



The impact of inventory management on the profitability of small businesses in Bangladesh

Abdullah Mamoon¹, Amina Ahmad², & Mohammed Islam³

^{1,2,&3} Department of Economics, University of Barishal, Bangladesh

Corresponding Author: Amina Ahmad

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Abstract

The growth and development of small and medium-sized enterprises (SMEs) are essential for the survival of any economy. Among the key factors contributing to the success of small businesses, inventory management plays a vital role. This study evaluates the inventory management practices of small businesses in Bangladesh. Specifically, it examines the impact of inventory value on the profitability of these businesses over a 10-year period. The analysis is conducted using a regression analysis framework. The findings reveal a significant and positive relationship between inventory management and the profitability of small businesses in selected regions of Pakistan. Based on these results, we conclude that efficient inventory management is crucial for improving profitability in small enterprises.

Keywords: Inventory Management, Profitability, Small Businesses, Bangladesh.

INTRODUCTION

Inventory management plays a crucial role in all types of organizations. For businesses, it is essential to regulate the procurement of inputs, their storage, work-in-progress, and final product inventory. On one hand, businesses aim to maintain a large stock to avoid issues such as stock shortages. On the other hand, they strive to minimize inventory levels to prevent excessive capital from being tied up in stock. Therefore, inventory management presents a significant challenge, as businesses must strike a balance between these conflicting demands. In general, inventory management involves identifying items based on their demand or requirements and determining the appropriate stock levels and reorder points. In larger organizations, this process may require establishing multiple storage locations to ensure smooth operations. Efficient inventory management directly impacts business profitability by enhancing operational efficiency and reducing the capital invested in inventory. Additionally,

maintaining a large inventory comes with risks such as theft or fire, which can be mitigated by keeping inventory levels optimized.

Objectives of the Study

This study aims to examine the impact of inventory management on business profitability, specifically in the context of small enterprises.

LITERATURE REVIEW

Inventory refers to the total collection of tangible assets within a firm that are intended for sale as part of its daily business operations. It includes raw materials, work-in-progress, and finished goods (Robert, 1998). The total inventory balance is known as stock in hand or closing stock, which is determined after accounting for newly issued stock to departments and newly received inventory (Lucey, 1992). Broadly, inventory encompasses finished goods, work-in-progress, spare parts, and raw materials. Effective inventory management ensures the smooth functioning of an organization and helps prevent issues such as stock shortages.

Organizations maintain large inventories for various reasons, including ensuring uninterrupted production, taking advantage of bulk purchase discounts, mitigating supply shortages in the market, and meeting anticipated demand. Additionally, inventory management is driven by three key motives: speculative, precautionary, and transactional. The speculative motive involves holding inventory to capitalize on potential price fluctuations in the market. The precautionary motive aims to mitigate risks associated with unforeseen changes in demand and supply. The transactional motive focuses on ensuring smooth business operations, including production and sales. A well-managed inventory system helps reduce costs, and these savings can be passed on to customers. Conversely, poor inventory management increases costs, which must be absorbed either by the business or its customers. Several experts emphasize the importance of maintaining an efficient inventory system to minimize costs and optimize total inventory value (Morris, 1995).

The Effects of Inventory Management on Small Businesses

Large organizations have significant financial resources, allowing them to manage and absorb the costs associated with maintaining large inventories. In contrast, small businesses operate with limited financial capacity and must handle their inventory efficiently to avoid excessive costs. In the context of small businesses, maintaining a lower inventory level can sometimes result in reduced profitability due to fluctuations in market prices and sudden changes in customer demand. To mitigate risks and improve stock levels, small businesses often depend on inventory purchased on credit, which allows them to maintain a sufficient quantity of stock while easing financial burdens (Peel, Wilson, & Howorth, 2000). For small businesses, the primary focus is on enhancing profitability by carefully managing product-specific inventory and targeting niche markets (Howorth & Westhead, 2003). Peel and Wilson (1996) emphasize the importance of establishing a structured inventory management policy, enabling small businesses to maintain optimal stock levels and maximize profits.

Several previous studies have highlighted the positive impact of inventory management on business profitability. For instance, research by Grablowsky (1976) found that effective inventory management policies and practices contribute to increased business profitability. Similarly, Deakins (2001) demonstrated that businesses with efficient inventory management systems perform better in terms of profitability compared to those with weak inventory management practices. In the specific context of small businesses, Berry (2002) found that firms can enhance their profitability by placing greater emphasis on inventory management strategies. Additionally, a study by Narasimhan and Murty (2001) revealed a significant positive correlation between inventory management practices and small business profitability. They suggested that small businesses could improve their inventory management by purchasing goods on longer account payable terms while selling on shorter account receivable terms to optimize cash flow. Padachi (2006) also confirmed that effective inventory

management has a positive and significant influence on small business profitability. Lastly, research conducted by Deloof (2003) concluded that proper inventory management directly contributes to higher profitability in small businesses.

RESEARCH METHODOLOGY

The methodology of this study is based on primary data collected from business owners and managers of small-scale enterprises located in Dhaka, the capital city of Bangladesh. The data was gathered on two key variables: inventory management and business profitability. The analysis was conducted using regression analysis through SPSS version 22. The study sample consisted of 112 participants, selected using a convenience non-random sampling approach.

RESULTS

Demographic Details

Demographic details are provided below.

Table 1
Demographic Details

	Frequency
Gender	
Male	84
Female	28
Age	
18 to 30 Years	38
30 to 45 Years	44
45 to 60 Years	30

In terms of gender distribution, the study included 84 male and 28 female participants. Regarding age groups, 38 participants were between 18 and 30 years old, 44 participants fell within the 30 to 45 age range, and 30 participants were between 45 and 60 years old.

Regression Analysis

The results of the regression analysis is provided below.

Table 2
Regression Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
1	.886 ^a	.785	.775		4532.73329	1.998

The R-value indicates that the association between our variables is 88.6%. The R-square value shows that inventory management accounts for 78.5% of the variation in the dependent variable, which is the profitability of small businesses. Additionally, the Durbin-Watson (DW) statistic is close to 2, indicating that there is no issue of autocorrelation in the data.

Table 3
ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.3231	1	1.13692	252.322	.000 ^a
	Residual	1.5870	9	2.11392		
Total		3.9102	10			

The F-statistic indicates that the model demonstrates a good fit for the data, as its value is 252.322, which is significantly higher than the minimum threshold of 4. Furthermore, the p-value of the F-statistic is 0.000, which is less than 0.05, making it highly significant.

Table 4

Coefficients

	Unstandardized Coefficients		t-value	Sig
	Beta Value	Std. Error		
Constant	1.2334	.8944	1.377	0.542
Inventory Management	2.3233	.4342	5.348	0.000

The coefficient table indicates that inventory management has a positive and significant impact on business profitability in the context of small businesses in Dhaka, Bangladesh. The beta value suggests that for every one-unit improvement in inventory management, the profitability of small businesses increases by 2.3233 units. The t-value obtained is 5.348, which exceeds the critical value of 1.96, confirming statistical significance. Additionally, the significance value is 0.000, which is below the 0.05 threshold. Overall, these results demonstrate that inventory management plays a crucial role in positively and significantly influencing the profitability of small businesses in this local context.

Discussion of the Study

The objective of this study was to examine the influence of inventory management on the profitability of small businesses in Bangladesh. A survey method was used for data collection, gathering responses from 112 participants who were either owners or managers of small businesses. The findings indicate that inventory management has a positive and significant impact on small business profitability. These results align with previous research, such as Deakins (2001), which also found a positive relationship between inventory management and business profitability. Similarly, Berry (2002) demonstrated that effective inventory management serves as a strong predictor of business profitability. Padachi (2006) further confirmed that inventory management has significant positive effects on the profitability of small businesses. Additionally, Deloof (2003) found that inventory management plays a crucial role in enhancing business profitability. Overall, the findings of this study are consistent with prior research, reinforcing the importance of efficient inventory management in improving small business profitability.

CONCLUSION AND RECOMMENDATIONS

The primary objective of this study was to examine the impact of inventory management on the profitability of small businesses. Data was collected from 112 small business owners and managers and analyzed using a regression analysis framework. The findings indicate that inventory management has a positive and significant effect on small business profitability. Based on these results, it can be concluded that inventory management plays a crucial role in the success of small businesses. Additionally, a firm's inventory management practices can have a significant influence on its overall profitability.

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