



# Imbento-Ry: Assessing the Role of Service Crew Commitment to Inventory Counting on Inventory Management Efficiency in Quick Service Restaurant

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**Purpose:** This study examines how the commitment of the service crew impacts inventory management efficiency in Quick Service Restaurant.

**Study design/methodology/approach:** Employing a quantitative design, specifically a descriptive correlational design, while utilising a purposive sampling technique to collect the data from 171 respondents through a structured self-made questionnaire and applying the following statistical tools like mean, Pearson correlation, and regression analysis to uncover the relationship between service crew commitment and inventory management efficiency in quick service restaurant.

**Findings:** It reveals a strong or positive correlation between service crew commitment and inventory management efficiency in quick-service restaurants. The key factors affecting service crew commitment are training programs, recognition and feedback mechanisms, standardised procedures, resource availability, and organisational culture. The regression analysis emphasises that both service crew commitment and the contributing factors significantly enhance the efficiency of inventory management.

**Originality/value:** The uniqueness of this study is its investigation into the relationship of service crew commitment to the efficiency of inventory management in QSRs within a specific area covered by Quezon City, Philippines. This focus was not previously covered in the body of existing research. It pinpoints the factors that significantly affect crew commitment and inventory efficiency, including training, recognition, standardised procedures, availability of resources, and organisational culture. The quantitative descriptive-correlation approach presents useful data with which to act by showing a strong relationship between these variables. The authors have provided managers with practical ways to improve service crew engagement and optimise inventory processes to reduce costs and improve operational efficiency, especially in the Philippine QSR industry setting.

## Introduction

Effective inventory management is important for organisations, so they stay efficient and ensure that they have delivered services that meet the requirements and demands of the target market in a competitive market. In Quick Service Restaurants, "Imbento" is a different Tagalog word for lying or fudging data in inventory counts. Controlling inventory is crucial to an operation and for the functioning of an organisation, which means there must be an adequate amount of stock on hand to fulfil customers' demand with carrying costs as low as possible and wastage of operational efficiency as low as possible. For this reason, total inventory cost can be minimised by maintaining a systematic ordering policy that increases the efficiency of an organisation (Inegbedion et al., 2019).

Accurate inventory records are required to make effective decisions for procurement, production, and customer services. Paramount to the data's accuracy is the service crew's dedication and precision, which has the task of counting and tracking inventory. The quality of

their efforts has a direct carry-on into data reliability and, consequently, in the decisions carried forward at different stages of the supply chain, from forecasting to procurement, sales, and customer service, respectively. Proper implementation of good inventory management practices will give the organisation a competitive advantage and overall performance (Kansime, 2022).

The paper will focus on the commitment of the service crew in conducting inventory counts and the direct impact it has on the efficiency of inventory management for Quick Service Restaurants. The study will establish the level of commitment of the service crew towards the correct and timely counting of inventory; identify the key factors influencing this commitment; generate insight into the relationship between this commitment and the accuracy of inventory; and conclude on the impact of this commitment on inventory turnover rates as well as stockout and overstock frequency. Additionally, the study will assess the perceived effectiveness of the organisation's current inventory management practices. By meeting these objectives, the study aims to provide valuable insights for optimising operational processes and enhancing organisational performance through improved service crew engagement and commitment to effective inventory management practices.

### ***Statement of the Problem***

This study aims to investigate service crew members' commitment to inventory taking in a timely and accurate manner, identify the key factors that influence their commitment to such activities, investigate the impact of their commitment on inventory accuracy, inventory turnover rates, and the frequency of stockout and overstock scenarios, and investigate how the organisation perceives current practices as effective means of managing its inventory.

1. What is the level of commitment of the service crew to Inventory counting?
2. What are the factors affecting the Commitment of the Service Crew to Inventory counting in terms of:
  - 2.1 Training and Effectiveness
  - 2.2 Recognition and Feedback
  - 2.3 Counting Procedures
  - 2.4 Availability of Resources
  - 2.5 Organisational Culture?
3. What is the level of Impact on Inventory Management Efficiency in terms of:
  - 3.1 Inventory Accuracy
  - 3.2 Inventory Turnover
  - 3.3 Inventory Stockouts
  - 3.4 Inventory Overstock?
4. Is there a significant relationship between the Factors affecting the Service Crew's commitment to Inventory Counting and Inventory Management efficiency?
5. Is there a significant impact of Factors Affecting the Commitment of the Service Crew to Inventory counting and Inventory Management Efficiency?
6. Based on the result, what intervention program will boost the organisation's inventory management efficiency?

### ***Hypothesis***

*Ho1: There is no significant relationship between the Factors affecting the Commitments of the Service Crew to Inventory Counting and Inventory Management efficiency.*

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*Ho2: There is no significant impact of Factors Affecting the Commitment of the Service Crew to Inventory counting and Inventory Management Efficiency.*

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### **Review of Relevant Literature**

#### **Commitment in Inventory Counting**

Employee inventory tracking refers to counting and carefully carrying out procedures, with everything being right with the count. This would enable one to make practical decisions on procurements, production planning, and customer service. Those employees who eventually find commitment in inventory counting tend towards fewer errors, consistency, and continuous development of counting methods. Precise inventory data is critical since errors in the inventory may cause disturbances in efficiency, so extreme customer satisfaction is at its worst (Avrahami & Korchatov, 2019).

The technologically advanced and skilled workforce improves the inventory system's reliability and operations' overall efficiency. Therefore, effective inventory management becomes an important element of all operations' streamlined and cost-cutting processes (Mukherjee & Rao, 2023; Villacis et al., 2024).

A massive commitment to the right inventory counting ensures operational accuracy, organisational efficiency, and cost-effectiveness in inventory management practices (Amirrudin et al., 2023). This supports smooth operations and better overall performance.

#### **Factors Influencing Commitment to Inventory Counting**

Several critical factors influence successful warehouse inventory management. To begin with, attention should be paid to knowledge and qualified staff, as well as proper documentation and sufficient finance available for the warehouse (Tarudin et al., 2021). That raises the point that an effective warehouse inventory management system requires appropriate procurement procedures alongside careful planning of inventories properly documented (Wijekumara & Kumara, 2019). It can be done with advanced techniques, such as transfer learning from successful heuristics, making a deep reinforcement learning system significantly better for managing perishable products (Moor et al., 2022).

The inventory control systems, combined with updated appropriate control practices and information technology, can provide critical information on aspects of inventory management (Kaewchur, 2021). Optimising workforce training for slower and faster learners in handling demand uncertainty regarding production surges ensures flexibility and responsiveness (Valeva et al., 2020). DRL effectively managed complex problems such as lost sales and multi-echelon management. DRL resulted in better performance compared to the traditional methods (Gijsbrechts et al., 2022).

Some factors influencing the intensity level of the inventory control elements are the robustness of forecasting accuracy, production and sales alignment, skilled worker turnover, and market demand fluctuations (Ong et al., 2022). The positive effects of strategic practices regarding demand forecasting and procurement optimisation on key order fulfilment performance indicators and customer satisfaction are the results (Al Shukaili et al., 2023). Operational efficiency and cost-effective outcomes attained through effective management of the inventory help firms gain a competitive advantage by enhancing performance and making better decisions (Mumo & Moronge, 2019; Kiran, 2019).

### **Inventory Management Efficiency**

Efficient inventory management will streamline warehouse operations and monitor stock movements well. It would show proper assistance in stock count, ensure maximum storage space utilisation, and avert losses from theft (Amirrudin et al., 2023). Inventory Management Efficiency (IME) is one performance metric that determines a firm's ability to minimise variability in inventory levels (Kim, 2023). Good IME practice grants strategic ordering to minimise the costs of inventories, such as setting the reorder point for items (Inegbedion et al., 2019).

Other than this, higher IME is involved in ensuring an improvement of overall supply chain performance which may be influential in its financial performance indicators, such as Cost of Goods Sold (COGS) and Gross Margins (Coney et al., 2019). This means that with IME, the potential scarcity or surplus of stock is avoided in advance, so there would be adequate goods when required but not too many in inventory. To cut a long story short, an optimised inventory system would mean efficiency at the operational level, better financial outcomes, and better customer satisfaction.

### **The relationship between employee commitment and inventory accuracy**

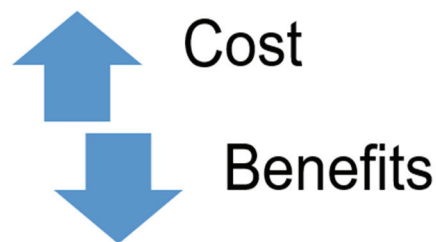
Earlier studies have proved the relationship between employee commitment and inventory accuracy satisfactorily. Commitment levels in an organisation are strongly related to the more accurate count, in which determination says that commitment and engagement form integral segments that allow reliable inventory data. Such reliable data enables procurement and scheduling decisions, production, and customer service decisions.

The organisational commitment represents the connecting element of the work environment and the employee's performance, thereby significantly impacting the organisation's operational outcomes. For example, economic order quantities directly affect production costs, which are further translated into operational and sales turnover costs to such an extent that connectivity exists between managing inventories and overall organisational strategies (Akpoviroro & Varečková, 2023). Furthermore, internal supply chain performance is associated with employee commitment and successful recruitment practice (Alansaari et al., 2019), which again reflects that proper human resource practice has a relationship with the effectiveness of the supply chain.

With supply chain risk management, advanced inventory management systems must be applied by following effective training (Saleem, 2020). Continuous improvement and employee engagement culture are favourable for the improvement of accurate inventories as well as operational efficiency (Kulikova et al., 2023; Chancasanampa-Mandujano et al., 2019). The Reorder points should be made with high accuracy, and a strong system to manage supplier partnerships should also exist to improve the efficiency of warehouses and the accuracy of stock levels (Ammirudin et al., 2023). All these factors will thus be of great importance in strategies formulated to increase employee commitment and optimise the management of inventories so that better organisational performance can be exhibited.

### *Theoretical Framework*

The theory was entailed in the social exchange theory.



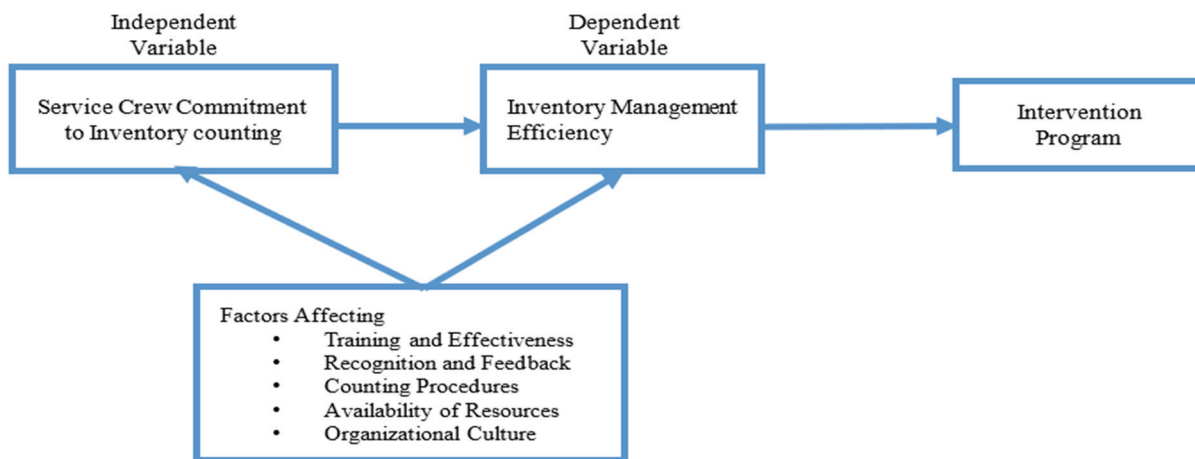
**Figure 1: Social Exchange Theory**

The Social Exchange Theory (SET) focuses on the psychology of transactions and their consequences within exchange processes. It asserts that people are behaviorally motivated to act in situations offering maximum reward and minimum cost within personal or organisational contexts. If this concept is applied to the paper, SET also explains why service crew members demonstrate commitment to the accurate and timely inventory count. They anticipate rewards, such as job satisfaction and career recognition, which far outweigh the time invested in counting (Zooler & Muldoon, 2019).

From an organisational standpoint, dedicated counting practice will provide accurate inventory data, considered a large reward. This subsequently enhances efficiency in operations and decision-making as procurement, production planning, and customer services are informed. Inaccurate inventory counts incur higher costs associated with stockouts, overstock, and inefficiencies in operations, as the costs incurred become enormous (Ahmad et al., 2023).

SET also offers a good framework for understanding the commitment of service crew members in terms of organisational outcomes. It ensures that efforts paid for as individuals result in organisational rewards and, therefore, builds commitment while suppressing the inaccuracy of inventory management. Accurate practices concerning inventory receive some awards, which build an organisation's commitment and enhance its effectiveness and efficiency in its operations.

## Conceptual Framework



**Figure 2: IV-DV Paradigm**

The conceptual framework explains how the service crew's dedication to correct counting inventory depends on key factors such as training, recognition, counting procedures, availability of resources and the organisational culture. Thus, direct influences of such dedication on efficiency in the management of inventories will establish targeted programs for intervention that will enforce improvement of the practice related to inventory. Therefore, knowledge of these relationships will reveal areas that need improvement and how overall management can be enhanced. This method also enhances efficiency but, at the same time, helps in building up an efficient solution for optimum inventory practices.

## Methodology

### *Research Design*

This study utilised a quantitative approach to investigate the impact of employee commitment toward inventory counting upon inventory management practices. In other words, the methodology chosen here is a descriptive correlation study, as it systematically collects and analyses numerical data to determine correlations, find predictors, and explore causal relationships between variables. According to Janse et al. 2021, the correlation coefficient is a statistical tool used to determine the strength and direction of the relation between variables or to assess the agreement between different methods.

### *Participants*

Through purposive sampling, the study will ensure a holistic representation of the various roles that employees play. Stockman crew, supervisors, and managers will be addressed to sample those doing hands-on inventory counting and management. Different departments and locations within Quick Service Restaurants in Quezon City of Metro Manila in the Philippines will be tapped to pull out the participants. On the other hand, the researcher used the Yamane Formula to calculate the sample size and utilised it, resulting in a target of around 171 for this particular study.

$$n = \frac{N}{[1 + N(e)2]}$$

$$n = \frac{300}{[1+300(.05)2]} \quad n = \frac{300}{1.75} \quad n = 171.42 \text{ or } 171$$

### *Instruments*

Data will be collected using a structured questionnaire designed to measure employee commitment factors and perceptions of inventory management effectiveness. The first part is the level of commitment of the service crew to Inventory counting; the second part is for factors affecting the Commitment of the Service Crew to Inventory counting in terms of Training and Effectiveness, Recognition and Feedback, Counting Procedures, Availability of Resources and Organizational Culture and the third is the level of Impact on Inventory Management Efficiency in terms of Inventory Accuracy, Inventory Turnover, Inventory Stockouts, and Inventory Overstock. The following table shows the metrics and verbal interpretation of the results.

**Table 1: Four-point Scale for Level of Service Crew Commitment on Inventory Counting**

Score	Mean	Verbal Interpretation
4	3.25- 4.00	Very High (VH)
3	2.50- 3.24	High (H)
2	1.75- 2.49	Low (L)
1	1.00- 1.74	Very Low (VL)

**Table 2: Four-point Scale for Factors Influencing the Service Crew Commitment**

Score	Mean	Verbal Interpretation
4	3.25- 4.00	Extremely Influential
3	2.50- 3.24	Influential
2	1.75- 2.49	Moderate Influential
1	1.00- 1.74	Not Influential at all

**Table 3: Four-point Scale for Impact on Inventory Management Efficiency**

Score	Mean	Verbal Interpretation
4	3.25- 4.00	Very accurate
3	2.50- 3.24	Accurate
2	1.75- 2.49	Inaccurate
1	1.00- 1.74	Very Inaccurate

### *Statistical Tools*

This study used a Quantitative data analysis that will include descriptive statistics (mean, standard deviation) to summarise the level of commitment, factors influencing the crew commitment, and assessment of the Inventory management efficiency. Inferential statistical techniques such as regression analysis were employed to examine the predictive relationships between employee commitment (independent variable) and inventory management outcomes

(dependent variables). Correlation analysis will assess the strength and direction of relationships between variables of interest.

## Results

The results garnered in this study investigate the level of commitment among service crew members to inventory counting, explore key factors influencing this commitment, assess its impact on inventory management efficiency, examine the relationship between commitment and efficiency, and propose intervention strategies to enhance overall inventory management effectiveness.

### *Assessment of the Service Crew Commitment to Inventory Counting*

**Table 4: Service Crew Commitment to Inventory Counting**

<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. I ensure accuracy in inventory counting by meticulously verifying stock levels against records.	171	3.7368	.44164	Very High
2. I prioritise inventory counting tasks to maintain consistency and minimise discrepancies.	171	3.2105	.62507	High
3. I take responsibility for identifying and reporting any inaccuracies in inventory counts promptly.	171	3.6257	.48535	Very High
4. I actively seek opportunities to improve my skills and knowledge related to inventory counting.	171	3.5731	.49608	Very High
5. I am committed to following standardised procedures for inventory counting to ensure reliability.	171	3.2105	.75312	High
<b>AVERAGE</b>	<b>171</b>	<b>3.4713</b>		<b>VERY HIGH</b>

The analysis of commitment toward inventory counting for the Service Crew indicates an overall high commitment. The overall average mean score is 3.4713. They are outstanding in ensuring the accuracy of verification of stock levels with a mean of 3.7368 and SD of 0.44164. They also take responsibility for discovering inaccuracies and reporting them with a mean of 3.6257 and SD of 0.48535. They continue to seek further development of their skills with a mean of 3.5731 and an SD of 0.49608. However, regarding prioritising inventory counting tasks, the mean reading was 3.2105 and an SD of 0.62507, while following standardised procedures had a mean reading of 3.2105 and an SD of 0.75312. Indeed, this calls for supplementary training on the aspect of standardised procedures and the establishment of clear guidelines concerning this. Variables regarding continuous improvement through workshops and regular feedback need to be further firmed by the crew's performance and commitment toward inventory counting.

### *Assessment of the factors affecting the Commitment of the Service Crew to Inventory counting*



**Table 5: Factors affecting the Commitment of the Service Crew to Inventory counting**

<b>Training and Effectiveness</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. The training provided adequately prepares me to perform accurate inventory counting.	171	3.2047	.63169	Influential
2. I receive regular updates and refresher training sessions on inventory counting techniques.	171	3.1930	.64458	Influential
3. The training programs enhance my efficiency in conducting inventory counts.	171	3.6257	.48535	Extremely Influential
<b>AVERAGE</b>		<b>3.3411</b>		<b>Extremely Influential</b>
<b>Recognition and Feedback</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. I receive recognition for performing accurate and timely inventory counts.	171	3.5556	.54353	Extremely Influential
2. Feedback on my inventory counting accuracy helps me improve my performance.	171	3.2105	.62507	Influential
3. The organisation values and acknowledges my contributions to inventory management.	171	3.6082	.52440	Extremely Influential
<b>AVERAGE</b>		<b>3.4581</b>		<b>Extremely Influential</b>
<b>Counting Procedures</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. Standardised procedures for inventory counting are clearly defined and easy to follow.	171	3.5439	.55530	Extremely Influential
2. The counting procedures ensure consistency and accuracy in inventory records.	171	3.1871	.65084	Influential
3. There are clear guidelines for handling discrepancies identified during inventory counts.	171	3.1871	.66868	Influential
<b>AVERAGE</b>		<b>3.3060</b>		<b>Extremely Influential</b>
<b>Availability of Resources</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. I have access to the necessary tools and equipment for conducting inventory counts.	171	3.6257	.48535	Extremely Influential
2. Adequate staffing levels are maintained to support timely and thorough inventory counts.	171	3.5731	.50780	Extremely Influential
3. The organisation provides sufficient budget allocation for inventory management resources.	171	3.5614	.50780	Extremely Influential
<b>AVERAGE</b>		<b>3.5867</b>		<b>Extremely Influential</b>
<b>Organisational Culture</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. The organisational culture emphasises the importance of accurate inventory management.	171	3.5439	.56579	Extremely Influential
2. Collaboration and teamwork are encouraged during inventory counting activities.	171	3.5439	.57610	Extremely Influential

3. There is a culture of continuous improvement in inventory counting practices.	171	3.5789	.49518	Extremely Influential
<b>AVERAGE</b>		<b>3.5556</b>		<b>Extremely Influential</b>

From the assessment, it can be seen that many factors significantly influence the commitment of the Service Crew towards counting inventory. The training programs are very effective in bringing about efficiency, with a mean of 3.3411, which is very high. Similarly, recognition and feedback are other important factors, with strong acknowledgement of contributions by the staff with a mean of 3.4581. The counting procedures are standardised to bring uniformity and accuracy, with a mean of 3.3060. The resources are also quite adequate, with proper tools, sufficient staffing, and a budget, with a mean of 3.5867. Therefore, a significantly enhanced commitment means that a strong organisational culture stressing accuracy, teamwork, and continuous improvement, among others, brings out a significantly boosted commitment of 3.5556. To ensure that these efficiencies are maintained and enhanced, the training programs should be continued and enhanced; the recognition and feedback mechanisms should be further strengthened, counting procedures standardised, resource allocation ensured, and a positive organisational culture promoted. These will sustain high standards and move inventory counting practices into better practices.

### *Assessment of the Impact on Inventory Management Efficiency*

**Table 6: Inventory Management Efficiency**

<b>Inventory Accuracy</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. The recorded inventory levels closely match the actual stock available.	171	3.2865	.73147	Very Accurate
2. Discrepancies between recorded and actual inventory levels are promptly investigated and corrected.	171	3.5497	.57562	Very Accurate
3. There is a high level of confidence in the accuracy of our inventory data.	171	3.2865	.73147	Very Accurate
<b>AVERAGE</b>		<b>3.3742</b>		<b>Very Accurate</b>
<b>Inventory Turnover</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. Inventory turnover rates are regularly monitored and analysed to optimise stock levels.	171	3.5906	.56017	Very Accurate
2. Efforts are made to minimise excess inventory to maintain healthy turnover rates.	171	3.2222	.74184	Accurate
3. Our inventory turnover rates align well with industry benchmarks for efficiency.	171	3.5965	.55919	Very Accurate
<b>AVERAGE</b>		<b>3.4698</b>		<b>Very Accurate</b>
<b>Inventory Stockouts</b>				
<i>Indicators</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>VI</i>
1. Stockouts of essential inventory items are rare occurrences.	171	3.5789	.50692	Very Accurate
2. Procedures are in place to mitigate and respond promptly to inventory stockouts.	171	3.2105	.62507	Accurate
3. Stockouts have minimal impact on our operations and customer service.	171	3.5789	.50692	Very Accurate
<b>AVERAGE</b>		<b>3.4561</b>		<b>Very Accurate</b>

<b>Inventory Overstock</b>				
<b>Indicators</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>VI</b>
1. There are processes in place to prevent excessive overstock of inventory items.	171	3.2515	.63333	Very Accurate
2. Efforts are made to forecast demand accurately to avoid overstock situations.	171	3.5146	.55685	Very Accurate
3. Surplus inventory is effectively managed to minimise storage costs and obsolescence.	171	3.2573	.63560	Very Accurate
<b>TOTAL</b>		<b>3.3411</b>		<b>Very Accurate</b>

Inventory management assessed that the Service Crew does a good job managing its inventories, with the accuracy rated very accurate overall, with an average of 3.3742. Variance is identified and resolved promptly so that data is valid. Inventory turns are adequate compared to industry benchmarks, with an average of 3.4698; there are attempts to reduce obsolete inventory levels, but the implementation is patchy, while stockouts are rare and managed with effective workarounds, so there is minimal impact on operations with an average of 3.4561. Accumulation of overstocked inventory is prevented, and the associated processes are efficient, with demand forecasted accurately: the mean stands at 3.3411. This will require the sustenance of training programs, periodic audits with feedback, refinement in inventory practices to reduce overstock, and robust mitigation measures against stockouts and overstock circumstances.

### *The significant relationship between service crew commitments to inventory management efficiency*

**Table 7: Relationship between service crew commitments to inventory management efficiency**

		<b>SERVICE CREW COMMITMENT</b>	<b>INVENTORY MANAGEMENT EFFICIENCY</b>
<b>SERVICE CREW COMMITMENT</b>	Pearson Correlation	1	.911**
	Sig. (2-tailed)		.000
	N	171	171
<b>INVENTORY MANAGEMENT EFFICIENCY</b>	Pearson Correlation	.911**	1
	Sig. (2-tailed)	.000	
	N	171	171
**. Correlation is significant at the 0.05 level (2-tailed).			
<b>LEGEND INTERPRETATION:</b> 0 or Below- No Relationship ( <b>NR</b> ); 0.01-0.25- Low Relationship ( <b>LR</b> ); 0.26-0.50-Moderate Relationship ( <b>MR</b> ); 0.51-0.75-High Relationship ( <b>HR</b> ); 0.76-0.99-Very High Relationship ( <b>VHR</b> ); 1.00- Perfect Relationship ( <b>PR</b> )			

The data reveals a high positive and statistically significant relationship between Service Crew Commitment and Inventory Management Efficiency, with a Pearson correlation coefficient of 0.911 and a p-value of 0.000. This indicates that higher levels of commitment among the service crew are strongly associated with increased inventory management efficiency. To capitalise on this relationship, organisations should focus on enhancing service crew commitment through continuous training and recognition programs and fostering a supportive organisational culture. Regular monitoring and support can help maintain and improve both commitment and efficiency, leading to better overall inventory management.

### *The significant impact of factors affecting the commitment of the service crew to inventory counting and inventory management efficiency*

**Table 8: Model Fit Measures**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Overall Model Test			
				F	df1	df2	p
1	0.935	0.874	0.872	582	2	168	<.001

This implies that the model fits, with an independent and a dependent variable showing a relationship. The value of R is 0.935, thereby implying that there is a high correlation between variables. In the model, the R<sup>2</sup> value is 0.874, which gives almost 87.4% of the variation in the dependent variable may be explained by the model. The Adjusted R<sup>2</sup> of 0.872 also confirms the robustness of the model after considering the predictors' count. This means the model is statistically significant; therefore, a group of predictors significantly affects the dependent variable. The high p-value (< .001) provides further reasons to believe in the model's reliability since it rules out chance as the cause for the observed relationship.

**Table 9: ANOVA Test**

	Sum of Squares	df	Mean Square	F	p
Service Crew Commitment	3.041	1	3.0415	213.7	<.001
Factors Affecting the Commitment of the Service Crew	0.874	1	0.8738	61.4	<.001
Residuals	2.391	168	0.0142		

The ANOVA test results show that both predictors are significant in the dependent variable. The sum of squares and corresponding F for Service Crew Commitment and Factors Affecting the Commitment of the Service Crew were 3.041 and 0.874. Their respective F-values were 213.7 for Service Crew Commitment and 61.4 for Factors Affecting the Commitment of the Service Crew, which are considerably high and add up to a significant part of the explained variance in the model. The very low p-values (< 0.001) for the Service Crew Commitment and Factors Affecting the Commitment of the Service Crew already indicate that they have statistically significant effects on the dependent variable. The mean square of the residuals of 0.0142 indicates the unexplained variance in the model. Generally, the two variables seem to be significant predictors that meaningfully contribute to explaining the total variance in the model.

**Table 10: Impact of factors affecting the commitment of the service crew to inventory counting and inventory management efficiency**

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.323	.114		-2.825	.005
	<b>SERVICE CREW COMMITMENT</b>	.768	.054	.659	14.345	.000
	<b>FACTORS AFFECTING THE COMMITMENT OF THE SERVICE CREW</b>	.306	.044	.318	6.921	.000

a. Dependent Variable: Inventory Management Efficiency

The regression analysis indicates that Service Crew Commitment and factors significantly impacting this commitment have a notable influence on Inventory Management Efficiency. Service Crew Commitment has a strong positive impact (Beta = 0.659, p-value = 0.000), while the factors affecting their commitment also have a significant, albeit smaller, positive impact (Beta = 0.318, p-value = 0.000). The negative constant indicates a baseline level of efficiency. To enhance inventory management efficiency, it is crucial to focus on strategies that increase service crew commitment, such as training, recognition, and support, and to address the specific factors influencing their commitment, ensuring a supportive work environment.

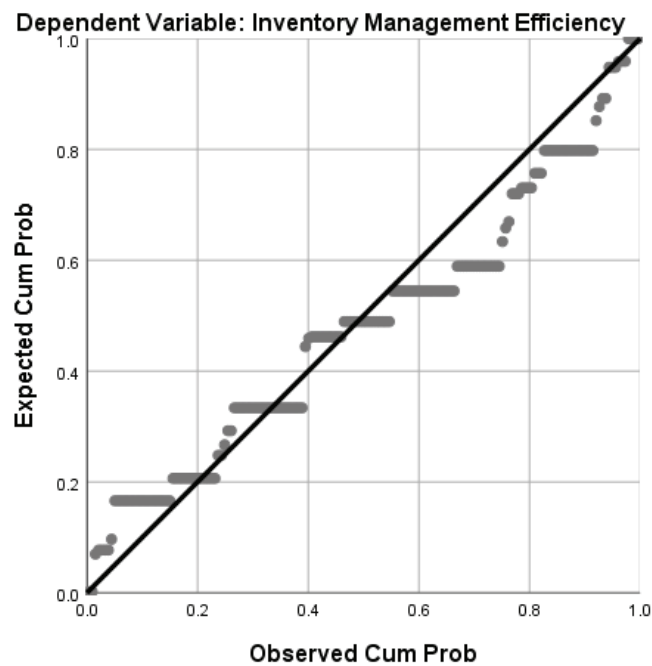


Figure 3: P-Plot for Regression Analysis

Using the Normal P-P Plot of Residuals in inventory management efficiency, it can be proved that residuals are normally distributed since most points tend to follow the diagonal line of perfect agreement very closely. The assumption that residues are normally distributed is proven correct; hence, the regression model is also correct. Thus, the regression model is reliable for predicting inventory management efficiency from service crew commitment and factors affecting their Commitment.

Table 11: Normality Test

	Statistic	p
Shapiro-Wilk	0.858	< .001
Kolmogorov-Smirnov	0.185	< .001
Anderson-Darling	6.73	< .001

The results of the normality tests depict that the data is not normally distributed. The Shapiro-Wilk, Kolmogorov-Smirnov, and Anderson-Darling tests have obtained highly significant p-

values less than 0.001, meaning their null hypothesis about normality must be rejected. Hence, the data's distribution is significantly different from a normal distribution. This result ensures that non-parametric statistical methods will analyse data.

### Output (The Intervention Program)

Area	Objectives	Strategies	Time Frame	Persons Involved	Outcome
Advanced Inventory Counting Methods	Enhance skills in accurate recording and verification of inventory levels	Conduct workshops on advanced counting techniques, provide hands-on training, certification	Quarterly	Inventory Managers, Service Crew	Improved accuracy and efficiency in counting
Standard Operating Procedures (SOPs) Training	Ensure adherence to standardised counting procedures	Develop detailed SOP manuals, conduct training sessions, regular audits	Bi-annual	Inventory Supervisors, Service Crew	Consistent and standardised counting procedures
Technology Integration Training	Improve efficiency through the use of inventory management software	Training on software usage, practice sessions, troubleshooting and support sessions	Ongoing	Managers, Inventory Managers	Enhanced use of software for real-time data entry
Team Collaboration and Communication	Foster a positive team culture for effective inventory management	Workshops on communication and teamwork, role-playing exercises, feedback mechanisms	Monthly	Team Leaders, Service Crew	Improved collaboration and communication skills
Continuous Improvement Workshops	Encourage ongoing learning and process enhancement	Quarterly workshops on process optimisation, idea-sharing sessions, recognition for innovations	Quarterly	Total Quality Manager, Service Crew	Enhanced process efficiency and innovation

### Discussion

#### *The level of commitment of the service crew to inventory counting*

The study's findings on the commitment of the service crew toward inventory counting converge with other studies on the significance of proper inventory management and staff commitment to operational efficiency. In this regard, commitment refers to the employees' dedication to accurately recording inventory levels, strictly following procedures, and generally maintaining overall inventory accuracy. This is vital because healthy decisions need to be made regarding purchasing, planning production, and providing service to customers. The employees attempt to do things right, accurately, consistently, and with an eye for constant improvement in the count process.

The research focuses on the importance of inventory accuracy in supply chain management regarding efficiency and customer satisfaction. From the reliability viewpoint of the inventory system, advanced technology with a qualified workforce improves efficiency (Huang et al., 2018). Good inventory management is required in various industries to smooth out the entire process with reduced costs (Mukherjee & Rao, 2023; Villacis et al., 2024). A commitment to

accurate inventory count ensures operational accuracy while also enhancing organisational efficiency and the cost-effectiveness of the practices in inventory management (Amirrudin et al., 2023).

### ***Service Crew Commitment to Inventory Counting: Examining the Roles of Training, Recognition and Feedback, Counting Procedures, Resource Availability, and Organizational Culture***

Various major factors responsible for the commitment level of the Service Crew towards inventory counting are identified in the evaluation. Efficient training programs with a score of 3.34 are important for developing the required employee skills (Tarudin et al., 2021). Acknowledgement and the feedback mechanism, with a score of 3.46, play an integral role in increasing employee job satisfaction and motivation levels (Wijekumara & Kumara, 2019). Standardised count procedures: This is an average score of 3.31. Such practices really call upon the question of standardised exact practices, Kaewchur in 2021. The proper resource availability must be maintained with an average score of 3.59 to manage activities efficiently (Mukherjee & Rao, 2023; Villacis et al., 2024). An optimistic organisational culture has an average score of 3.56 and complements commitment and teamwork, Amirrudin et al., 2023. To maintain inventory management practices at the best level, it is advisable to enhance the training mechanism with effective reinforcements, formal procedures, optimum resource utilisation, and a supportive culture in the organisation. This will be in response to clearly established research that facilitates effectiveness improvement in operations and decision-making during warehouse management.

### ***The Level of Impact on Inventory Management Efficiency in terms of Inventory accuracy, Inventory Turnover, Inventory Stock outs and Inventory Overstock***

The assessment of the stock management practice of the Service Crew reflected very strong scores in accuracy (average 3.3742) and variance and had minor issues in data validity consistent with the literature that stresses the accuracy aspect as vital to cost reduction and efficiency (Amirrudin et al., 2023). There was also an acceptable level of a proper inventory turnover rate, as recorded by an average score of 3.4698, which reflects the good stock management effort of the industry (Kim, 2023). Lower old stock levels present the problem; thus, improvement opportunities are realised to achieve optimal levels of inventory that enhance better financial performance (Inegbedion et al., 2019). Low stockouts recorded only 3.4561 times provide a good inventory management application (Coney et al., 2019). An average score of 3.3411 for non-transference of overstock indicates appropriate forecasting, highlighting the importance of proactive inventory management to realise value through effective stock management techniques (Jhansi et al., 2022). Maintaining training programs, conducting regular audits with feedback, and refining practices- always based on the best in the field.

### ***The Relationship between Service Crew Commitments to Inventory Management Efficiency***

The analysis shows that the correlation between the two scale variables is  $r = 0.911$ ,  $p < 0.001$  for Service Crew Commitment and Inventory Management Efficiency. Such a significant

correlation suggests that an enhancement in commitment creates high support for the effectiveness of inventory management. For optimum mileage, continuous training, recognition programs, and an enabling culture need to be addressed to enhance commitment and effectiveness.

It is consistent with research that emphasises the importance of employees' commitment to ensuring proper inventory data and proper operational outcomes in a wide range of operational activities such as procurement, production scheduling, and customer service (Karoso et al., 2022). Other critical economic factors illustrated in these studies involve issues of order quantity and related production costs (Akpoviro & Varečková, 2023). These studies emphasise that efficient employees influence internal chain performance and are vital for the organisation's success (Alansaari et al., 2019). Optimisation of inventory management systems and minimising supply chain risks involves proper training and continuous improvement practices (Saleem, 2020; Kulikova et al., 2023). More than encouraging employee engagement, comprehensive inventory strategies enhance the efficiency of the warehouse in general and keep inventory records correct and on par (Chancasanampa-Mandujano et al., 2019; Amirrudin et al., 2023). The emphasis on developing employee commitment and advanced inventory management can lead to potential overall operational excellence.

### ***The Impact of the Commitment of the Service Crew to Inventory Counting and Inventory Management Efficiency***

The regression analysis shows a strong positive correlation between Service Crew Commitment and Inventory Management Efficiency (IME). The impact of contribution is significant and positive, with a beta value of 0.659 and  $p$  less than 0.001. Contributing factors also have a positive impact, with a Beta value of 0.318 and  $p$  less than 0.001. This shows the importance of commitment levels because firms should motivate high commitment levels through proper training, recognition, and an effective support work environment that influences IME.

The findings concur with other literature in that employee commitment significantly assists in ensuring proper management of inventories and efficiency in operations (Karoso et al., 2022). Best practices, for instance, strategic ordering and documentation, help optimise the supply chain performance and control cost (Akpoviro & Varečková, 2023; Amirrudin et al., 2023). Thus, this approach represents the significance of constant improvement programs apart from employee involvement in sustaining high levels of commitment and attainable best possible warehouse management practices (Chancasanampa-Mandujano et al., 2019; Kulikova et al., 2023).

### **Conclusions and Recommendations**

It is expected that employee commitment to the diligent recording of inventory levels and the rigorous procedures for stock updating, which guarantees accuracy, would be high and would therefore underpin effective decision-making across procurement, planning, production, and customer service, as well as be in line with literature highlighting commitment as a principal driver for the attainment of these goals. These are, among others, effective training programs, recognition and feedback mechanisms, adequate allocation of resources, positive organisational



culture, and standard counting procedures that gear this commitment towards the attainment of high standards in inventory management.

According to the assessment, these factors all impact the efficiency of inventory management, as witnessed through the high correlations between levels of commitment against the metrics for inventory management efficiency, such as inventory accuracy, turnover, stockouts, and overstock prevention. Identify this relationship and further strengthen it with regression analysis that shows how higher commitment levels are related most significantly to an increase in inventory management efficiency with a Beta of 0.659 and a p-value less than 0.001. Organisational initiatives that enhance commitment through training, two-way and timely feedback mechanisms, procedural standardisation, resource optimisation, and cultural practices offering support can best optimise IME.

In other words, these findings identify the development of employee commitment and include overall inventory management strategies as a key consideration in deploying a competitive strategy through operational excellence, reducing costs, and enhancing supply chain performance. This holistic view allows for the smooth operation of warehouses but also increases the resilience and competitiveness of organisations within such dynamic market environments.

## **Recommendations**

Based on the study's findings, here are the following recommendations for this study.

1. Provide extended and periodic training sessions regarding new inventory counting methods, standardised work practices, technology integration, team collaboration, and improvements.
2. Develop robust systems that recognise and reward service crew members for their tremendously outstanding contribution to the inventory management component to foster an appreciative and motivating culture.
3. Develop transparent and very prescriptive standard operating procedures regarding inventory counting to ensure consistency and accuracy of operations.
4. Allocate sufficient resources regarding personnel, tools and budget for effective inventory management practices.
5. Provide a good working environment which rewards dedication, teamwork, and learning of inventory management practices.

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