design was utilized on this study to determine the impact of inventory management of a selected restaurants and to show the correlation of business profile and operational performance to the impact of inventory management of the selected restaurants in Pagsanjan, Laguna. The total population of restaurants in this study was 35 list of restaurants that provided by Pagsanjan Tourism Department based on the pamphlet or the establishments that registered on the municipal.

V. Result

Table 1 shows the business profile of the respondents. Among the 35 restaurants, Majority of the respondents still utilized the manual inventory management practices (71.42%), while the other 7 restaurants are now utilized the both inventory management practices (20%); Manual and the Digitized Inventorying. Restaurants owners in Pagsanjan record and update their inventory manually. As supported by Gordon and Gupte (2015), the manual inventory counts can identify and reduce the inventory stock-outs, and can minimizing the administrative errors, which can achieve the substantial cost saving.

Majority of the respondents expressed that have been operating for 6-10 years (31.43%) followed by 9 of the respondents which answered that they have been in operation for 11-15 years (25.71%), while the 8 respondents was also have been operated their business for 16-20 years (22.86%), and lastly some of the respondent's response that their business operated for almost 21 years and above (8.57%). This may indicate that a substantial portion of the business community in the Pagsanjan, Laguna has achieved a level of stability and experience in their respective markets. This longevity in terms of business operation is a testament to their tenacity in meeting the demands of the business. By often dining out, business owners of restaurants show their dedication to adapting and upholding their reputation and success (Singh, 2022). And according to Wilson (2019) stated that the success in the restaurant industry varies for different operators, with some aiming to

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sustain a living and others aspiring to achieve market dominance and targeted returns on investment. Regardless of individual definitions of success, fundamental principles remain constant.

More than half of the respondents said that they have about 5-8 employees (62.86%). Followed by 6 restaurants answered that they have 13-16 employees (17.14%), while the other 5 restaurants said they have 17 and above employees. And lastly the 2 restaurants said they having 9-12 employees (5.71%) to help them on their business operations. Having a few employees will have a factor to the growth and care of the business. As supported to the study of Abdou and Shehata (2021), labor shortage is the one factor why most establishments having a few staffs on their operations, if the establishments have a low income, they will hard to pay the service rendered by their workers.

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Table 2 shows the summary results of mean and the standard deviation on the level of effectiveness of inventory management of the restaurants in Pagsanjan, Laguna.

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It will be noticed in the responses by the respondents in terms of purchasing they claimed that the level of inventory management system in terms of purchasing is Highly Effective as shown in the overall weighted mean score of 3.43 and a standard deviation of 0.65. The respondents mentioned that the restaurants have a checklist of what inventory needs to be purchased (x=3.63). They also stated that they negotiate with reliable suppliers for inventory purchases (x=3.49). Respondents also disclosed that they take into account customers feedback when purchasing (x=3.37). All of these are proofs that the inventory management of selected restaurants in Pagsanjan, Laguna is Highly Effective in terms of purchasing.

According to Cho et al. (2019), it is known that purchasing, a crucial functional activity in restaurant operations, is essential to the sustainability of the industry. One of the earliest academic studies on the subject of purchasing for the restaurant industry identified specific research areas that included price increases, time delays between orders and deliveries, inventory imbalances, inconsistent quality, increased competition, and unpredictable economic cycles.

The level of effectiveness of inventory management in terms of Storage is also Highly Effective as shown in the overall weighted mean score of 3.52 and standard deviation of 0.66. The restaurant's storage ensures that they have enough space for all their inventory items (x=3.40). It is also shown that the restaurant provides adequate training for staff so staff are equipped with proper inventory storage and handling procedures (x=3.37). They also stated that the restaurant maintains the quality of their inventory items by using appropriate storage equipment (x= 3.43). Additionally, Restaurants also positively responded when asked if their inventory is properly organized with a proper designated area for storage of inventory items (x= 3.71). Respondents also disclosed that restaurant's overstocking and/or stock outs is prevented by consistent monitoring of the inventory levels (x= 3.71). Sharma et al. (2019) stated that the management of inventory encounters difficulties in real-world scenarios because of numerous constraints related to the storage and replenishment of goods. These limitations can result from factors such as budget constraints, varying production and supply schedules for different items, and constrained storage space, a situation frequently encountered in retail, food, and the pharmaceutical sector.

In terms of minimizing the food wastage has an overall weighted mean of 3.38 and a standard deviation of 0.67 indicating that the Inventory Management is Highly Effective in terms of Minimizing Food Wastage. In order to minimize food waste, the respondents noted that the staff is well-trained in portion control (X=3.54). Additionally, they stated that the frequency of their inventory checks is sufficient to prevent food from spoiling (X=3.51). Also, they regularly review and adjust menu items based on contribution to food waste (X=3.34). These are all indications that selected restaurants in Pagsanjan, Laguna are Highly Effective in terms of Minimize Food Wastage.

The results of a study by Duursma et al. (2016) titled "Food waste reduction at Restaurant De Pleats: Small steps for mankind" revealed that the fastest way to reduce food waste is through prevention. The three most crucial recommendations for interventions are to minimize portion sizes, weigh all servings, and estimate the impact of waste. Additionally, menu engineering and menu portioning are two key strategies for reducing food waste in restaurants and caterers before the meal is served to the customer, according to Cavagnaro and Kruif (2015).

Moreover, in terms of controlling they claimed that inventory management in terms of controlling is High Effective as shown in the overall weighted mean score of 3.35 and standard deviation of 0.54. The respondents mentioned that the restaurant inventory management is effective in controlling food costs (x=3.49). They also stated that the restaurant conducts regular audits to identify discrepancies (x=3.43). Furthermore, respondents also disclosed that restaurants inventory management is effective in minimizing food waste(x=3.31). All of these prove that inventory management of selected restaurants in Pagsanjan,Laguna are Highly Effective in terms of controlling.

Effective inventory management seeks to control the costs associated with the inventory, from the perspective of the opportunity cost of the capital tied up in the inventory, the holding cost and the ordering costs. Inventory management is the process of effectively overseeing the constant flow of units into and out of an existing inventory. This process usually involves controlling the transfer of the units in order to prevent the inventory from becoming too high or dwindling to levels that could put the operation of a business into jeopardy. (Onkundi & Bichanga, 2016).

Table 3 shows the summary results of mean and the standard deviation on the Operational Performance of the restaurants in Pagsanjan, Laguna.

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In terms of Food Quality shows the overall weighted mean score of 4.40 and the standard deviation of 0.66 indicating that the respondents strongly acknowledge that inventory management system significantly contributes to high food quality. The respondents prioritize practices for maintaining food freshness (x = 4.43) and recognize that effective inventory control enhances consistency of their dishes' taste and presentation (x = 4.40). On the other hand, poor inventory management is seen to negatively impact the customer's dining experience (x = 4.37). They also ensure adherence to food safety and hygiene standards (x = 4.29). Furthermore, inventory management is crucial for optimizing purchasing and procurement processes (x = 4.49). Collectively, these findings affirm the highly effective food quality-focused inventory management in the selected restaurants in Pagsanjan, Laguna. This can be correlated to the study of Barlan-Espino (2017), entitled "Operational Efficiency and Customer Satisfaction of Restaurants: Basis for Business Operation Enhancement" which tackles the importance of maintaining efficient operations and enhancing service quality to achieve positive customer satisfaction while retaining and gaining new customers.

The respondents claimed that operational performance in terms of productivity is Strongly Agree/Outstanding as shown in the overall weighted mean score of 4.34 and standard deviation of 0.62. The restaurant's productions ensure that they rarely run out of key ingredients (x=4.23). They also stated that the restaurant's food wastage has significantly reduced (x=4.57). Respondents also disclosed that the restaurant's frequency stock out has decreased since they improved the inventory management (x=4.49). All of these prove that operational performance of selected restaurants in Pagsanjan,Laguna are Outstanding in terms of productivity. Based on Barrish (2019), it's wise to pinpoint ingredients susceptible to seasonal variations and occasional shortages during the early planning stages. Based on Barrish (2019), it's wise to pinpoint ingredients susceptible to seasonal variations and occasional shortages during the early planning stages.

In addition, the respondents have asserted the exceptional Cost Efficiency of the inventory management system, evident in the overall weighted mean score of 4.48 and a standard deviation of 0.54. The respondents emphasize that effective inventory management has a positive impact on restaurant cost efficiency (x=4.63). They further note that efficient inventory control plays a crucial role in minimizing food wastage, resulting in cost reduction (x=4.57). Additionally, the respondents reveal that well-organized inventory practices contribute significantly to reducing operational costs (x=4.51). These findings collectively demonstrate the outstanding performance of the inventory management in selected restaurants in Pagsanjan, Laguna, particularly in terms of cost efficiency.

As per the findings of Izzati I. and Damayanti D.D. (2023), the challenge of inventory policy revolves around ensuring that each demand for usage is fulfilled with minimal associated costs within the inventory system. It is not only crucial for the procurement and utilization of stocks to be cost-efficient but also imperative that the necessary stock is consistently available. Discrepancies between overall inventory and usage can lead to inventory damage due to expiration dates, as well as increased total inventory costs. The issue of exceeding the budget arises when overstock accounts for 83% of the total requirement, a consequence of excessive orders. The primary objective of inventory management is to curtail the overall inventory cost, taking into account factors such as expiry costs, inspection costs, shortage costs, order costs, and holding costs.

Table 4 shows the Significant Relationship between Business Profile and the Inventory Management of selected Restaurants in Pagsanjan, Laguna

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The table shows the significant relationship between business profile and the inventory management of selected restaurants in Pagsanjan, Laguna that is statistically treated using Pearson correlation coefficient. Type of inventory management used is observed to have a significant relationship with the Minimize Food Wastage (r=-0.1434) and controlling (r= 0.2597). On the other hand, it does not pose a significant relationship with Storage (r=-0.2982) and Purchasing (r=-0.4134). Then, Number of Years of Operations as conformed by the respondents is found out to be significantly related to Storage (r=-0.1882) and Purchasing (r= 0.0654) but not with Minimized Food Wastage (r=0.0411) and Controlling (r=0.0090). Lastly, the Number of Employees is perceived to have a significant relationship with Storage (r=-0.0646), Minimize Food Wastage (r=-0.1564), Purchasing (r=-0.1538) and Controlling (r=-0.1451).

Table 5 shows the Significant Relationship between Inventory Management and Operational Performance of selected Restaurants in Pagsanjan, Laguna

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The table below shows the significant relationship between inventory management and operational performance of selected restaurants in Pagsanjan, Laguna that is statistically treated using Pearson correlation coefficient. Storage is observed to have a significant relationship with Quality (r=0.3801), Productivity (r=0.4608) and Cost Efficiency (r=0.3412). Thus, Minimize Food Wastage is seen to have no significant relationship with Quality (r=0.0076), Productivity (r=0.0771) and Cost Efficiency (r=0.1601). Purchasing as confirmed by the respondent is found out to be significantly related to Quality (r=0.3535) but it was not related significantly to Productivity (r=0.2370) and Cost Efficiency (r=0.1695). Lastly, the restaurants' controlling is perceived to have a significant relationship with Quality (r=0.5329), Productivity (r=0.4710) and Cost Efficiency (r=0.5026).

VI.   Conclusion

The results of the study point towards a significant relationship between business profiles, inventory management practices, and the operational performance of restaurants in Pagsanjan, Laguna. The common use of manual approaches, coupled with insights into the duration of operation and workforce size, provides a better understanding of the local restaurant industry's situation.

The respondents' strong belief in the importance of inventory management is substantiated by high average scores in quality, productivity, and cost efficiency. This underscores the complex impact of effective inventory management on various aspects of restaurant operations, including food quality, consistency, customer satisfaction, hygiene, and cost-efficiency.

The researchers rejected the null hypothesis emphasizes the empirical relationship between business profile factors and inventory management, as well as the interconnectedness of inventory management practices with overall operational performance. This study provides insightful information that can be applied to other business sectors, given the strong correlation found between the business profile and inventory management in the chosen restaurants in Pagsanjan, Laguna, and the evident influence of efficient inventory management on restaurant operational performance. However, these conclusions not only contribute valuable insights but also have broader implications for enhancing industry-wide practices, ultimately fostering improved efficiency and profitability.

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