YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF MANAGEMENT STUDIES

MBA PROGRAMME

EFFECT OF INVENTORY MANAGEMENT ON FIRM PERFORMANCE OF IT SHOPS IN YANGON

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EMBA II - 85

EMBA 17th BATCH

OCTOBER, 2022

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ACADEMIC YEAR (2018-2022)

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A Thesis submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Business Administration (MBA)

Supervised By:

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ACCEPTANCE

This is to certify that the thesis prepared by Shein Wint entitled "**Effect of Inventory Management on Firm Performance of IT Shops in Yangon**" has been accepted by the Examination Board for awarding Master of Business Administration (MBA) degree.

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Dr. Tin Tin Htwe

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(Examiner)	(Examiner)

OCTOBER, 2022

ABSTRACT

This study aims to analyse the effect of contextual factors on inventory management and the effect of inventory management on firm performance of IT shops in Yangon. From the analysis, 172 IT shops which keep inventory in their shops are randomly selected by using simple random sampling method. The data are collected through structured questionnaires. According to the findings, cost barrier and owners' / managers' attitude have positively effect on purchasing, inventory accuracy and stockout of inventory management. Contextual factor like owners' / managers' knowledge is highly significant effect on controlling of inventory management. In addition, the result shows that inventory management factors such as purchasing, inventory accuracy and stockout have significantly positive effect on firm performance of IT shops in Yangon. To be concluded, IT shops which perform inventory management system in their shops can make huge progress not only in sales but also in customers' loyalty as firm performance.

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LIST OF ABBREVIATIONS

AR	Augmented Reality
CCTV	Closed-circuit Television
CPFR	Collaborative Planning, Forecasting, Replenishment
EDI	Electronic Data Exchange
EOQ	Economic Quantity Order
ERP	Enterprise Resource Planning
GPS	Global Positioning System
IoT	Internet of Things
IT	Information Technology
JIT	Just-in-Time
MRP	Material Requirements Planning
POS	Point of Sale
RMI	Retailer Managed Inventory
SKU	Stock Keeping Unit
SMEs	Small and Medium-sized Enterprises
VMI	Vendor Managed Inventory
VR	Virtual Reality

CHAPTER 1
INTRODUCTION

In these days, retail businesses are in the challenging state of dealing with uncertainty of market situation and inconsistency of the customer demand while trying to improve firm performance. Figuring out what factors influence firm performance brings retail businesses a step closer towards understanding how firm performance can be effectively impacted (Hise, 1983). The rapidly changing retail environment, along with sophisticated and demanding consumers, has presented retailers with the challenge of finding ways in which to differentiate themselves from the competition (Sanjaya, 2006). The objective of inventory management is to turn over the inventory as fast as possible in order not to lose sales. In achieving these goals, enterprises should understand customer needs, vendor partnerships, technology, data integrity and performance measurements.

Inventory management is one of the fundamental processes of supply chain in every industry. In retail businesses, business owners have to consider how high the inventory level should be kept to achieve the goal of the businesses and how low the inventory level should be kept to reduce operational cost for holding the inventory such as financial cost, quality cost and space cost. To get a holistic view of inventory management, retail businesses require determining inventory levels both upstream and downstream to customers. Inventory optimization reduces demand variability by continuously updating safety stock levels throughout in supply chain (Davis, 2014).

Inventory optimization involves strategies used to maximize profits through the use of various inventory control techniques. It helps to have an understanding of opportunity cost, which applies giving up something of value in exchange for something else. Inventory management is the process of ordering, storing, and using a company's inventory, which mainly constitutes the raw materials, administrative supplies and effective use of inventory (Shardeo, 2015). Many new concepts have been developed in the field of inventory management system in recent years. By integrating advanced technologies in retail businesses, business owners can improve their firm performance and can differentiate their businesses from other competitors.

There are various factors concerning inventory management such as purchasing, inventory accuracy, stockout and controlling. Purchasing with bulk orders can have an advantage on price competitiveness among the competitors and analysis on the market

demand will support submitting purchase order with customer needs. Inventory accuracy with efficient inventory management practices helps to prevent stockout situation and it increases customer satisfaction and loyalty.

Contextual factors such cost barrier, owners' / managers' attitude and knowledge have an impact on the inventory management in the ways of consideration for warehouse cost, holding cost and opportunity cost to keep stock in hand. Inventory costs consist of all costs associated with ordering, holding and managing the inventory levels of a product. These costs can affect the profitability of firms because firms with high volume of inventories usually have to become substantial inventory costs. Moreover, owners' / managers' attitude towards inventory management is essential to improve firm performance by implementing advanced technologies and adequate skillful staff. When owners' / managers' knowledge on controlling of inventory management is extraordinary, their retail business becomes blooming with higher achievement, better performance and satisfied benefit.

If inventory management is not applied in the workplace, it costs not only financial chaos but also loss of customers' satisfaction. Product availability by controlling well on inventory management support increasing sales and profit to survive in the competitive markets. In today's marketplace, customers do not hesitate to share their bad experiences on online platforms or to spread others by word of mouth if they do not receive their satisfaction. Therefore, inventory management increase customers' satisfaction, customers' loyalty, employee engagement and firm performance.

Firm performance is the capability of a business to effectively use its resources in such a way to generate operational and financial results (Taouab & Issor, 2019). The facts of profitability, growth, market value, customer satisfaction, employee satisfaction determine firm performance. IT shops as retail businesses are getting competitive among local players as well as global competitors through having variety of products in shelves, popular brands in shops, no quality issues and customer satisfaction. To be unique and profound in the retail industry, IT shops become mainly concerning with inventory management to improve their firm performance. By performing inventory management properly, it increases product availability, customers' satisfaction and loyalty. In addition, it improves firm performance which can be described profit as well as employee engagement. Thus, this study emphasizes on the contextual factors of inventory management and how inventory management affects firm performance of IT shops in Yangon.

1.1 Rationale of the Study

Inventory management plays an important role in every firm as any ineffective inventory management occurs in loss of sales and customers. To prevent these circumstances, retail businesses like IT shops should take precautions such as preventing from occurring stockout, monitoring inventory accuracy, engaging purchasing and conducting controlling.

The purpose of inventory management is to be ready when it is needed but it should not intrude sale department with lesser stock or stockout while the demand is occurring. Effective inventory management enables covering the entire sale while preventing the quality of the goods which are in the warehouse to be sold out in the given period. Meanwhile, it has monetary cost for investing in advanced technologies to get the job done efficiently and effectively. On the other hand, if there is any human error in performing inventory management, it weakens sales performance and firm performance accordingly. It needs more precisely employees' participation and enthusiasm in the processes of performing advanced technologies and taking good care of inventory management to control inventory well and to keep customer satisfied at the highest level.

Performing proper inventory management will help not only SMEs level enterprises but also Corporation level enterprises to get profit. By knowing inventory management well, it can arrange not to keep many stocks to avoid stockout situation and accumulate organisation performance in terms of profit and satisfying customers to be retained in the long term for future businesses. Without emphasizing inventory management in the organisation, it will cause chaos such as keeping outdated items, storing slow-moving items, having a pile of stocks which cannot generate customer interest, losing loyal customers while happening stockout condition, causing financial issue and decreasing firm performance.

IT shops among retail businesses are running with advanced technologies and sharing knowledge of how to conduct these new technologies to other industries. It is interesting to know how IT shops are using which inventory management system and how to handle to control the stock as the optimal level to improve their firm performance. The study aims at investigating the effect of contextual factors on inventory management such as cost barrier, owners' / managers' attitude and owners' / managers' knowledge and how inventory management factors imply firm performance of IT shops. The area of study is conducted on IT shops which keep inventory as firm performance in Yangon.

1.2 Objectives of the Study

There are two main objectives for this study. They are:

(1) To examine the effect of contextual factors on inventory management of IT shops in Yangon

(2) To analyse the effect of inventory management on firm performance of IT shops in Yangon

1.3 Scope and Method of the Study

Sample size proposed for the study is 172 IT shops which keep inventory in their shops by using Taro Yamane's sampling size formula at 95% confidence level based on the total population of 300 shops according to the data of Yangon Region Computer Associations. Primary data are collected through survey questionnaires from 172 IT shops in Yangon. Secondary data are collected from previous research, website, published journals, international thesis and relevant textbooks. For data analysis, both descriptive statistics method and multiple linear regression method are used in the study. Time taken for collecting survey data was from Jun 2022 to Aug 2022. Due to the limitation of time and effort, the study focused on inventory management of IT shops in Yangon.

1.4 Organisation of the Study

The paper is organised into five different Chapters. Chapter One starts with an introduction section, which includes rationale of the study, objectives of the study, scope, methodology, limitation of the study and organisation of the study. Chapter Two includes theoretical background concerning with purchasing, inventory accuracy, stockout and controlling on inventory management and firm performance and provides a conceptual framework of the study with a diagram. Chapter Three consists of inventory management of IT shops in Yangon and exploring what factors affect inventory management of IT shops in Yangon. Structure questionnaires for the survey are also prepared for gathering information for the study. Chapter Four describes the analysis on effect of contextual factors, inventory management and firm performance of IT shops in Yangon. The last chapter, Chapter Five is the conclusion section including representation of findings, discussions, suggestions, recommendations and needs for further research.

CHAPTER 2
THEORETICAL BACKGROUND

This chapter includes the theories and concepts that form theoretical framework of the study. The definitions and related theories of dependent variables and independent variables are presented. The conceptual framework of the study is also described.

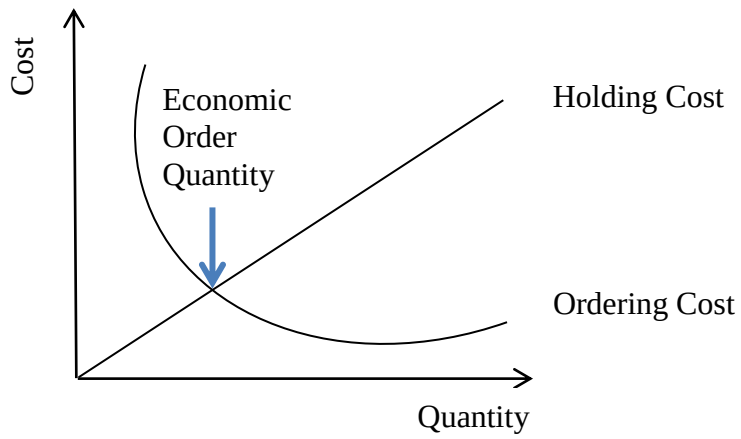
2.1 Inventory Management

Inventory management is the function responsible for all decisions about stock in an organisation. It makes decisions for policies, activities and procedures to make sure the right amount of each item is held in stock at any time. The expression of inventory in assembling organisations alludes to the store of the items a firm is putting forth available to be purchased and the segments that make up the items. The assets that organisations store as stock for expectation about requires are raw materials, work in progress, finished goods and supplies (Ioannis, 2015).

2.1.1 Concept of Inventory Management

As a component of supply chain management, inventory management supervises the flow of goods from manufacturers to warehouses and from these facilities to point of sales. There are many concepts of inventory management. Among them, two concepts of inventory management such as Economic Quantity Order (EOQ) model and Just In Time (JIT) model are defined in this study. For EOQ model, it is a term for the ideal quantity a company should conduct to minimize its inventory costs, like shortage or carrying costs.

Figure (2.1) Economic Order Quantity



Source: Coyle, 2003

The model of Economic Order Quantity (EOQ) known as fixed ordered quantity implies that a firm will reorder when the amount on hand decreases to some predetermined level. The amount ordered depends upon the products' cost and demand, along with inventory carrying and reordering costs. The reorder point is based upon lead time or replenishment time to fill stock in the inventory. To get optimal order size by applying EOQ model, inventory management system calculates fixed ordered quantity to minimize total costs. The EOQ model is developed in standard mathematical form, as follows:

$$Q = \sqrt{\frac{2RA}{S}}$$

Q = quantity ordered lot size (units)

R = annual rate of demand or requirement for period (units)

A = cost of placing an order or setup cost ($ per order)

S = storage cost per unit per year ($ per unit per year)

Economic order quantity refers to the maximum amount of inventory a warehouse can have while minimizing inventory costs. The optimal quantity is the exact amount of inventory retail shop should order to meet demand. By calculating the economic order quantity, it helps to achieve the most out of the warehouse space, minimize costs, and increase revenue.

For JIT model, it is a management strategy that a company receives goods as close as possible to when they are needed. Consequently, it minimizes inventory and increases efficiency to improve firm performance. JIT system is designed to manage lead times and eliminate waste. Product should arrive exactly when a firm needs it with no tolerance for late or early deliveries. JIT attempts to eliminate excess inventories, to reduce production time, to decrease warehouse holding cost and to shorten lead times to satisfy the need for more inventories in a timely manner. With the availability of high-quality product and dependable transportation services can support to fit a JIT-based system. On the other hand, JIT model can have a major impact on the business. Since there is no excess stock to fall back on, sales may come to a halt.

There are a few examples of successful JIT implementations such as Toyota and Dell. The Toyota production strategy is highlighted by the fact that raw materials are not brought to the production floor until an order is received. The JIT-based approach has allowed Toyota to keep a minimum amount of inventory which means lower costs. It defines that Toyota can adapt quickly to changes in demand without having to worry

about disposing of expensive inventory. Dell's approach to JIT is unique in that Dell can provide exceptionally short lead times to their customers by forcing their suppliers to carry inventory to shorten lead times on components so that products can be simply assembled by Dell and then shipped to the customers quickly.

2.1.2 Practices of Inventory Management

Inventory is fundamental to association for production activities, maintenance of plant and machinery and also other operational necessities. This results in tying up of cash or capital which could have been utilized more productively. The administration of an association turns out to be exceptionally worried in inventory stocks are high. Inventory is a piece of the organisation resources and is constantly reflected in the organisation's asset report (Godana, 2014).

Inventory management is essential to an enterprise since it is custom-made to reducing costs or increasing profits while satisfying customer's demands by guaranteeing that balanced items of stock are sustained at the right quality, quantity, and that are obtainable at the right time and in the right place (Atnafu, 2018). The role of inventory management is to maintain a desired stock level for every specific product or item, where the systems that plan and control inventory must be based on the product, customer, and the process for product that available in the inventory (Toomey, 2000). Furthermore, based on the importance of inventory on the balance sheet of companies, inventory is an asset on the balance sheet of companies where has taken an increased significantly because many firms play some strategies by reducing their investment in fixed assets, plants, warehouses, office buildings, equipment and machinery (Coyle, 2003).

Kontus (2014) posited that inventory management is a key organisational function that helps in the development of policies aimed at optimal investment in inventory. Consequently, optimal inventory management can lead to maximization of liquidity and risk. Chambers and Lacey (2011) observed that inventory management seeks to get a balance between benefits that accrue from holding inventory and costs of doing the same. Accordingly, inventory management is a process designed to maximize the net benefits of the inventory as well as minimize expenses at the same time.

To obtain the objects, the organisations usually hold different types of stock such as raw materials, work in progress and finished goods. Inventory management is the process of ordering, storing, and using a company's inventory, which mainly constitutes the raw materials, administrative supplies and finished products. The purpose of ordering

is to make inventory easy to track and identify in a warehouse where there is a cluster of materials and goods. Storage is a term used to describe warehousing of inventory. The purposes of storing are to keep the level of stock needed to ensure continuous production or service delivery, avoid unexpected shortage of inventory and prevent wastage of raw materials and goods. Effective inventory use is a term used to describe using the right type of inventory to accomplish the right goal in the prescribed way (Shardeo, 2015).

Information systems which are essential to inventory management have been seen as the solution to support organisations required in terms of decision making, organisational agility and competitiveness. Sharif (2007) noted that evaluation of information systems in businesses is a process that ensures that decisions are made compatible with the organisation's defined risks, benefits and costs, and highlights backlash that arises from investment in information systems for integrating with inventory management process. More efficient inventory management gives lower operating costs. It can also improve procurement, monitor and control stock levels, set optimal order sizes and generally reduce inventory costs. The result is higher profit margins or price reductions to increase sales (Waters, 2003).

(a) Purchasing

When an organisation decides to purchase, there might be a delay before the goods is ready to be sent. With small quantities purchase, this can be very short and involve a few administrative details. Bulk quantities purchase needs time for designing items, performing of a tendering process, arranging finance and so on. Procurement department has attempted to appear attractive to get the best bargain from the suppliers. Understanding the important fact of valued suppliers allows value creation to be maximized in firm performance. When demand is constant, there is no benefit in carrying stock from one cycle to the next. But for fluctuated demand, it will need faster time to keep the inventory back on shelves. To perform this, owners and managers have to make a purchase upon lead time and reorder level before the goods of delivery are concerned to be reachable in time. Economic Order Quantity (EOQ) is used to determine and control the optimal level of inventory. The principle stipulates that EOQ is the level that minimises holding and ordering costs (Lwiki, 2013; Olufemi, 2016; Kumar, 2016).

Purchasing which usually initiates the flow of materials through an organisation by sending a purchase order to a supplier. It means procurement has to find suitable

suppliers, negotiate terms, set conditions, organise delivery, arrange insurance, authorize payment and do necessary things to get materials into the organisation (Waters, 2003).

The existence of software for supply chain management that can help reduce production, inventory, transportation and purchase costs and also reduce lead time is therefore an added advantage in achieving the same. Mundia (2015) noted that Electronic Data Exchange (EDI) and Enterprise Resource Planning (ERP) are most commonly used although several communication technologies are used across companies.

EDI is the use of transaction sets to occasion exchange of data between computer systems (Mundia, 2015). It can both reduce costs and increase customer service at the same time. Both recognize that customer satisfaction and low costs are dominant themes and there must be some balance between the two (Waters, 2003). The use of EDI not only reduces administration costs while overseeing improved data management accuracy and speed but, also injects speed, flexibility, security and accuracy in sending and receiving standardized business communication among organisations.

ERP system coordinates executions of activities minimizing delays, improving inventory management and reducing operational costs. ERP system ensures that the organisation's operations are coordinated and the organisation's relationship with suppliers and customers is enhanced. Top management should be committed to fostering the requisite organisational change that supports ERP system.

(b) Inventory Accuracy

The lack of accurate, real-time and suitable aggregate information on material flows and stock levels prevented the Finnish SMEs from setting precise quantitative goals for inventory management (Chikan, 1990). It explored the impact of common inventory system inaccuracies that occurred in retail outlets on the inventory levels, fill rate and service level of those outlets found that inventory system error and the frequency with which the error was corrected were statistically significant for the fill rate and service level (Waller, 2006). A computerized inventory control system which is automated to count inventories and to record withdrawals and balances is also used in modern business environment.

Shardeo (2015) observed that the technique controls inventories by easily tracking large inventory items. There are several techniques which are commonly used in the management of inventory. These are Economic Order Quantity (EOQ), Just-In-Time (JIT), ABC analysis, Inventory Turn Over Ratio, Barcode System and Enterprise Resource Planning (ERP). It was concluded that retailers with sophisticated computerized systems for better forecasting and improved inventory management had an edge over the others in terms of inventory accuracy. Thus, retailers can make use of the proposed model for demand forecasting of various items to improve the inventory performance and profitability of operations (Bala, 2012).

The jump in demand is encouraging organisations to hold higher stocks to give themselves a margin of safety. These extra stocks increase costs definitely. When final customers start demanding a new product, all the stocks of old products in the supply chain have to be sold before the new ones appear to serve customers' needs (Waters, 2003).

Understanding the demand pattern improves the forecast and helps to get inventory accuracy. Since comprehensive forecast supports inventory accuracy, it reduces safety stock and inventory holding cost and improves firm performance.

(c) Stockout

A stockout occurs when desired quantities of finished goods are not available to provide customer needs. Stockout results from holding too little stock for the offending lines because the forecasts, monitoring or controls are inadequate. When a seller is unable to satisfy demand with available inventory, one of four possible events may occur: (1) the customer waits until the product is available, (2) the customer back orders the product, (3) the seller loses a sale or (4) the seller loses a customer. From the viewpoint of most companies, these four outcomes are listed from best to worst in terms of desirability and cost impact (Coyle, 2003).

Inventory management is necessary because a sufficient amount of inventory is needed to minimise the rate of stockouts in a firm. In setting inventory levels, firms should consider the costs such as ordering costs, holding costs and stockout costs (Drury, 2004). Stockout can be the cost which occurs the lost income and expense associated with a shortage of inventory. Stockout cost results when a firm is unable to meet current internal and external inventory demands. Firms could lose customers to competitors during stockout situation. However, this can be prevented or reduced by performing effective inventory management.

The findings of Chikan (1990) revealed that financial pressures forced enterprises to reduce their inventories, which eventually led to internal as well as external stockout. Any variation between production and sales is covered by changes in stock. When production is higher than sales, stock builds up and when sales are higher than production, stock declines. These stock changes might be simple adjustments to the finished goods. Careful management of stocks increases the availability of products, reduces lead times, allows proper delivery size and frequency and gives faster delivery. This raises their perceived value and gives higher customer satisfaction. The result is more frequent orders from customers, more repeat orders, greater customer loyalty, new customers and generally higher sales (Waters, 2003).

(d) Controlling

Inventory management is responsible for all aspects of stock control. Every organisation holds stocks of materials. Stocks are replenished by deliveries from suppliers and reduced to meet demands from customers. Inventory control sets the overall policies for stock, considering the materials to store, investment, customer service, stock levels, order sizes, order timing and so on. High stock levels arise because too much stock has been purchased, through bad forecasting, monitoring or controls. High stock and poor availability are caused simultaneously as a result of poor control. Controlling is the essential process of quality products and services of every successful organisation. An effective inventory management system involves controlling the inventory at the optimal level in order to prevent from having too much and not having enough inventory. Accordingly, managers should allow employees to take necessary actions on their initiatives to improve controlling and all employees should be allowed to share in implementing and controlling of inventory management. It is essential for retail businesses to survive and sustain in the competitive market.

Many successful businesses have identified the effective management of their employees as a key area of competency in controlling. Although the need for technology is obvious, none of the benefits will be experienced if the employees and organisational issues are not properly addressed from the start (Coyle, 2003). By building a culture that enables employees to engage more in their work, organisations may benefit from employees who are willing to go the extra miles and achieve better financial performance (Baumruk, 2006). Training should be provided to allow employees to attain higher skills and should include training in techniques for controlling such as statistical methods and managerial skills in decision-making, leadership, team building, safety, and so on (Aly, 2003).

To offset the increasing demands from customers, organisations are becoming more competitive. They simply try to keep prices down and at the same time they try to find some other way of improving customer service. Both of these depend on the management of stocks. Low prices can only be achieved with low costs, and the main cost can be the cost of holding stock. It is normally in everyone's interests to make this as low as possible so that customers pay as little as possible and the organisation remains competitive (Waters, 2003). But many companies hit problems when they reduced stocks to levels that made it impossible to work effectively or maintain any kind of customer

service. In order to be balance between out-of-stock condition and outdated stock condition, it needs to concentrate on the process of controlling inventory.

2.2 Contextual Factors

There are many contextual factors of inventory management practices. Among them, cost barrier, owners' / managers' attitude and owners' / managers' knowledge are commonly found in every aspect of inventory management.

(a) Cost Barrier

The findings of Chikan (1990) revealed that financial pressures forced enterprises to reduce their inventories which could lead to stockout. The financial volatility necessitated a more accurate characterisation of inventory costs based on the time-adjusted value. Inventory costs are important for three major reasons. Firstly, it describes a significant component of the total logistics costs in many companies. Secondly, the inventory levels affect the service of the firm can provide to its customers. Thirdly, cost trade-off decisions in logistics commonly depend upon and ultimately affect inventory costs. Basically, four types of inventory costs exist. These are item costs, holding costs, ordering costs, and shortage costs (Coyle, 2003).

(b) Owners' / Managers' Attitude

The main problem of sophisticated inventory management usage was due to the inadequacy of qualified personnel as well as owners' and managers' attitude. In a study, it pointed out key factors within the control of store managers to optimize inventory level of the stores (Ayad, 2008). Owners' and managers' willingness to involve in improving inventory management enhances the business activities such as operation, investment, employee engagement, customer relationship management and firm performance. The results showed that different stores within the same companies delivered different results, mainly due to human factors, specifically in terms of critical thinking, functional knowledge, and leadership.

(c) Owners' / Managers' Knowledge

The knowledge towards a proper inventory management practice and their knowledge on inventory management may have a greater impact on inventory management practices. Managerial support towards the use of management practices had been investigated in many studies related to the use of advanced management practices (Chikan, 1990). Business owners may derive their biased understanding of inventory management.

A traditional view has senior managers making the strategic decisions that set their organisation on its course. These strategic decisions give the objectives, constraints and context for the tactical decisions made by middle managers. These, in turn, give the objectives, constraints and context for operational decisions made by junior managers. New styles of management and advanced technology have changed this traditional pattern. Most decisions are discussed, negotiated and agreed upon rather than simply passed down, and there is a growing recognition that the best person to make a decision is the person most closely involved with it (Waters, 2003).

2.3 Firm Performance

Firm performance has been described as the extent to which a business or organisation achieves its profitability and efficiency goals (Koumanakos, 2008). It focuses on measuring the current operational, marketing including sales and financial performance of the business in the current or previous financial year (Sitienei, 2016). It is different from firm growth, which is a measure of how well the business improves its performance over time. To achieve positive growth in the organisation, satisfactorily high performance is necessary. As a result, performance and growth improvement is a common agenda for all organisations.

Stocks play an important role in every organisation. Stocks allow operations to become more efficient and productive. Stocks affect lead times and availability of materials affecting customer service, satisfaction, and the perceived value of products. To get better control of stock, inventory management system becomes essential to every organisation. By using an effective inventory management system, it reduces operating costs and risk. On the other hand, it increases profit, return on assets, return on investment of financial performance, maintain customer loyalty and increase employee engagement (Waters, 2003).

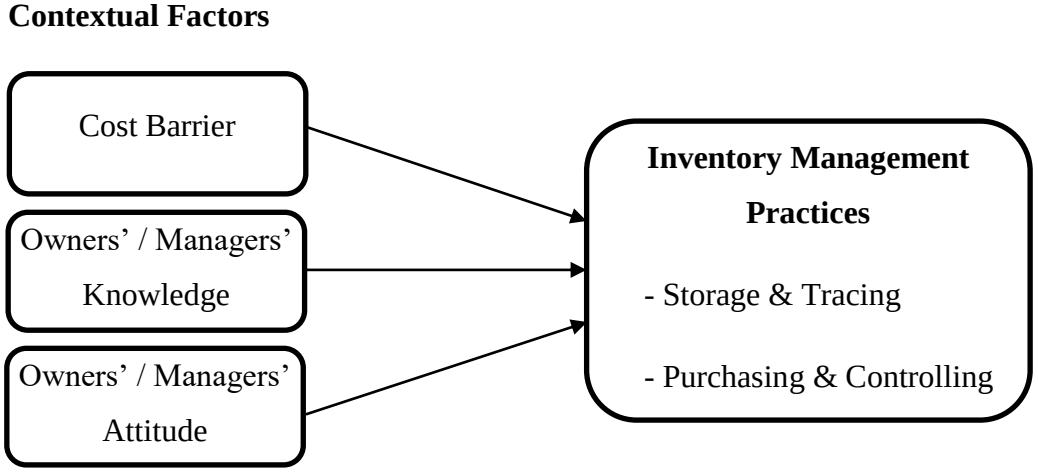
By conducting proper inventory management to get a positive effect on firm performance, it is worth knowing what factors make inventory management effective. The influence of human capital on firm performance has also been investigated. It focused on analysing the effect in human capital investment on firm performance. Using the inferential tests of association, the study revealed that firm performance was associated with investment in quality, relevance, and reliability in human capital (Odhon, 2015).

Inventory affects not only the balance sheet of a firm by increasing its liabilities and assets but also hampers its profit and loss account by incurring additional expenses. Proper inventory management enables retail businesses to determine and maintain an optimum level of inventory to achieve firm performance. Inventory is an important part of profit and loss account since the cost of procurement is computed against sales for the period (Hossain, 2015).

2.4 Previous Studies

In the first referenced research, Ahmad (2016) mentioned that owners' / managers' attitude and their knowledge on inventory management had a high correlation with the extent of use of inventory management, which meant that the owners / managers played a crucial part in facilitating the development of the proper implementation of inventory management in retail businesses. Due to the inadequacy of qualified personnel as well as the management's attitude, it became the main problem of sophisticated inventory management. It examined key factors within the control of store managers to optimize the inventory. The results found that different stores within the same companies and different departments within the same stores delivered different results, mainly due to human factors, specifically in terms of critical thinking, functional knowledge and leadership. Even if retail enterprises had financial challenges to develop a systematic approach to inventory management, the issues should be concentrated as inventory management was one of the key factors to success. The previous conceptual framework of study is shown in Figure (2.2) below:

Figure (2.2) Conceptual Framework of Ahmad

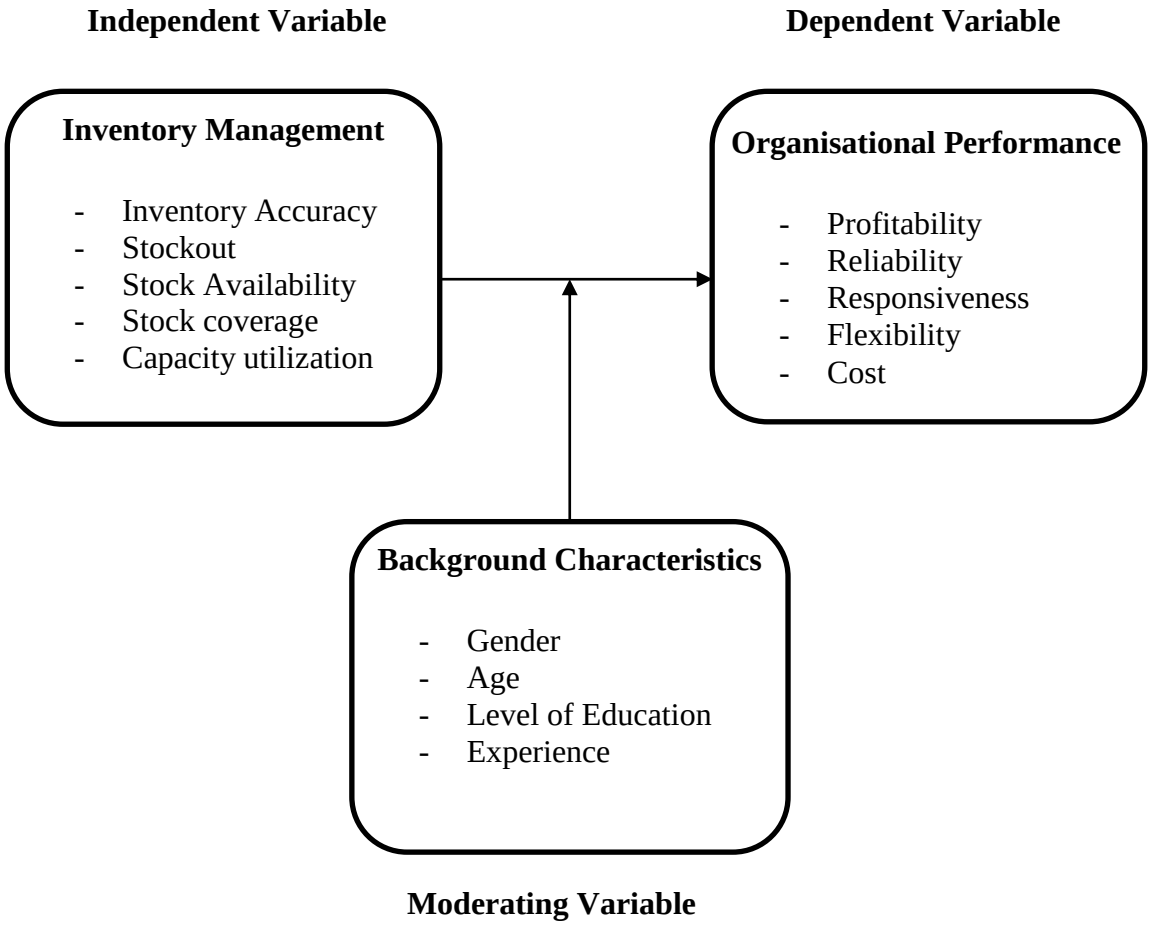


Source: Ahmad, 2016

In this research, researcher recommended classifying on contextual factors which associate with cost barrier, owners' / managers' attitude and their knowledge can affect the inventory management of micro retailing enterprises.

In the second referenced research, Musau (2017) stated that inventory management was another form of supply chain element that features prominently in empirical literature concerning organisational performance. Management appeared to consistently agree to be aware of inventory management practices on offer in their respective firms. Among key practices identified for inventory management included: the achievement of demand forecasting to determine stock coverage; proper material handling to address stockout; timely response to customer references; ensuring inventory accuracy; optimizing capacity utilization and achieving optimal inventory. The study found that the use of inventory management tools such as material requirement planning, distribution planning, and vendor managed inventory had a positive influence on operations efficiency and by extension on organisational performance. The previous conceptual framework of study is shown in Figure (2.3) below:

Figure (2.3) Conceptual Framework of Musau



Source: Musau, 2017

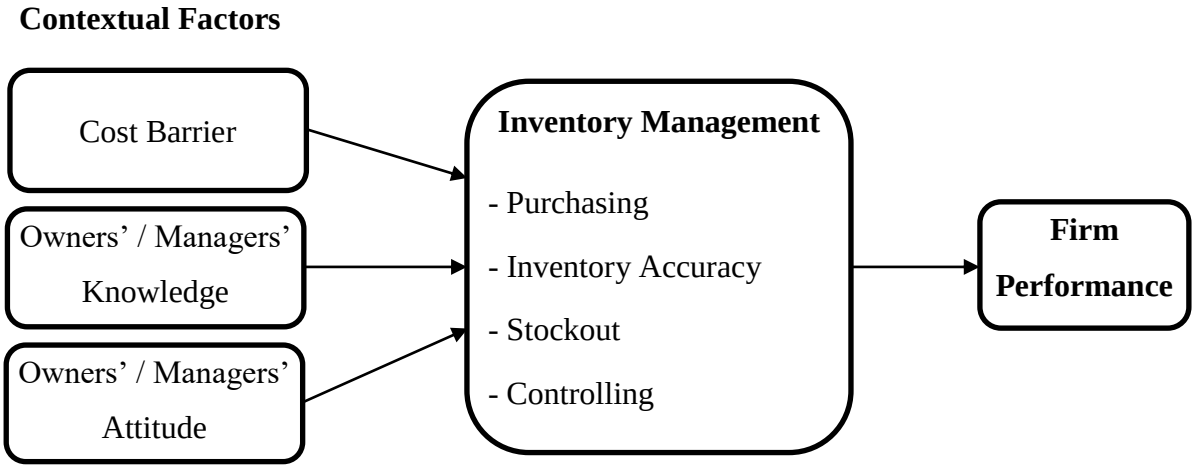
In the research, researcher found out that organisational performance was associated with an investment in quality, relevance and reliability in the human capacity.

It explored that employee empowerment through information sharing and training tended to have a moderate impact on organisational performance.

2.5 Conceptual Framework of the Study

Inventory management is one of the main concepts in supple chain to get better performance and customer satisfaction. Weakness in inventory management will cost keeping a higher volume of obsolete stock and a lesser volume of demanding stock. In the effect, retail business will lose competitive advantages in the market. To prevent this, retail business should imply proper inventory management system in their stores. The conceptual framework of study is shown in Figure (2.4) below:

Figure (2.4) Conceptual Framework of the Study



Source: Own Compilation, 2022

The conceptual framework of this study examines the relationship between contextual factors and inventory management. It explores subordinate factors of purchasing, inventory accuracy, stockout and controlling and examines the effects on the relationship between inventory management and firm performance according to the conceptual framework in Figure (2.4). In this study, firm performance is used to measure in terms of increasing sales and profit, improving employee engagement, providing customer satisfaction and maintaining customer loyalty.

CHAPTER 3
PROFILE AND INVENTORY MANAGEMENT OF IT SHOPS IN YANGON

This chapter is organised into three sections. The profiles of IT shops in Yangon are composed in the first part, inventory management practices of IT Shops are presented in the second part and the third part is to explore demographic data of respondents of IT shops in Yangon.

3.1 IT Shops in Yangon

There are about 300 IT shops in Yangon, Myanmar. Most IT shops are not only focusing on IT products but also Mobile products. There are relative customers who want to purchase IT and mobile products. Most of IT shops are located on Seikkantar Street, Kyauktada Township, Yangon. Some of IT companies are also in MICT park, Hlaing Township, Yangon. According to the market trend, some IT shops are opening in shopping malls where can serve customers conveniently. In the future, there will be IT industry zone in Thanlyin Township, Yangon.

In the world, IT business started growing since 1970s after developing microprocessor of computer. By using advanced technologies of IT, it has transformed entirely from traditional businesses to modern businesses in the very short periods of time. After inventing new products which are hardware and software such as laptop, mobile phone, website, social media and so on, IT sector becomes an important role in society. It has positive and negative effects on the world and impacts on daily lives of everyone.

IT business has been booming in Myanmar since Visit Myanmar Year 1996. Since 1996, the businesses of opening IT shops which are mostly established and operated by younger generation has been creating new job opportunities in Myanmar. With the help of IT sector, other business sectors has been increasing revenue and profit and reducing operational cost and time by using new technologies and managing systems with the latest software and hardware implementation. IT sector becomes fundamental to new technologies like Mobile Phone, POS, CCTV, GPS, AI, AR & VR, IoT, Big Data and Cloud Computing. IT shops provide hardware and software support for new technological devices.

For IT shops, most of them are keeping inventory as firm performance so that it can support customers' demand whenever they need. To keep inventory at optimal level, it has to check continuously the stock level in order not to happen stockout situation.

3.2 Inventory Management Practices of IT Shops

Inventory management is essential because holding cost of inventory is one of the highest cost factors for most the companies. To keep customers satisfied, IT shops are preparing to keep the stock which has demand from customers. IT shops require knowing the market trend and have to get a good relationship with suppliers in order to get minimum purchased price and higher quality products. IT shops need to follow up the suppliers' delivery date to get the goods in time before changing the market demand. When IT shops are ordering for replenishment, they may ask for the highest rebate by buying bulk items at the same time. Different suppliers are supporting different types of rebate systems such as discount for bulk buying, discount for cash payment, commission for fulfilling target, warranty extension, bundle products (fast-moving items with slow-moving items) and so on.

Most shops are using accounting software and barcode scanner to record the incoming and outgoing items of their inventory. It is also important to get inventory accuracy so that the decision makers can precise which items need to be replenished and which items need to be clear out from inventory list. While having many stocks, it causes higher holding cost and while having lesser stock, it causes losing customers.

Normally, IT products become obsolete in terms of function and warranty term after a period of time. IT shops are not keeping many stocks to avoid having outdated products. Handling warranty issue is challenging and is one of the key factors of IT shops to keep customers returning to buy from them. If customers are not satisfied with IT shops' response to warranty issues, they will complain about those shops and spread about the bad service with friends through online and offline feedback. Word-of-mouth marketing is still effective on this modern world and new customers are always searching the previous customers' reviews and feedback before deciding to buy items from IT shops. In the other hand, JIT order and not having enough safety stock can cause stockout situation and it impacts the business that some customers switch to the competitors. As the consequence of stockout, IT shops become reducing competence in customer relationship management, employee engagement and firm performance.

To get better control of inventory management, owners and managers invest in staff performance and advanced technologies. Occasionally, IT products are kept coming new models quite often and they are having new functions with better quality and cheaper price. To be balance between holding a pile of stock and stockout situations, IT shops are continuously checking the inventory data with advanced management systems.

By using cloud computing, IT shops are integrating ERP system (Enterprise Resource Planning) in their workplace. In that system, owners and managers are easy to monitor the outcome of firm performance by keeping optimal inventory level, motivating employee engagement and satisfying customers with quality products. Several inventory management practices that include Economic Order Quantity (EOQ), Just In Time (JIT), Vendor Managed Inventory, ABC analysis, Inventory Turn Over Ratio, Barcode System and Enterprise Resource Planning (ERP) are reported to significantly predict performance in retail businesses.

(a) Purchasing

In the following Table (3.1), it shows the data of person who is collecting inventory data, person who is supervising and managing inventory data and person who is deciding for purchasing order. The detailed frequency and percentage are shown in Table (3.1).

The data show that 95% of the respondents are staff of the stores who are collecting inventory data and they are the highest number of the respondents among the categories. 0% and 1% of the respondents are managers and owners respectively who are collecting inventory data shown in Table (3.1). It seems that staff assigned by manager or owner are collecting the inventory data most of the time.

For supervising and managing inventory data, 63% of the respondents are supervisors. They are the most number of respondents who are supervising and managing inventory data. Owners are the least number of respondents among the categories and have only 4% of the respondents. Staffs are the second least number of respondents among the categories and have 10% of the respondents shown in Table (3.1). It seems that supervisors of IT shops are usually in charge of inventory data.

Table (3.1) Collecting and Managing Inventory

Description	Staff		Supervisor		Manager		Owner		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Person who is collecting inventory data	163	95	7	4	0	0	2	1	172	100
Person who is supervising and managing inventory data	17	10	109	63	39	23	7	4	172	100
Person who is deciding for purchasing order	8	5	18	10	79	46	67	39	172	100

Source: Survey Data, 2022

For deciding for purchasing order, 46% of the respondents are managers. They have the highest number of the respondents who are deciding for purchasing order. 39% of the respondents are owner which are the second highest number of respondents among the categories. Staffs are the least number of respondents who are deciding for purchasing order and have only 5% of the respondents shown in Table (3.1). It seems that managers of IT shops are mostly deciding for purchasing order.

According to Table (3.2), the survey analysis describes the result of frequency of purchasing order and number of time collecting for inventory data. The detailed frequency and percentage are shown in Table (3.2) below.

Table (3.2) Ordering Inventory

Description	Daily		Weekly		Monthly		Total	
	No.	%	No.	%	No.	%	No.	%
Number of time collecting for inventory data	43	25	89	52	40	23	172	100
Frequency of purchasing order	45	26	87	51	40	23	172	100

Source: Survey Data, 2022

According to the survey data, most IT shops are doing purchasing weekly and it shows that 51% of the respondents are purchasing weekly for replenishment to fill back the stock in their inventory. Quarterly purchase plan is not working for IT shops. It seems that most IT shops need to restock their inventory very often in order not to lose their customers' satisfaction shown in Table (3.2).

In the result showing in Table (3.2), it shows that 52% of the respondents are collecting inventory data weekly and it is the most of the respondents in the categories. Similar to frequency of purchasing order, most IT shops do not perform quarterly at all for collecting inventory data. It seems that taking too long time to check inventory balance may cause unwanted problems such as stockout, pilferage, making order incorrectly and losing customers.

(b) Inventory Accuracy

When owners and managers manage the inventory accurately, it leads to how many products are needed to have on hand to meet customer needs. IT shops are normally using barcode scanner to store data for in and out of inventory from the shops. IT shops create stock keeping unit (SKU) for the items in their inventory. SKU helps IT shops to check easily on a variety of products and track effectively on inventory levels. To get inventory accuracy, staffs are assigned to collect data daily or weekly to precise between physical stock and actual recorded data. Owners and managers have the willingness to improve inventory accuracy by upgrading skillful staff and advanced technologies.

(c) Stockout

Whenever there is stockout situation in IT shops, there is stockout cost. It is the capital lost from inventory that has become unavailable for the customer to purchase. Stockout occurs when there are a few facts which are delay in submitting order, inaccurate order which does not match the products that customers' need, delay in delivery from supplier, logistics error and inadequate staff who are assigned to control inventory. In addition, inventory inaccuracy occurs stockout situation more frequently.

(d) Controlling

According to the result of Table (3.3), it shows the data of using barcode scanner or software for collecting and selling IT products. The detailed frequency and percentage are shown in Table (3.3).

As the interest of knowing IT shops which are collecting inventory data by using barcode scanner or software for processing, 66% of the respondents answered they use barcode scanner or software to collect inventory data to manage their inventory. It is the most of the respondents in the categories. There are 27% of respondents which IT shops

are not using barcode scanner or software to collect their inventory data. It seems that they perform manually to collect their inventory data.

Table (3.3) Using Barcode Scanner or Software for Collecting and Selling IT Products

Description	Not Really		Seldom		Frequently		Always		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Use barcode scanner or software to collect inventory data	46	27	8	5	4	2	114	66	172	100
Use barcode scanner or software to sell IT products	46	27	7	4	3	2	116	67	172	100

Source: Survey Data, 2022

According to the result of Table (3.3), it shows 67% of the respondents answered they use barcode scanner or software for selling IT products and it is the major group among the answers. It seems that they always conduct selling by using barcode scanner or software to save product data in their server in order to identify warranty period and price and data confirmation.

3.3 Demographic Profile of the Respondents

In the analysis, demographic profile of the respondents is examined and studied to collect data through survey questionnaires. The respondents from 172 shops are from retail IT shops in Yangon based on the sample size of 300 shops. The survey analysed 7 categories such as age, gender, educational level, length of service in current job, position, number of staffs working in one store and number of chain-stores owned by the company. The profile of 172 randomly selected respondents for this study is shown in Table (3.4).

Table (3.4) Demographic Profile of the Respondents

Particular		No. of Respondents	Percentage %
		172	100
Age	18-24 Years	48	28
	25-35 Years	102	60
	36-46 Years	18	10
	47 Years and above	4	2
Gender	Male	72	42
	Female	100	58
Educational Level	High School	13	8
	Under Graduated	45	26
	Graduated	87	50
	Post Graduated	27	16
Length of Service in Current Job	Less than one year	17	10
	1-3 years	71	41
	4-6 years	36	21
	More than 7 years	48	28
Position	Senior Executive	53	31
	Supervisor	46	27
	Manager	40	23
	Owner	33	19
Number of Staffs Working in One Store	1-5 persons	50	30
	6-10 persons	60	35
	11-20 persons	35	20
	21-50 persons	27	15
Number of Chain-Stores Owned by the Company	1 store	112	65
	2-3 stores	55	32
	4-6 stores	3	2
	More than 7 stores	2	1

Source: Survey Data, 2022

As the result of the survey data, the major age group of the respondents is between 25 to 35 years old and it represents 60% of the respondents. 28 % of the respondents are between 18 and 24 years, 10% of respondents are between 36 and 46 years and 2 % of the respondents are above 47 years old. The result shows that most of the staffs from IT shops are in the middle age and they have the best interest in technology.

In gender group, female percentage is slightly more than male percentage. The result shows that 58% of the respondents are female and 42% of the respondents are male. It seems female staffs are more likely to work in IT shops than male staffs, which needs to give more incentive care on customer services.

From the result of the analysis on the education level of respondents, the most participants are holding bachelor degree and it accounts 50% of the respondents. 8% of the respondents are high school level, 26% of the respondents are under graduated and 16% of the respondents are post graduated. It can be assumed that most of the respondents are graduated and they are able to run IT businesses with well-trained skill and powerful knowledge to fulfill their customers' needs.

According to the survey data of length of service in current job, the result shows that most of the respondents are between 1 to 3 years in current job with 41% of the respondents. 10% of the respondents are less than 1 year in current job, 21% of the respondents are between 4 to 6 years in current job and 28% of the respondents are more than 7 years in current job. It seems the respondents who are less than 1 year in current job are the least of the respondents and most of the staffs of IT shops are well-experienced in current job to serve customers effectively and efficiently.

From the result of the survey data of job position, 31% of the respondents are senior executives and it is the highest group among the respondents. The second highest group among respondents is supervisor and it shows 27% of the respondents. 23% of the respondents are managers and 19% of the respondents are owners of IT shops. It seems owners are the least group of the respondents because they do not participate in day-to-day jobs and let managers and supervisors manage IT shops with full accountability and responsibility.

As the result of the survey data of number of staffs working in one store, the most staffs in one store are between 6 to 10 persons in one store and it is 35% of the respondents. 30% of the respondents are between 1 to 5 persons in one store, 20% of the respondents are between 11 to 20 persons in one store and 15% of the respondents are

between 21 to 50 persons in one store. It seems IT shops are not spending much on manpower as the nature of retail business.

From the result of the analysis on the number of chain-stores that company has, 65% of the respondents answered 1 store that their company has and it is the major group in these categories. 32% of the respondents answered that their company has 2 to 3 stores, 2% of the respondents answered that their company has 4 to 6 stores and 1% of the respondents answered that their company has more than 7 stores. It seems most of the IT shops are run by different owners as small and medium sized enterprises.

3.4 Reliability Test

To determine the respondent perceptions, reliability is a measure of the degree of consistency between multiple measurements of variables. Cronbach's Alpha which was developed by Lee Cronbach in 1951 indicates the measure of internal consistency that is closely related to a set of particulars in a group. Generally, alpha values of 0.7 are considered acceptable for the interpretation of reliability. The result was considered to be a scale of measurement for reliability test shown in Table (3.5).

Table (3.5) Reliability Test

Category	Cronbach's Alpha	No. of particular	Interpretation
Cost Barrier	0.932	5	Reliable
Owners'/ Managers' Attitude	0.960	5	Reliable
Owners'/Managers' Knowledge	0.897	5	Reliable
Purchasing	0.908	5	Reliable
Inventory Accuracy	0.917	5	Reliable
Stockout	0.863	5	Reliable
Controlling	0.952	5	Reliable
Firm Performance	0.969	5	Reliable

Source: Survey Data, 2022

As the result of Table (3.5), it shows Cronbach's Alpha coefficient values for all scales are higher than the cut-off value of 0.7 and all of the results are above 0.8 in the reliability test. Therefore, the results for interpretation of the scale are valid and reliable for the factors of the scales used in this study affecting contextual factors towards inventory management and inventory management towards firm performance.

CHAPTER 4
ANALYSIS ON EFFECT OF CONTEXTUAL FACTORS, INVENTORY MANAGEMENT AND FIRM PERFORMANCE OF IT SHOPS IN YANGON

This chapter presents the effect of contextual factors towards inventory management and the effect of inventory management towards firm performance of IT shops in Yangon. For data analysis, both descriptive research method and multiple linear regression method are used in this study.

4.1 Effect of Contextual Factors on Inventory Management of IT Shops in Yangon

In this study, the effect of contextual factors on inventory management of IT shops in Yangon is analysed. Based on survey analysis, mean value, standard deviation and multiple linear regression results of each factor are described.

4.1.1 Contextual Factors

There are many contextual factors of inventory management practices such as cost barrier, owners' / managers' attitude and owners' / managers' knowledge are mostly found in every part of inventory management.

(a) Cost Barrier

Cost barrier is one of the important factors towards inventory management practices. Respondents are required to answer 5 statements about cost barrier causing inventory management. The result is shown in Table (4.1) based on survey findings.

Table (4.1) Cost Barrier

No.	Cost Barrier	Mean	Std. Deviation
1	Cost of space provision for storage purposes	4.09	0.77
2	Cost of storage facilities (shelves, boxes and packaging)	3.66	0.83
3	Maintenance cost for the storage	3.63	0.75
4	Cost of equipment related to inventory control	3.63	0.76
5	Cost of staff involvement on inventory control	3.65	0.82
	Overall Mean	3.73	

Source: Survey Data, 2022

As the result of Table (4.1), it shows that most of the respondents agree with the statement of cost barrier has the effect on inventory management and overall mean value is 3.73 which is higher than cut-off mean value 3. The highest mean value is 4.09 and the lowest mean value is 3.63. The highest mean value of 4.09 indicates that cost of space provision for storage purposes as keeping stock in the warehouse is the highest cost among the factors of cost barrier towards inventory management. Both of maintenance cost for the storage and cost of equipment related to inventory control are the lowest mean value of 3.63 and they identify that maintenance cost and equipment cost are not much effecting on the cost for keeping stock in the warehouse for sales purposes. For renting, buying and building warehouse in Myanmar, it needs significant amount of capital to invest for infrastructure to keep stock as inventory. In conclusion, cost barrier has the notable effect on the inventory management towards firm performance.

(b) Owners' / Managers' Attitude

Owners' / managers' attitude is one of the crucial factors towards inventory management practices. Respondents are required to answer 5 statements about owners' / managers' attitude effecting inventory management. The result is shown in Table (4.2) based on survey data.

Table (4.2) Owners' / Managers' Attitude

No.	Owners' / Managers' Attitude	Mean	Std. Deviation
1	Requirement of a systematic inventory management	4.16	0.66
2	Effort to implement inventory management	4.10	0.69
3	Time taken to implement systematic inventory	3.90	0.81
4	Contribution of systematic inventory management to profitability	3.92	0.80
5	Willingness to make any changes in the operations of inventory management	4.02	0.73
	Overall Mean	4.02	

Source: Survey Data, 2022

According to survey data, it describes the data of owners' / managers' attitude towards inventory management. Overall mean value is 4.02 which is higher than cut-off mean value 3 and the highest mean value is 4.16 and the respondents notice that systematic inventory management is needed the most to get proper improvement on inventory management. With technology and skillful staff supported by systematic inventory management, IT shops operate the business with profit due to having optimal level of stock. To be concluded, owners' / managers' attitude has willingness to improve inventory management to control well over keeping and holding stock according to the nature of IT business.

(c) Owners' / Managers' Knowledge

Owners' / managers' knowledge is one of the key factors towards inventory management practices. Respondents are required to answer 5 statements about owners' / managers' knowledge responding inventory management. The survey data is shown in Table (4.3) based on the findings.

Table (4.3) Owners' / Managers' Knowledge

No.	Owners' / Managers' Knowledge	Mean	Std. Deviation
1	Level of knowledge on inventory management	4.20	0.68
2	Level of knowledge on inventory handling techniques	4.16	0.66
3	Training / guidance received in inventory management	3.48	0.79
4	Awareness of existing scientific models of managing inventory	3.42	0.81
5	Maintaining a balance between minimum cost of ordering and holding cost for inventory to keep optimum stock levels	4.09	0.74
	Overall Mean	3.87	

Source: Survey Data, 2022

Table (4.3) presents owners' / managers' knowledge towards inventory management. Overall mean value is 3.87 which is higher than cut-off mean value 3. The highest mean value is 4.20 and the respondents agree that owner's / managers' knowledge level on inventory management is vital to IT shops which keep inventory as firm performance. The second highest mean value is 4.16 and it indicates that it is essential for owners' / managers' knowledge on inventory handling techniques. The lowest mean value of awareness of existing scientific models of managing inventory is 3.42 and it can be concluded that owners' / managers' knowledge on inventory management has a significant effect on inventory management. Owners' / managers' knowledge on inventory management have high correlation with the extent of use of inventory management, which meant that the owners / managers play a crucial part for facilitating the development of the proper implementation of inventory management of IT shops.

4.1.2 Inventory Management

Inventory management provides IT shops to identify which and how much stock to order and to keep in the warehouse. The practice identifies and responds to ensure there's always enough stock to fulfill customers' demand and to avoid stockout situation. The challenge of inventory management is to support an upward trend in sales while keeping the investment at the lowest level consistent with adequate customer service.

(a) Purchasing

When demand is stable, there is no need to carry stock more than customers' demand. But for unstable demand, it needs to keep buffer stock as safety stock on shelves. To perform this, IT shops have to purchase in time. Respondents are required to answer 5 statements about purchasing of inventory management. The result is shown in Table (4.4) based on the analysis.

Table (4.4) Purchasing

No.	Purchasing	Mean	Std. Deviation
1	Placing a fixed order or constant quantity when the inventory reaches that predetermined level	4.29	0.71
2	Purchase orders verified by authorized employees	4.33	0.66
3	Having a list of valid and reliable suppliers	4.32	0.68
4	Taking advantage of trade discounts by placing bulk quantities order	3.75	0.77
5	Forecasting for purchase based on previous sales, demand, and future plans	4.36	0.65
	Overall Mean	4.21	

Source: Survey Data, 2022

As the result of survey data, overall mean value is 4.21 and it is higher than cut-off mean value 3. The highest mean value is 4.36 and the lowest mean value is 3.75. It indicates that factors of purchasing have greatly impact on inventory management. Factor that forecasting for purchase based on previous sales, demand, and future plans has the highest impact on the factors of purchasing of inventory management. The second highest mean value of 4.33 has an impact on the factors of purchasing that purchase orders must be verified by authorized employees in order to submit order which has customer demand. Respondents agree that purchasing is the initial state of the process which is needed to be careful with submitting order which has demand and purchaser has to make close relationship with supplier to get better price support and bulk quantities discount. In addition, purchaser should do market research on price, warranty term and specification of the products compared to competitors' products before submitting purchase order. To be concluded, purchasing process has a direct effect on inventory management towards firm performance.

(b) Inventory Accuracy

Inventory accuracy of inventory management helps to remain competitive in the market for IT shops. It improves operation efficiency, return on sales, return on equity, keeping customers' loyalty and firm performance. Respondents are required to answer 5 statements about inventory accuracy of inventory management. The survey data is analysed in Table (4.5) based on survey findings.

Table (4.5) Inventory Accuracy

No.	Inventory Accuracy	Mean	Std. Deviation
1	Ordering items correctly	3.62	0.81
2	Monitoring inventory continuously (Not only sometimes)	3.75	0.73
3	Checking inventory at fixed time intervals	3.50	0.80
4	Using barcode scanner to maintain the right quantity of inventory for sales	3.59	0.90
5	Monitoring inventory levels by using software	3.64	0.87
	Overall Mean	3.62	

Source: Survey Data, 2022

Table (4.5) describes overall mean value of 3.62 which is higher than cut-off mean value 3. The highest mean value of 3.75 is the fact that inventory is monitored continuously to prevent stockout situation and the lowest mean value of 3.5 is the fact that company checks inventory at fixed time intervals. To be accurate in inventory data, most of IT shops are using barcode scanner for data entry and POS device for sales data. According to the survey data, most of IT shops are selling miscellaneous items on their shelves including high-end and economic products. Therefore, they are collecting inventory data daily to be precise actual stock with accounting figures. Some IT companies start implementing ERP system to manage day-to-day business activities such as accounting, procurement, customer relation and inventory management. To be concluded, inventory accuracy is an important factor of inventory management towards firm performance.

(c) Stockout

A stockout is when inventory becomes unavailable from being purchased and results in a loss in sales. The costs of stockout can impact firm performance both in the short term and the long term. Respondents are required to answer 5 statements about stockout of inventory management. The survey data is identified in Table (4.6) based on the findings.

Table (4.6) Stockout

No.	Stockout	Mean	Std. Deviation
1	Performing stock replenishment continuously	3.37	0.79
2	Submitting order on time	4.26	0.66
3	Adequate professional skill to check the stock on shelves	4.12	0.75
4	Delivering the order on time by supplier	3.43	0.77
5	Matching physical inventory (stock) with the actual records	4.22	0.65
	Overall Mean	3.88	

Source: Survey Data, 2022

According to survey data, overall mean value of stockout is 3.88 and it is higher than cut-off mean value 3. The highest mean value of 4.26 indicates that submitting order on time has the most impact on inventory management as delaying to order on time causes stockout situation. The second highest mean value of 4.22 identifies that physical stock should be the same with actual records in order to order the required items. In conclusion, stockout has a significant effect on inventory management.

(d) Controlling

Controlling is the essential process of quality products and services of IT shops. An effective inventory management system involves controlling the inventory at the optimal level in order to prevent from stockout situation and holding a pile of stocks. Respondents are required to answer 5 statements about controlling of inventory management. The result is shown in Table (4.7) as per survey findings.

Table (4.7) Controlling

No.	Controlling	Mean	Std. Deviation
1	Recording properly every inventory's movement in and out of the firm	4.07	0.72
2	Using of barcode scanner to prevent pilferage	4.02	0.75
3	Controlling over defect or slow inventories	4.01	0.68
4	Clear procedures followed by staff when receiving and issuing stock from the warehouse	3.84	0.85
5	Frequent management involvement in practice of inventory management system	3.88	0.84
	Overall Mean	3.98	

Source: Survey Data, 2022

Table (4.7) shows that overall mean value is 3.98 and it is higher than cut-off mean value 3. The highest mean value of 4.07 identifies that every inventory's movement in and out of the firm is properly recorded and it shows that IT shops are handling inventory management well by recording properly. The second highest mean value of 4.02 indicates that the use of barcode scanner helps to keep in and out of inventory data in order to prevent pilferage. To be concluded, the facts of controlling of inventory management address the importance of recording for inventory data conducted by staff and involvement of management level for better inventory management.

4.1.3 Effect of Contextual Factors on Inventory Management

In this section, the effect of contextual factors on inventory in Yangon is analysed. These are presented based on multiple linear regression results from the analysis.

(a) Effect of Contextual Factors on Purchasing

To find out the effect of contextual factors on purchasing of inventory management conducted on IT shops in Yangon and multiple linear regression is used to test for this analysis. Table (4.8) states the relationship of cost barrier, owners' / managers' attitude and owner's / managers' knowledge to purchasing of inventory management, as follows.

Table (4.8) Effect of Contextual Factors on Purchasing

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	1.759	0.276		6.374	0.000		
Cost Barrier	0.390***	0.071	0.459	5.457	0.000	0.401	2.493
Owners'/ Managers' Attitude	0.264***	0.072	0.307	3.643	0.000	0.401	2.493
Owners'/ Managers' Knowledge	-0.013	0.051	-0.014	-0.264	0.792	1.000	1.000
R	0.723[a]						
R Square	0.523						
Adjusted R Square	0.514						
Durbin-Watson	1.665						
F Value	61.399***						

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As the results shown in Table (4.8), R square is 0.523 and adjusted R square is 0.514. This model can explain 51.4% about the variance of dependent variable (Purchasing) and independent variables (Cost Barrier, Owners'/ Managers' Attitude and Owners'/ Managers' Knowledge). Durbin Watson value is 1.665 and it indicates that contextual factors reported by respondents and purchasing are correlated.

The value of F test, the overall significance of the models comes out highly significant at 1 percent level and this model can be said valid. From these three variables, cost barrier has positively significant effect on purchasing with highly significant at 1 percent level. If there is the increase in cost barrier by 1 unit, it will also raise to purchasing by 0.390 units. Owners'/ managers' attitude has the expected positive sign and is highly significant at 1 percent significant level and it indicates that the increase in owners'/ managers' attitude by 1 unit, it will also raise to purchasing by 0.264 units.

According to survey data, it indicates that both of cost barrier and owners'/ managers' attitude are critical components of contextual factors towards purchasing. For purchasing, owners and managers need to concern about the cost of warehouse to keep stock as inventory. Due to higher cost of storing stock in warehouse, owners' and managers' attitude towards purchasing is submitting purchase order which preserves optimal stock level to fulfill customer demand for cost effectiveness. Most of IT products have fixed warranty period provided by suppliers. Out of warranty products affects the cost of maintenance and the situation of obsolete function. To be concluded, both of cost barrier and owners' / managers' attitude have an effect on purchasing of inventory management.

(b) Effect of Contextual Factors on Inventory Accuracy

To explore the effect of contextual factors on inventory accuracy of inventory management conducted on IT shops in Yangon, multiple linear regression is applied to test for this analysis. Table (4.9) identifies the relationship of cost barrier, owners' / managers' attitude and owner's / managers' knowledge to inventory accuracy of inventory management, as follows.

Table (4.9) Effect of Contextual Factors on Inventory Accuracy

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	0.292	0.319		0.915	0.361		
Cost Barrier	0.613***	0.082	0.597	7.440	0.000	0.401	2.493
Owners'/ Managers' Attitude	0.194**	0.084	0.187	2.325	0.021	0.401	2.493
Owners'/ Managers' Knowledge	0.068	0.059	0.059	1.153	0.251	1.000	1.000
R	0.752[a]						
R Square	0.566						
Adjusted R Square	0.558						
Durbin-Watson	1.880						
F Value	73.102***						

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As the results shown in Table (4.9), R square is 0.566 and adjusted R square is 0.558. This model can explain 55.8% about the variance of dependent variable (Inventory Accuracy) and independent variables (Cost Barrier, Owners'/ Managers' Attitude and Owners'/ Managers' Knowledge). Durbin Watson value is 1.880 and it identifies that contextual factors reported by respondents and inventory accuracy are correlated.

The value of F test, the overall significance of the models comes out highly significant at 1 percent level and this model can be said valid. From these three variables, cost barrier has positively significant effect on inventory accuracy with highly significant at 1 percent level. If there is the increase in cost barrier by 1 unit, this will also raise to inventory accuracy by 0.613 units. Owners'/ managers' attitude has the expected positive sign and is significant at 5 percent significant level and it indicates that the increase in owners'/ managers' attitude by 1 unit, it will also raise to purchasing by 0.194 units.

According to survey data, it indicates that both of cost barrier and owners'/ managers' attitude are vital components of contextual factors towards inventory accuracy. Some IT shops use ERP software to improve inventory management to get inventory accuracy. Using software like ERP needs significant amount of capital to invest. To get skillful staff to control inventory accuracy, there are higher training cost and wages as cost barrier. When owners and managers are committed to improving inventory management, it helps inventory accuracy not only in physical stock but also in actual inventory data to make better decision for inventory management. In conclusion, both of cost barrier and owners'/ managers' attitude have an effect on inventory accuracy of inventory management.

(c) Effect of Contextual Factors on Stockout

To discover the effect of contextual factors on stockout of inventory management conducted on IT shops in Yangon, multiple linear regression is applied to test for this analysis. Table (4.10) describes the relationship of cost barrier, owners' / managers' attitude and owner's / managers' knowledge to stockout of inventory management, as follows.

Table (4.10) Effect of Contextual Factors on Stockout

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	0.782	0.202		3.867	0.000		
Cost Barrier	0.519***	0.052	0.622	9.935	0.000	0.401	2.493
Owners'/ Managers' Attitude	0.237***	0.053	0.279	4.460	0.000	0.401	2.493
Owners'/ Managers' Knowledge	0.053	0.037	0.057	1.429	0.155	1.000	1.000
R	0.858[a]						
R Square	0.736						
Adjusted R Square	0.731						
Durbin-Watson	1.978						
F Value	156.100***						

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As the results shown in Table (4.10), R square is 0.736 and adjusted R square is 0.731. This model can explain 73.1% about the variance of dependent variable (Stockout) and independent variables (Cost Barrier, Owners'/ Managers' Attitude and Owners'/ Managers' Knowledge). Durbin Watson value is 1.978 and it shows that contextual factors reported by respondents and stockout are correlated.

The value of F test, the overall significance of the models comes out highly significant at 1 percent level and this model can be said valid. From these three variables, cost barrier has positively significant effect on stockout with highly significant at 1 percent level. If there is an increase in cost barrier by 1 unit, this will also raise to stockout by 0.519 units. Owners'/ managers' attitude has the expected positive sign and is highly significant at 1 percent significant level and it indicates that the increase in owners'/ managers' attitude by 1 unit, it will also raise to stockout by 0.237 units.

According to survey data, it indicates that both of cost barrier and owners'/ managers' attitude are crucial components of contextual factors towards stockout. Cost barrier concerning of financial investment for carrying inventory in the warehouse can cause stockout situation for retail businesses. Stockout can lead to reduce customer satisfaction and customer loyalty in the long term. When owners and managers have willingness to improve inventory by integrating advanced technologies and skillful staff conducting the adequate forecasts, monitoring and controls, it can prevent stockout in order to get better firm performance. To be concluded, both of cost barrier and owners'/ managers' attitude have an effect on stockout of inventory management.

(d) Effect of Contextual Factors on Controlling

To identify the effect of contextual factors on controlling of inventory management conducted on IT shops in Yangon, multiple linear regression is applied to test for this analysis. Table (4.11) defines the relationship of cost barrier, owners' / managers' attitude and owner's / managers' knowledge to controlling of inventory management, as follows.

Table (4.11) Effect of Contextual Factors on Controlling

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	0.505	0.283		1.786	0.076		
Cost Barrier	0.011	0.073	0.011	0.156	0.876	0.401	2.493
Owners'/ Managers' Attitude	-0.037	0.074	-0.036	-0.496	0.621	0.401	2.493
Owners'/ Managers' Knowledge	0.924***	0.052	0.806	17.702	0.000	1.000	1.000
R	0.807[a]						
R Square	0.651						
Adjusted R Square	0.645						
Durbin-Watson	2.078						
F Value	104.664***						

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As the results shown in Table (4.11), R square is 0.651 and adjusted R square is 0.645. This model can explain 64.5% about the variance of dependent variable (Controlling) and independent variables (Cost Barrier, Owners'/ Managers' Attitude and Owners'/ Managers' Knowledge). Durbin Watson value is 2.078 and it points out that contextual factors reported by respondents and controlling are correlated.

The value of F test, the overall significance of the models comes out highly significant at 1 percent level and this model can be said valid. From these three variables, only owners'/ managers' knowledge has the expected positive sign and is highly significant at 1 percent significant level and it indicates that the increase in owners'/ managers' knowledge by 1 unit, it will also raise to controlling by 0.924 units.

According to survey data, it indicates that owners'/ managers' knowledge is the main component of contextual factors towards controlling. Level of knowledge of owners

and managers on inventory management helps to handle inventory's movement in and out of IT shops improving firm performance. As the way of increasing sales, controlling on inventory supports to get more market shares and profit. In conclusion, owners'/ managers' knowledge has an effect on controlling of inventory management.

4.2 Effect of Inventory Management on Firm Performance of IT Shops in Yangon

In this study, the effect of inventory management on firm performance of IT shops in Yangon is analysed. Based on survey analysis, mean value, standard deviation and multiple linear regression results of each factor are described.

4.2.1 Firm Performance

Firm performance focuses on the capability of a business to effectively use its resources to generate operational and financial results. Respondents are required to answer 5 statements about inventory accuracy of inventory management. The survey findings are shown in Table (4.12) according to the analysis.

Table (4.12) Firm Performance

No.	Firm Performance	Mean	Std. Deviation
1	Enhancement of the chances for creating new outlet by conducting effective inventory system	3.89	0.83
2	Availability of customers' favourite product to increase market share	3.90	0.75
3	Effective use of inventory to increase company's profit	4.00	0.70
4	Efficient management of inventory in the way of sharing more profits in order to boost employee morale	3.84	0.81
5	Product availability with proper inventory management to enhance customer loyalty	4.05	0.69
	Overall Mean	3.94	

Source: Survey Data, 2022

As the result of survey data, overall mean value 3.94 and it is higher than cut-off mean value 3. The highest mean value of 4.05 indicates that product availability enhances customer loyalty by efficient inventory management of IT shops. IT shops are keeping stock as firm performance to satisfy customers with their demanding products. The second highest mean value of 4.00 identifies that effective use of inventory increases company's profit in terms of keeping optimal inventory level. The lowest mean value of 3.84 presents that employee empowerment through sharing information and conducting training has a slightly impact on firm performance by boosting employee morale. In conclusion, performing inventory management increases firm performance such as increasing company profit, reducing cost, improving employee morale and keeping customer loyalty.

4.2.2 Effect of Inventory Management on Firm Performance

To specify the effect of inventory management on firm performance conducted on IT shops in Yangon, multiple linear regression is applied to test for this analysis. Table (4.13) shows the relationship of purchasing, inventory accuracy, stockout and controlling to firm performance, as follows.

Table (4.13) Effect of Inventory Management on Firm Performance

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
(Constant)	0.541	0.350		1.546	0.124		
Purchasing	0.236**	0.097	0.194	2.440	0.016	0.423	2.364
Inventory Accuracy	0.220**	0.086	0.219	2.542	0.012	0.360	2.776
Stockout	0.492***	0.120	0.398	4.084	0.000	0.281	3.563
Controlling	-0.079	0.053	-0.078	-1.493	0.137	0.985	1.015
R	0.745[a]						
R Square	0.555						
Adjusted R Square	0.545						
Durbin-Watson	1.840						
F Value	52.132***						

Source: Survey Data, 2022

*** Significant at 1% level, ** Significant at 5% level, * Significant at 10% level

As the results shown in Table (4.13), R square is 0.555 and adjusted R square is 0.545. This model can explain 54.5% about the variance of dependent variable (Firm Performance) and independent variables (Purchasing, Inventory Accuracy, Stockout and Controlling). Durbin Watson value is 1.840 and it describes that the factors of inventory management reported by respondents and firm performance are correlated.

The value of F test, the overall significance of the models comes out highly significant at 1 percent level and this model can be said valid. From these four variables, purchasing has the expected positive sign and is significant at 5 percent significant level and it indicates that the increase in purchasing by 1 unit, it will also raise to firm performance by 0.236 units. Purchasing done by EOQ model to keep optimal stock level supports to increase product availability and to set competitive price to get more market share and customer loyalty. While forecasting is based on previous sales, demand, and future plans, purchasing can be effective and efficient in the ways of selling high demand products, reducing slow-moving products, avoiding warranty issue and increasing sales.

Inventory Accuracy has the expected positive sign and is significant at 5 percent significant level and it indicates that the increase in inventory accuracy by 1 unit, it will also raise to firm performance by 0.220 units. Inventory accuracy helps to reduce a pile of safety stocks, operation cost and delaying time for managing inventory.

Stockout has positively significant effect on firm performance with highly significant at 1 percent level. If there is an increase in stockout by 1 unit, it will also raise to firm performance by 0.492 units. Stockout can cause reducing customers' satisfaction and losing customer loyalty. It can affect the competitiveness of the store in the market and customers are likely to choose competitors in the future.

To be concluded, the variables of inventory management such as purchasing, inventory accuracy and stockout have significant effects on firm performance. Inventory accuracy helps to perform purchasing smoothly and purchasing done by effective inventory management supports to reduce stockout situation in IT shops. Thus, the factors of inventory management affect the firm performance significantly.

CHAPTER 5
CONCLUSION

This chapter presents the findings and discussions based on the effect of inventory management on firm performance of IT shops in Yangon. Based on these findings and discussions, suggestions and recommendations are made. In the last section, the limitations and needs for further research are discussed.

5.1 Findings and Discussions

This study aims to explore inventory management practices of IT shops in Yangon and to find out the effect of inventory management towards firm performance of IT shops in Yangon. The data were collected with 5-point Likert-scale structured questionnaires and primary data were distributed to a randomly selected sample of 172 IT shops based on the total population of 300 shops according to the data of Yangon Region Computer Associations. Secondary data were collected from previous research, website, published journals, international thesis and relevant textbooks.

The findings indicate that the majority of the staff working at IT shops are between 25 years and 35 years old to serve customers well with fully energetic response. Most of the respondents from IT shops are well educated with bachelor and master degree holders in order to apply the skillful knowledge to the competitive industry with full of the latest technologies. With the relation to length of service in current job, it was shown that the majority of the respondents have working experience 1 to 3 years. As the nature of retail business, IT shops are not spending much on manpower allocating between 6 to 10 persons in one store. The majority of the IT shops are run by different owners having only one store to operate the business as small and medium sized enterprise.

The survey data shows that staff was assigned to collect the inventory data most of the time, supervisor was appointed to control the inventory data and owner or manager was designated to make a decision for inventory management. In order not to lose customer satisfaction, most IT shops replenished very often as weekly to restock their inventory level. The majority of IT shops use barcode scanner or software to collect inventory data to manage their inventory recording in and out of stock from the shops.

Based on the survey result on the contextual factors such as cost barrier, owners' / managers' attitude and owners' / managers' knowledge, it is found that cost of space

provision for storage purposes is the highest consideration because it needs significant amount of capital to spend in cost barrier. In owners' / managers' attitude, it has shown that they have willingness to improve inventory by integrating advanced technology and skillful staff supported by systematic inventory management. In owners' / managers' knowledge, it indicates that level of owners' / managers' knowledge plays a crucial part for facilitating the development of the proper implementation of inventory management of IT shops.

As the result of survey data of purchasing, inventory accuracy, stockout and controlling of inventory management, purchasing is the initial state of the process which is needed to be careful with submitting order which has demand and purchaser should do market research on price, warranty term and specification of the products compared to competitors' products before submitting purchase order. To get inventory accuracy, inventory is monitored continuously at IT shops. If stock replenishment is not done continuously, there will be stockout situation. In the way of better controlling, every inventory's movement in and out of the firm is properly recorded and it shows that IT shops are handling inventory management well by recording properly by using barcode scanner or software. IT shops are keeping optimal stock level as firm performance to fulfill customer needs by enhancing customer loyalty integrating efficient inventory management.

Based on the survey result of contextual factors towards purchasing, inventory accuracy, stockout and controlling, it shows that cost barrier and owners' / managers' attitude are highly significant towards purchasing and they are concerning storage cost while submitting purchase order. Due to inflation and exchange rate fluctuations, IT shops are more careful to keep stock in their inventory by performing inventory management properly. For inventory accuracy, cost barrier and owners' / managers' attitude are significant and most of IT shops are using barcode scanner and the latest powerful software like ERP to manage inventory. For stockout, cost barrier and owners' / managers' attitude are highly significant and owners and managers have willingness to improve inventory by integrating advanced technologies and skillful staffs to prevent stockout situation. For controlling, only owners' / managers' knowledge is highly significant and level of knowledge of owners and managers on inventory management helps to improve controlling of inventory management.

According to the survey analysis, this research found that purchasing, inventory accuracy and stockout have a significant positive effect on firm performance. But

controlling has no coefficient significance on firm performance. Purchasing done by EOQ model to keep optimal stock level supports IT shops by increasing product availability, market share, customer loyalty and firm performance. Inventory accuracy helps to support JIT model to reduce a pile of safety stocks, operation cost and delaying time for managing inventory. Preventing stockout raises product availability, customer satisfaction and customer loyalty and it supports the competitiveness in the market compared with competitors' services in the long term.

5.2 Suggestions and Recommendations

Based on the findings of the study, IT shops are operating with younger and more enthusiastic staffs concerned on new technologies with updated hardware and software. IT shops should recruit more skillful staffs as knowledge-oriented industry with full of the latest technologies. Due to staffs' working experience 1 to 3 years in the current job, it shows that owners and managers need to consider reducing turnover rate by conducting proper employee engagement and wage improvement. As the nature of retail business in the competitive market, IT shops are providing intensive care to customers such as price guarantee, quality control with warranty terms and conditions and after-sales service with taking full responsibility.

As the survey analysis, purchasing can be done according to EOQ model holding optimal stock level with the advantages of bulk quantities order by bargaining power of buyers for competitive price. To get inventory accuracy, the majority of IT shops are using barcode scanner or software to collect inventory data to manage their inventory recording in and out of stock from the shops. If every IT shop makes implementation of ERP system, owners and managers will operate the shops properly not only on inventory management but also on every aspect of business activities such as procurement, customer relationship management and project management. Stockout situation can have an effect on firm performance because it can lead to product availability and customer satisfaction. In the way of preventing stockout situation, IT shops should check inventory data daily and assign to designated staff to collect the data of remaining stock. For controlling, there should be progress on level of owners' and managers' knowledge to upgrade the latest technologies and techniques which are useful and working well in international organisations.

According to survey data, owners and managers should concentrate on product availability which can generate sales and customer loyalty. To attract customers coming

back to the shops is a critical part of IT shops to survive in the competitive and congested market. Owners and managers are interested to keep enough safety stock in order not to lose sales. On the contrary, proper analysis is required not to maintain many safety stocks because it causes excess inventory cost. Increasing sales can make more profit which can distribute more to the employee in the way of increasing employee engagement and improving wages. Before submitting purchase order, owners and managers should perform analysis on market research such as price comparison, quality and functions compared to the competitors' products because higher price, obsolete functions and shorten warranty period can have an effect on sales of IT products.

5.3 Needs for Further Research

This study is carried out through respondents from 172 shops amid the total population of 300 shops in Yangon according to the data of Yangon Region Computer Associations. As the similar business structure with IT shops, mobile shops should be conducted inventory management practices on firm performance. Due to the limited scope of the study, the findings are not generalized across all IT shops in Myanmar. In this study, it focused on IT shops in Yangon only and further research can be conducted on IT shops in Mandalay or Naypyidaw which are developing in these few years. To check inventory data continuously, IT shops will need powerful software like ERP software with the latest technologies. In future research, the researcher should perform survey analysis on employee involvement in detail and how to take advantage of using the latest technologies on inventory management. This study concentrated on purchasing, inventory accuracy, stockout and controlling of inventory management practices. There are a few important factors such as storage, tracing, stock availability, stock coverage and capacity utilization which are still remaining to do analysis for future research.

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APPENDIX A

QUESTIONNAIRE

Section (A) Questionnaire for demographic data

1. Age:
   - ☐ 18-24
   - ☐ 25-35
   - ☐ 36-46
   - ☐ 47 Year and above
2. Gender:
   - ☐ Male
   - ☐ Female
3. Educational Level:
   - ☐ High School
   - ☐ Under Graduated
   - ☐ Graduated
   - ☐ Post Graduated
4. Length of service in current job:
   - ☐ Less than one year
   - ☐ 1-3 years
   - ☐ 4-6 years
   - ☐ More than 7 years
5. Position:
   - ☐ Senior Executive
   - ☐ Supervisor
   - ☐ Manager
   - ☐ Owner
6. Number of staffs working in one store:
   - ☐ 1-5 persons
   - ☐ 6-10 persons
   - ☐ 11-20 persons
   - ☐ 20-50 persons
7. Number of chain-stores owned by the company:
   - ☐ 1 store
   - ☐ 2-3 stores
   - ☐ 4-6 stores
   - ☐ More than 7 stores

8. Person who is collecting inventory data
   - ☐ Staff
   - ☐ Supervisor
   - ☐ Manager
   - ☐ Owner
9. Person who is supervising and managing inventory data
   - ☐ Staff
   - ☐ Supervisor
   - ☐ Manager
   - ☐ Owner
10. Frequency of purchasing order
   - ☐ Daily
   - ☐ Weekly
   - ☐ Monthly
   - ☐ Quarterly
11. Person who is making decision for purchasing order
   - ☐ Staff
   - ☐ Supervisor
   - ☐ Manager
   - ☐ Owner
12. Number of time collecting for inventory data
   - ☐ Daily
   - ☐ Weekly
   - ☐ Monthly
   - ☐ Quarterly
13. Use barcode scanner or software to collect inventory data
   - ☐ Not really
   - ☐ Seldom
   - ☐ Frequently
   - ☐ Always
14. Use barcode scanner or software to sell IT products
   - ☐ Not really
   - ☐ Seldom
   - ☐ Frequently
   - ☐ Always

Section (B) Questionnaire for inventory management

Note: (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

Purchasing ဝယ်ယူခြင်း						
1	Placing a fixed order or constant quantity when the inventory reaches that predetermined level ကုန်ပစ္စည်းထားသိုခြင်းတွင်ကြိုတင်သတ်မှတ်ထားသောပစ္စည်းလက်ကျန်အဆင့်သို့ရောက်ပါက သတ်မှတ်ထားသောပုံမှန်မှာယူမှု (သို့) ပုံသေအရည်အတွက်မှာယူခြင်း	1	2	3	4	5
2	Purchase orders verified by authorized employees ဝယ်ယူမှုအစီအစဉ်ကို သတ်မှတ်ထားသောတာဝန်ခံတစ်ဦးမှဆုံးဖြတ်ပေးခြင်း	1	2	3	4	5
3	Having a list of valid and reliable suppliers တရားဝင်ဖြစ်သောနှင့်ယုံကြည်စိတ်ချရသောပစ္စည်းသွင်းသူများ၏စာရင်းတစ်ခုရှိခြင်း	1	2	3	4	5
4	Taking advantage of trade discounts by placing bulk quantities order ကုန်ပစ္စည်းပမာဏများစွာမှာယူမှုကြောင့်ရနိုင်သောဈေးသက်သာနိုင်မှုကိုအသုံးချ၍ပစ္စည်းများကိုမှာယူခြင်း	1	2	3	4	5
5	Forecasting for purchase based on previous sales, demand, and future plans ဝယ်ယူမှုကိုခန့်မှန်းရာတွင်ယခင်ကအရောင်းပမာဏ၊ဈေးကွက်တောင်းဆိုမှုနှင့်အနာဂတ်အစီအစဉ်တို့အရပြုမူခြင်း	1	2	3	4	5
Inventory Accuracy ကုန်ပစ္စည်းထားသိုမှုကိုမှန်ကန်မှုရှိခြင်း						
1	Ordering items correctly ဆိုင်အတွက်ပစ္စည်းများကိုမှန်ကန်စွာမှာယူမှုခြင်း	1	2	3	4	5
2	Monitoring inventory continuously (Not only sometimes) ကုန်ပစ္စည်းထားသိုခြင်းကို စဉ်ဆက်မပြတ်စောင့်ကြည့်ခြင်း	1	2	3	4	5
3	Checking inventory at fixed time intervals ကုန်ပစ္စည်းထားသိုခြင်းကို အချိန်အပိုင်းအခြားအလိုက်စစ်ဆေးခြင်း	1	2	3	4	5
4	Using barcode scanner to maintain the right quantity of inventory for sales အရောင်းအတွက်မှန်ကန်သောကုန်ပစ္စည်းလက်ကျန်အရေအတွက်ကိုထားရှိစေရန်ဘားကုတ် ဖတ်ခြင်း	1	2	3	4	5
5	Monitoring inventory levels by using software ဆော့ဝဲလ်အသုံးပြု၍ ကုန်ပစ္စည်းလက်ကျန်ပမာဏကိုသတိထားစောင့်ကြည့်ခြင်း	1	2	3	4	5
Stockout ကုန်ပစ္စည်းပြတ်လပ်မှု						
1	Performing stock replenishment continuously ကုန်ပစ္စည်းဖြည့်တင်းမှုကို စဉ်ဆက်မပြတ်လုပ်ဆောင်ခြင်း	1	2	3	4	5
2	Submitting order on time ဆိုင်မှအော်ဒါကို အချိန်မှီတင်ခြင်း	1	2	3	4	5

3	Adequate professional skill to check the stock on shelves ပစ္စည်းစင်တွင်လုံလောက်သောကုန်ပစ္စည်းများကိုရှိအောင်လုပ်ဆောင်နိုင်သောကျွမ်းကျင်အရည်အချင်းများရှိခြင်း	1	2	3	4	5
4	Delivering the order on time by supplier ကုန်ပစ္စည်းတင်သွင်းသူမှ ကုန်အမှာပစ္စည်းများကို အချိန်မှန်စွာပေးပို့ခြင်း	1	2	3	4	5
5	Matching physical inventory (stock) with the actual records ဆိုင်မှအမှန်တကယ်ပစ္စည်းလက်ကျန်နှင့် စာရင်းလက်ကျန်ကိုက်ညီမှုရှိခြင်း	1	2	3	4	5
	Controlling ထိန်းချုပ်ခြင်း					
1	Recording properly every inventory's movement in and out of the firm လုပ်ငန်းတစ်ခု၏ကုန်ပစ္စည်းထားသိမှု အဝင်အထွက်တိုင်းကိုသေချာစွာမှတ်သားထားခြင်း	1	2	3	4	5
2	Using of barcode scanner to prevent pilferage ဘားကုတ်ဖတ်ခြင်းကိုအသုံးပြုခြင်းဖြင့် မလျော်မကန်ခိုးယူခံရခြင်းမှကာကွယ်ပေးခြင်း	1	2	3	4	5
3	Controlling over defect or slow inventories ကုန်ပစ္စည်းအညံ့ (သို့) အရောင်းနှေးသောပစ္စည်းများကို ထိန်းသိမ်းစောင့်ကြည့်ခြင်း	1	2	3	4	5
4	Clear procedures followed by staff when receiving and issuing stock from the warehouse ကုန်ပစ္စည်းသိုလှောင်ရုံမှကုန်ပစ္စည်းများကိုလက်ခံခြင်းနှင့်ထုတ်ပေးခြင်းတို့ကိုဝန်ထမ်းများကလုပ်ဆောင်ရာတွင် တိကျသောလုပ်ငန်းဆောင်တာအဆင့်များထားရှိခြင်း	1	2	3	4	5
5	Frequent management involvement in practice of inventory management system ကုန်ပစ္စည်းထားသိမှုစနစ်နှင့်ပတ်သက်ပြီး စီမံခန့်ခွဲသူတို့ကအမြဲလိုလိုပါဝင်ပတ်သက်လေ့ရှိခြင်း	1	2	3	4	5

Section (C) Questionnaire for contextual factors

Note: (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

Cost Barrier ကုန်ကျစရိတ် အတားအဆီး						
1	Cost of space provision for storage purposes သိုလှောင်မှုတွင် နေရာလိုအပ်မှုအတွက်ကုန်ကျစရိတ်	1	2	3	4	5
2	Cost of storage facilities (shelves, boxes and packaging) သိုလှောင်မှုအတွက်လိုအပ်သောပစ္စည်းကိရိယာများ၏ကုန်ကျစရိတ် (ပစ္စည်းစင်၊ သေတ္တာ၊ ထုပ်ပိုးမှု)	1	2	3	4	5
3	Maintenance cost for the storage သိုလှောင်မှုတွင် ပြုပြင်ထိန်းသိမ်းမှုအတွက်ကုန်ကျစရိတ်	1	2	3	4	5
4	Cost of equipment related to inventory control ကုန်ပစ္စည်းထိန်းချုပ်မှုနဲ့ဆက်စပ်သော ကိရိယာများ၏ကုန်ကျစရိတ်	1	2	3	4	5
5	Cost of staff involvement on inventory control ကုန်ပစ္စည်းထိန်းချုပ်မှုအပေါ် ဝန်ထမ်းများ၏ကုန်ကျစရိတ်	1	2	3	4	5
Owners' / Managers' Attitude စီမံခန့်ခွဲသူ၏သဘောထား						
1	Requirement of a systematic inventory management စနစ်တကျကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုလိုအပ်ခြင်း	1	2	3	4	5
2	Effort to implement inventory management ကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုကိုအသုံးချရန်အားထုတ်မှု	1	2	3	4	5
3	Time taken to implement systematic inventory စနစ်ကျကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုဖြစ်ပေါ်လာစေရန်အချိန်ကာလ	1	2	3	4	5
4	Contribution of systematic inventory management to profitability စနစ်တကျကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုကိုအသုံးချမှုကြောင့်ဖြစ်ပေါ်လာသောအကျိုးအမြတ်	1	2	3	4	5
5	Willingness to make any changes in the operations of inventory management ကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုလုပ်ဆောင်မှုပိုင်းတွင်အပြောင်းအလဲများကိုဖော်ဆောင်လိုသောစိတ်ဆန္ဒရှိခြင်း	1	2	3	4	5
Owners' / Managers' Knowledge စီမံခန့်ခွဲသူ၏အသိပညာ						
1	Level of knowledge on inventory management ကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုအပေါ်အသိပညာအဆင့်အတန်းတစ်ခုတွင်ရှိခြင်း	1	2	3	4	5
2	Level of knowledge on inventory handling techniques ကုန်ပစ္စည်းထားသိုခြင်းတွင် ထိန်းသိမ်းကိုင်တွယ်နိုင်မှုနည်းပညာအပေါ် အသိပညာအဆင့်အတန်းတစ်ခုတွင်ရှိခြင်း	1	2	3	4	5
3	Training/guidance received in inventory management ကုန်ပစ္စည်းထားသိုခြင်းစီမံခန့်ခွဲမှုအတွက် သင်တန်း(သို့) သင်ကြားခံရမှုရှိထားဖူးခြင်း	1	2	3	4	5
4	Awareness of existing scientific models of managing inventory လုပ်ငန်းတစ်ခု၏ကုန်ပစ္စည်းထားသိုခြင်းတွင်သိပ္ပံနည်းကျလုပ်ဆောင်မှုနည်းစနစ်များကိုသိရှိ ခြင်း	1	2	3	4	5
5	Maintaining a balance between minimum cost of ordering and holding cost for inventory to keep optimum stock levels	1	2	3	4	5

	ကုန်ပစ္စည်းလက်ကျန်ပမာဏကိုအကောင်းဆုံးဖြစ်စေရန်ကုန်ပစ္စည်းများမှာယူခြင်းစရိတ်နှင့် သိုလှောင်ခြင်းတွက်ကုန်ကျစရိတ်တို့ကိုထိန်းညှိရန် ကြိုးပမ်းခြင်း					

Section (D) Questionnaire for firm performance

Note: (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree)

Firm Performance အဖွဲ့အစည်း၏လုပ်ဆောင်နိုင်မှု						
1	Enhancement of the chances for creating new outlet by conducting effective inventory system ကုန်ပစ္စည်းထိန်းချုပ်မှုစနစ်ကိုထိရောက်စွာအသုံးပြုခြင်းဖြင့်ဆိုင်ခွဲအသစ်များကိုတိုးဖွင့်လာနိုင် ခြင်း	1	2	3	4	5
2	Availability of customers' favourite product to increase market share ဖောက်သည်အကြိုက်ပစ္စည်းများကိုရရှိစေခြင်းဖြင့် ဈေးကွက်ဝေစုကိုပိုရလာခြင်း	1	2	3	4	5
3	Effective use of inventory to increase company's profit ကုန်ပစ္စည်းထားသိုမှုကိုကောင်းမွန်စွာအသုံးပြုခြင်းဖြင့် ကုမ္ပဏီအမြတ်ရရှိမှုကိုတိုးမြှင့်ပေးခြင်း	1	2	3	4	5
4	Efficient management of inventory in the way of sharing more profits in order to boost employee morale ကုန်ပစ္စည်းထားသိုမှုကိုထိရောက်စွာအသုံးပြုခြင်းကြောင့်အကျိုးအမြတ်ကိုပိုမိုခွဲဝေနိုင်လာသဖြင့် ဝန်ထမ်းများ၏စိတ်ထက်သန်မှုကိုမြှင့်တင်ပေးခြင်း	1	2	3	4	5
5	Product availability with proper inventory management to enhance customer loyalty ကုမ္ပဏီတွင်ကုန်ပစ္စည်းထားသိုမှုကိုထိရောက်စွာအသုံးပြုခြင်းကြောင့် ကုန်ပစ္စည်းများပြတ်လပ်မှုမရှိတော့သဖြင့်သစ္စာရှိသောဖောက်သည်များကိုမြဲအောင်ဆွဲဆောင်ထားနိုင်ခြင်း	1	2	3	4	5

APPENDIX B

Effect of Contextual Factors on Purchasing

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.723[a]	.523	.514	.4137	.523	61.399	3	168	.000	1.665

a. Predictors: (Constant), Knowledge, CostBarrier, Attitude

b. Dependent Variable: Purchasing

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.531	3	10.510	61.399	.000[b]
	Residual	28.758	168	.171		
	Total	60.289	171			

a. Dependent Variable: Purchasing

b. Predictors: (Constant), Knowledge, CostBarrier, Attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	1.759	.276		6.374	.000	1.214	2.303		
	CostBarrier	.390	.071	.459	5.457	.000	.249	.530	.401	2.493
	Attitude	.264	.072	.307	3.643	.000	.121	.407	.401	2.493
	Knowledge	-.013	.051	-.014	-.264	.792	-.114	.087	1.000	1.000

a. Dependent Variable: Purchasing

Effect of Contextual Factors on Inventory Accuracy

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.752[a]	.566	.558	.4777	.566	73.102	3	168	.000	1.880

a. Predictors: (Constant), Knowledge, CostBarrier, Attitude

b. Dependent Variable: Inventory Accuracy

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.054	3	16.685	73.102	.000[b]
	Residual	38.343	168	.228		
	Total	88.397	171			

a. Dependent Variable: Inventory Accuracy

b. Predictors: (Constant), Knowledge, CostBarrier, Attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.292	.319		.915	.361	-.337	.921		
	CostBarrier	.613	.082	.597	7.440	.000	.450	.776	.401	2.493
	Attitude	.194	.084	.187	2.325	.021	.029	.359	.401	2.493
	Knowledge	.068	.059	.059	1.153	.251	-.048	.184	1.000	1.000

a. Dependent Variable: Inventory Accuracy

Effect of Contextual Factors on Stockout

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.858[a]	.736	.731	.3030	.736	156.100	3	168	.000	1.978

a. Predictors: (Constant), Knowledge, CostBarrier, Attitude

b. Dependent Variable: Stockout

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.014	3	14.338	156.100	.000[b]
	Residual	15.431	168	.092		
	Total	58.445	171			

a. Dependent Variable: Stockout

b. Predictors: (Constant), Knowledge, CostBarrier, Attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.782	.202		3.867	.000	.383	1.181		
	CostBarrier	.519	.052	.622	9.935	.000	.416	.623	.401	2.493
	Attitude	.237	.053	.279	4.460	.000	.132	.341	.401	2.493
	Knowledge	.053	.037	.057	1.429	.155	-.020	.127	1.000	1.000

a. Dependent Variable: Stockout

Effect of Contextual Factors on Controlling

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.807[a]	.651	.645	.4236	.651	104.664	3	168	.000	2.078

a. Predictors: (Constant), Knowledge, CostBarrier, Attitude

b. Dependent Variable: Controlling

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	56.348	3	18.783	104.664	.000[b]
	Residual	30.149	168	.179		
	Total	86.497	171			

a. Dependent Variable: Controlling

b. Predictors: (Constant), Knowledge, CostBarrier, Attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.505	.283		1.786	.076	-.053	1.062		
	CostBarrier	.011	.073	.011	.156	.876	-.133	.156	.401	2.493
	Attitude	-.037	.074	-.036	-.496	.621	-.183	.110	.401	2.493
	Knowledge	.924	.052	.806	17.702	.000	.821	1.027	1.000	1.000

a. Dependent Variable: Controlling

Effect of Inventory Management on Firm Performance

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.745[a]	.555	.545	.4876	.555	52.132	4	167	.000	1.840

a. Predictors: (Constant), Controlling, Inventory Accuracy, Purchasing, Stockout

b. Dependent Variable: Firm Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.580	4	12.395	52.132	.000[b]
	Residual	39.707	167	.238		
	Total	89.287	171			

a. Dependent Variable: Firm Performance

b. Predictors: (Constant), Controlling, Inventory Accuracy, Purchasing, Stockout

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.541	.350		1.546	.124	-.150	1.233		
	Purchasing	.236	.097	.194	2.440	.016	.045	.426	.423	2.364
	Inventory Accuracy	.220	.086	.219	2.542	.012	.049	.390	.360	2.776
	Stockout	.492	.120	.398	4.084	.000	.254	.729	.281	3.563
	Controlling	-.079	.053	-.078	-1.493	.137	-.183	.025	.985	1.015

a. Dependent Variable: Firm Performance