INFLUENCE OF INFORMATION TECHNOLOGY, SKILLS AND KNOWLEDGE, AND FINANCIAL RESOURCES ON INVENTORY MANAGEMENT PRACTICES AMONGST SMALL AND MEDIUM RETAILERS IN MALAYSIA

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ABSTRACT

Small-medium Enterprises (SMEs) play a vital role in the Malaysian economy. One of the rapidly growing SMEs in Malaysia is the retail industry. One important element in improving the growth of SME retailers is inventory management, as it assists the SME retailers in managing their inventories. SMEs face difficulties in securing financial resources, which inhibits the adoption of computerized inventory systems, as well as limited skill and knowledge in managing their inventory, are among the major problems that causes a less effective inventory management in retail SMEs. Thus, this study aims to investigate the impact of these three factors on inventory management practices of retail SMEs. 120 questionnaires were distributed to the SMEs in the retail industry, and 100 companies responded. Findings showed that the level of inventory management practices among retail SMEs is moderate. Skills and knowledge, and information technology influence inventory management practices of retail SMEs. However financial resources do not influence inventory management practices of retail SMEs in Malaysia suggesting that they do not have problems in getting financial resources as majority of them have received funds from the government.

INTRODUCTION

Small and medium enterprises (SMEs), play an important role in providing a path for Malaysian economic development. SMEs contribute especially to employment and national income (GDP) for emerging economies. To ensure the continuous development and growth of the Malaysian economy, SMEs need to manage their resources effectively. One of the resources is inventory. Inventory is important for the retailing industry as there are a variety of products that need to be handled properly (Kasim, Zubieru, & Antwi, 2015). SMEs often face numerous obstacles that limit their development and ability to sustain in the industry (Kamunge, Njeru, & Tirimba, 2014). Therefore, inventory management needs to be a main priority in SMEs as poor inventory management practices would lead to shortened lead-time, shortage of inventory, and the possibility of obsolete or loss of inventories. Consequently, this would influence the overall performance of the retail SMEs (Tripathi & Tiwari, 2014).

Effective inventory management practices could also reduce the cost associated with inventory, such as storage costs. Holding excessive inventory would require more physical space and thus, increase the financial burden of the SMEs (Ondari, 2016). Inefficient inventory management practices disrupt operations (Ngubane et al., 2015) and optimum levels of inventories need to be set accurately to minimize storage costs. Therefore, having effective inventory management practices to determine an ideal investment in inventories is eminent in order to reduce excessive cash outflow (John, Etim & Ime 2015). The inventory turnover ratio is often taken into consideration in determining the effectiveness of inventory management practices among retail SMEs.

One of the factors that could lead to the problems relating to inventory management among the retail SMEs is their lack of skills and knowledge. SME retailers often rely on their limited skill and knowledge in managing their inventory (Kasim, Zubieru & Antwi, 2015). Most of these retailers rely on simple techniques and/ or manual systems in controlling their inventories because of the limited number of employees that who often lack skills and knowledge. This argument is consistent with previous studies that found that most SMEs rely on their owners or family members in managing their inventory (Omar & Fraser, 2010). Other studies have found out that the SMEs rely on manual systems to control their inventory (Ng'ang'a, 2013).

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SMEs also face difficulties in securing financial resources due to the strict lending conditions imposed by financial providers. Most SMEs could not fulfil the lending conditions that lead to their failure in obtaining financial funds to expand their business or improve their operations management such as adopting computerized inventory management systems. The cost of adopting computerized inventory management systems requires a high cost due to the complexity of the systems and maintaining the systems (Ondari, 2016). Consequently, failure to adopt computerized inventory systems may affect the growth of the retail SMEs (Koech, Oyugi, & Memba, 2015). Having effective inventory management practices is important for SMEs in order to reduce risk of stockouts, improve customer satisfaction, smooth business's affairs, help to improve the sustainability of the business, and reduce storage cost. This study was carried out to examine the inventory management practices among the retail SMEs in Malaysia. Specifically, to examine the influence of skills and knowledge, information technology and financial resources of the retail SMEs in Malaysia on their inventory management practices.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Inventory Management Practices among SME Retailers

SME is a business entity managed by one or more owners, with business activities in a certain sector or sub-sector of the economy (Dumas, 2008b). An SME is described as more efficient and could provide more job opportunities thus increasing the economic development of a country (Ackah & Vuvor, 2011; Mungal & Garbharran, 2014). However, Oseifuah and Gyekye (2013) suggested that SMEs are easily exposed to fraudulent activities as they are often lacking in internal control systems which leads to business failure.

Narayanapillai (2014b) stated that SMEs provide great contribution to the economy of a country. Koech et al., (2015) found that SMEs could promote economic prosperity as it provides a great impact and contribution to developed and developing countries. This is because effective inventory management practices promote competitiveness among businesses.

Abdulrasheed Abdulraheem, Yahaya, Isiaka, and Aliu (2011) showed that the profitability of small businesses improves when there is efficient inventory management. They also found a significant positive relationship between adoption of inventory management and business performance. Other studies also supported the finding such as Ferenčíková (2014) that found SME performance is greatly influenced by the effectiveness of their inventory management.

Monisola (2012) discovered a huge gap between the theory and practice in using models in making inventory decisions among SMEs. He found that the application of inventory models among SMEs to be very low. Poor inventory management practices among SMEs would cause the inventories to be kept longer which is attributed by their ignorance in managing their inventory (Bai & Zhong, 2008). In order to protect the quality of products, effective inventory management is necessary among SMEs (Narayanapillai, 2014b). Mungal and Garbharran (2014) showed that SMEs were not serious in controlling their inventory and suggested the SMEs perform stocktake to ensure sufficient inventory.

Retailers need to have proper inventory management so that the retailers can make quick decisions on their operations and meet customers' demand (Erdem & Massey, 2004). Retailers need to align their inventory management practices along with market demand as most retailers need to deal with quick moving products (Rana, Osman, & Islam, 2015). Radio frequency identification (RFID) is one of the common technologies used by retailers to compute inventory data accurately, reduce shortage of inventories and prevent loss in revenue (Shin & Eksioglu, 2013).

SME retailers often use simple arrangements when controlling and maintaining their inventories due to the limited number of employees (Omar & Fraser, 2010). Haribhai-Pitamber and Dhurup (2014) stated that most retailers used the Last in First out (LIFO) method in managing their inventory. However, through simple procedures in controlling their inventory, most SME retailers still faced problems in counting their inventories and faced conflicts in preparing inventory valuation records (Haribhai-Pitamber & Dhurup, 2014).

Studies have shown that the SMEs across the UK have been facing problems, especially in their operations such as insufficient financial

investments, lack of knowledge on the current legislation, poor skills, and lack of training (Omar & Fraser, 2010). The retail industry has a variety of products to be managed (Kasim et al., 2015) and SMEs in the retail industry have provided serious consideration in adopting inventory management systems (Ahmad, Pakir & Zabri, 2014). Improper inventory management practices would create problems relating to space management. This would affect the retailers' sales or profit and also causes problems to both retailers and customers (Tripathi & Tiwari, 2014). Hence, the use of inventory management systems can have a significant influence on the retailers' financial performance particularly on the inventory turnover ratio.

There are many factors that influence inventory management practices among SMEs. Among the factors are limited financial resources, lack of human resources, poor technology, economic problems, organizational and behavioural aspects, and lack of knowledge to manage inventory (Narayanapillai, 2014a). A majority of the employees in SMEs do not have sufficient knowledge on inventory models (Monisola, 2012). In addition, the SMES do not have computerized record keeping of inventory due to limited ICT skills (Anokyewaa, 2015). The SMEs are also lacking in financial resources that deters them from adopting computerized inventory management systems (Abbas, Salmela, & Koskivara, 2013; Ahmad Mahyadin, Saad, Norhasni Asaad, & Zien Yusoff, 2015).

Inventory Control Theory

The Inventory Control Theory (ICT) observes the inventory so that the inventory can reach customers at any given point of time. It also helps to ensure any shortage or excess of inventory (Barwa, 2015). The ICT is also known as stock control. In controlling inventory, it is important to consider all consequences related to the inventory. An effective collaboration between technical matters, logistic aspects, medium connection and supply chain would assist in determining the quality of inventory management (Morgenstern, 2007). Inventory control needs a proper place to store the inventory such as a special area to keep the inventory and all the activities would be connected to the storage of the inventory. Different companies have different methods in managing their inventories. They can choose any method in handling their inventories provided that the method suits their business operations. Maintaining inventories is important especially for

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businesses that deal with physical products. This includes the manufacturers, wholesalers and retailers to ensure that their inventories are available for sale.

Skill and Knowledge

Skill and knowledge are considered important in considering the adoption of inventory management systems (Padachi, 2012). A SME requires the necessary skills such as technical skills to perform certain tasks (Karanja et al., 2013). Skills and knowledge are necessary in managing the inventory and produce proper record keeping (Umeji & Obi, 2014). Padachi (2012) found that the skills of owner-manager of SMEs is crucial in handling an inventory as well as managing the business as a whole.

A group of studies however, showed that the SMEs do not take skills and knowledge into consideration when adopting inventory management systems (Umeji and Obi, 2014). Kasim et al., (2015) supported Umeji and Obi's findings when they found limited used of the theories of inventory management systems when adopting inventory management systems. They found that only 70.9 percent of the SMEs relied on the experience of owners-manager when handling an inventory. Abbas et al., (2013) stated that SMEs have poor knowledge and lack skilled human resources in conducting business. They stated that most SME managers have insufficient understanding in inventory management.

SMEs normally recruit their employees with a basic knowledge on inventory management and hence, have minimal experience in handling the inventory (Ng'ang'a, 2013). In order to determine the level of the inventory, SMEs choose to use the manual methods such as notebooks (Kasim et al., 2015). Arguably, it is important for the SMEs to recruit competent personnel with adequate qualifications to control and manage the inventories (Ondari, 2016). The employees need to be trained accordingly to ensure effective inventory management.

As a majority of the SMEs employees are lacking in skills and knowledge, they need to be exposed to inventory models in order to make good decisions (Monisola, 2012). Accounting skills are the basic fundamental knowledge in running smooth business operations (Umeji

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& Obi, 2014). Retail SMEs that are lacking with certain skills, such as accounting skills, will create a barrier to achieve success (Haron et al., 2010). Abdulrasheed et al. (2011) in their study suggested that the SMEs employees need to be trained on inventory management such as inventory records and inventory checking.

H1: Employees' skills and knowledge significantly influence inventory management practices among retail SMEs.

Information Technology

The role of information technology is to assist businesses in achieving and sustaining competitive advantage since information technology does not have time and place barriers (Ramayah, Lim, & Sulaiman, 2005). The process of managing an inventory would become much easier and a business would be able to achieve competitive advantage through an effective information system (Coelho Jones & Ramos da Silva, 2013). Innovation on information and communications technology enhances the development process and consequently, the overall performance of SMEs (Attom, 2001). According to Kasim et al. (2015), most SMEs do not use mathematical models. They found that less than 1% of SMEs have used computer software in managing their inventory. Inventory management systems become less effective when there is no proper computerised systems in documenting inventory (Ng'ang'a, 2013). Anokyewaa (2015) provided similar findings when she found that lack of computerised record keeping contributes to poor inventory management practices among SMEs. Manual reports often cause many problems such as duplication and inefficiency as more time is needed to handle the inventory (Arshad, Shoaib, & Sajjad Khan, 2000). This is because most SME employees do not have adequate ICT skills and have poor computer literacy in handling the systems (Anokyewaa Christiana, 2015). Therefore, there is a need for training the SMEs employees. Information technology is crucial in determining the overall performance of the SMEs (Tseng, Wu, & Nguyen, 2011).

In addition, most SMEs employees are not exposed to advanced information technology. They lack the capability to manage advance inventory management systems (Abdol Kadir & Tuan Mat, 2016). Kairu (2015) stated that information and communications technology smoothens

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the operations of a business by enhancing the transparency and coordination of the business operations. The use of information technology enhances inventory management to become more efficient and accurate and hence, minimize inventory related costs (Ali, 2011). Onchoke and Wanyoike (2016) supported Ali's findings when they found a significant relationship between computerized inventory management control and organisational performance.

H2: Information technology is a significant determinant of inventory management practices among retail SMEs.

Financial Resources

Most SMEs have insufficient financial resources to buy expensive inventory management systems due to their low profit ratio with a high insolvency risk (Abbas et al., 2013). Koech et al., (2015) noted that SMEs often faced greater obstacles in getting funds, especially from local banks. If they manage to get their fund application approved, the approved amount is often very minimal. Inventory management systems are complex and require a high cost to develop and maintain. (Ondari, 2016). As compared to large businesses, SMEs do not have sufficient financial resources and thus, limit their ability to use advanced computerised systems (Ferenčíková, 2014b). Ng'ang'a (2013) supported the findings of Ferenčíková (2014a) that stated the importance to have enough funds in order to avoid difficulties in managing inventories.

A business with insufficient financial resources would provide a negative impact on the implementation of inventory management systems (Lucy Anisa & Susan, 2014). In other words, lack of finance among SMEs affects their ability to adopt an effective inventory management system (Xie, James, & Ali, 2014). Ackah and Vuvor (2011) found that most SMEs face challenges in obtaining funds due to their inability to provide necessary information such as audited financial statements required by financial providers. In addition, SMEs also faced difficulties in managing their receivables such as delays in getting payments for products and services provided. Kung'u (2013) noted that SMEs faced financial constraints as they could not access credit and thus, limit their ability to expand their business. The sources of funding needed by the SMEs are divided into

several phases, starting from the start-up to the current phase that is to run the business operations (Aldaba, 2012).

H3: Financial resource is a significant factor for effective inventory management practices among retail SMEs.

RESEARCH METHODOLOGY

This study utilized a questionnaire survey for data collection. The questionnaires were randomly distributed to 120 retail SMEs located in the Klang Valley. 100 SMEs responded, which give a response rate of 83%. Variables measurements were adapted from previous studies i.e., Tuan Mat and Abdol Kadir (2016), Umeji and Obi (2014), Kung'u (2011), John et al., (2015), and Hilmi and Ramayah (2008). Variables were measured using a 5-point likert scale ranging from scale 1: strongly disagree, to 5: strongly agree. The questionnaire consisted of three parts namely, demographic profile, questions on the level of inventory management practices by retail SMEs in Malaysia and questions on the factors influencing inventory management practices in retail SMEs. Details of the variables are presented in the findings section below.

FINDINGS

This study examined three factors that may influence inventory management practices towards inventory turnover ratio performance of the retail SMEs. The factors are skills and knowledge, information technology and financial resources.

Inventory Management Practices

The first objective of this study was to examine the level of inventory management practices among retail SMEs. Table 1 shows a total mean score of 3.97. This indicates that all SME retailers practised inventory management and perceived it as one the important aspects in conducting their business. The results also show the highest mean score of 4.76. This indicates that all transactions were evidenced by proper supporting documentation as to avoid from making mistakes while recording the inventory. On the other hand,

the lowest mean score is store records (2.68). This indicates that the retail SMEs do not have proper segregation of duties. Issues such as missing of store records still exist when there is only one person in charge of keeping the records. It is recommended that there must be at least two persons in charge of keeping store records. The size of standard deviation indicates that inventory management practices had been used in the eight items in the questionnaire and were representative of a majority of respondents.

The finding is consistent with Ahmad, Pakir and Zabri (2014) as SMEs in the retail industry have provided more consideration to adopting a proper inventory management practices. Good inventory management practices can help retail SMEs to deal with market demand and to manage quick movement of products in their business activities (Rana, Osman & Islam, 2015). It is necessary for SMEs to have effective inventory management practices to protect the quality of their products, as well as to avoid problems relating to space management as it would affect the retailers' performance, especially towards its sales or profit (Tripathi & Tiwari, 2014). In addition, a study by Tuan Mat and Abdol Kadir (2016) also suggested that inventory management practices are able to provide significant improvements in the operation of the SME business as a whole. As a conclusion, the results show that the SME retailers are using inventory management practices as they agree that they have properly conducted inventory management to enhance the performance of their business.

Table 1: Descriptive Statistic for Inventory Management Practices

		Mean	Std. Deviation
1	All transactions are evidenced by proper supporting documentation. (Example: goods received note)	4.76	0.653
2	All materials are physically counted annually	3.76	1.199
3	All materials should be classified accordingly and given a code number of identification.	4.47	0.969
4	Adequate record of store movements must be maintained for each item of material in stock	4.14	0.569
5	All materials are maintained at optimal levels as to avoid consistent stock-outs and overstock from occurring frequently.	3.94	0.679

6	There must be a physical control material for obsolete / slow moving items.	4.02	0.829
7	Store records kept by person other than the storekeeper	2.68	1.348
8	Careful investigation of significant overages and shortage of material	3.96	0.737
	Total Mean	3.97	
	AVE	0.42	
	N	100	

Note: 5 likert-scales (Ranging from 1: Strongly Disagree to 5: Strongly Agree)

Skills and Knowledge

Skills and knowledge have been identified in the literature as one of the influential factors for inventory management practices in retail SMEs. Based on the results as shown in Table 2, the mean score of 3.60 indicates that the employees in retail SMEs do have the skills and knowledge in inventory management. The results also show that, with the highest mean score of 4.31, most of the respondents know how to place orders for moving inventory at the right quantity and quality. This indicates that the majority of the employees in retail SMEs have sufficient knowledge in managing the order of the inventory and are able to differentiate the inventory based on its quality and at the right quantity. Having sufficient knowledge is important to improve the efficiency of inventory management.

The results however, shows that most of the employees in the retail SMEs do not have knowledge on accounting, management principles, practices and procedures, with the lowest mean score of 2.56. This indicates that the employers or the owners of the retail SMEs do not place such knowledge as a priority in selecting their employees. Most of the employees in SMEs were selected based on their experience in working and not on their knowledge. Although a majority of the employees do not have appropriate knowledge on accounting, management principles, practices and procedures, they however have the knowledge on inventory control principles and methods, with a mean score of 3.62 and on an average, the results show that most employees in retail SMEs know how to handle the business's inventory and, they can maintain records of the inventory, time and work performed (mean score=4.01). Thus, it is perceived that employees have gained skills and knowledge on inventory management through work experience.

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Table 2: Descriptive Statistic for Skills and Knowledge

		Mean	Std. Deviation
1	You have knowledge of inventory control principles and methods	3.62	0.908
2	You know how to calculate the minimum stock level to avoid stock out	3.39	0.994
3	You know how to calculate the maximum stock level to determine the economic order quantity	3.39	1.024
4	You know how to calculate the reorder level of stock to determine the maximum usage of stock	3.15	0.999
5	You have the ability to maintain records of inventory, time, and work performed	4.01	0.482
6	You have the ability to understand and follow instructions in managing inventories	4.30	0.560
7	You know how to place orders for moving inventory at the right quantity and quality	4.31	0.647
8	You have the ability to store moving inventory to minimize holding cost	3.40	0.932
9	You have knowledge of accounting, management principles, practices and procedures	2.56	1.067
10	You make frequent check of stock to prevent and control fraud	3.53	1.010
11	You take physical count of inventory to manage deterioration and obsolesce	3.70	0.905
12	You record the issuance and usage of inventory	3.87	0.861
	Total Mean	3.60	
	AVE	0.60	
	N	100	

Note: 5 Likert-scales (Ranging from 1: Strongly Disagree to 5: Strongly Agree)

Information Technology

Information technology is another factor that may influence inventory management practices towards performance of inventory turnover ratio

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performance. Shown in Table 4.2 are the descriptive statistics of information technology among the retail SMEs. Based on the results most of the retail SMEs use information technology in running their business, with a total mean score of 3.95 which is quite high. This indicates that respondents are using information technology in managing their inventory.

The highest mean score is for communication between the SMEs and their suppliers, with a mean score of 4.87. The SME retailers used the mobile phone in communicating with their suppliers as it is much easier and faster to obtain information. However, the lowest mean score is related to the Electronic Data Interchange towards both suppliers (mean score=2.79) and customers (mean score=2.83). Such results indicate that the retail SMEs prefer to used paper rather than the less standardized format of sending information electronically. Such results indicate that the SME retailers are more likely to use the old pen and paper style.

In sum, it can be concluded that on average, the retail SMEs do use information technology such as computerised accounting systems and internet in managing their business even though the result shows that the employees do not prefer to use Electronic Data Interchange in their business. The size of the standard deviation indicates that information technology is used in the eight items in the questionnaire and was representative of the majority of respondents. This element provides the total average explained (AVE) by 57%. This indicates that about 57% variance of inventory management practice can be explained by the changes in IT.

Table 3: Descriptive Statistic for Information Technology

		Mean	Std. Deviation
1	Your business uses computerized accounting systems	4.32	0.649
2	Your business uses the computer to communicate with your supplier. (Example: E-mail)	3.87	0.939
3	Your business uses information networks such as the internet in assessing information	4.10	0.847
4	Your personnel have fast and immediate access toinformation	4.47	0.611
5	Your supplier communicates with you by using the mobile phone	4.87	0.506

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6	Your business uses EDI (Electronic Data Interchanges) when dealing with customers	2.83	1.101
7	Your business uses EDI (Electronic Data Interchanges) when dealing with suppliers	2.79	1.122
8	You use the bar cod system when dealing with your customer	4.32	1.024
	Total Mean	3.95	
	AVE	0.57	
	N	100	

Note: 5 Likert-scales (Ranging from 1: Less likely used to 5: Highly used)

Financial Resources

The last factor that may influence inventory management practices on inventory turnover ratio performance is financial resources. This study examined whether the retail SMEs have financial problems in conducting their business. Based on Table 4, the total average mean score is 3.06. This indicates that most of the retail SMEs do not have problems in getting financial resources. The highest mean score is 3.98, indicating most retailers agree that having business skills would influence business performance and hence, better access to funding. On the other hand, the lowest mean score is 1.65, an indication that most respondents do not borrow money to finance their business activities. This shows that the SME retailers use their own money in financing their business, rather than borrowing money from other parties.

On average, the retail SMEs need more funding to finance their business activities. However, they avoid from borrowing money because of their lack of credibility and contact in the banking market and thus, making it hard to get funding from banks. The size of the standard deviation indicates that financial resources has been used in the six items in the questionnaire and were representative of the respondents. The critical value of factor loading for the rotated factor matrix was set at 0.5. The instruments captured the total average variance explained (AVE) of 64%. This indicates that 64% of the changes in variance of the dependent variable which is inventory management practices can be explained by the changes in the independent variable, which is financial resources.

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Table 4: Descriptive Statistic for Financial Resources

		Mean	Std. Deviation
1	Does your business borrow money to finance its activities?	1.65	0.857
2	Do you think your business needs more funding to finance business activities?	3.60	1.128
3	The age of your firm affects the ability to access funds	2.76	1.065
4	Lack of reputation and contact in the banking market makes it hard to borrow money from banks	3.49	1.105
5	Having business skills will influence business performance and hence access to funding	3.98	0.752
	Total Mean	2.58	
	AVE	0.64	
	N	100	

Note: 5 likert-scales (Ranging from 1: Strongly Disagree to 5: Strongly Agree)

Regression Analysis and Hypotheses Testing

Regression analysis was performed in order to test the hypotheses for this study, which was to examine the factors that influence inventory management practices (IMP), involving skills and knowledge, information technology, and financial resources and to examine the relationship between inventory management practices and the performance of inventory turnover ratio in retail SMEs in Malaysia. This study used simple linear regression. Therefore, each model had its own regression model, and all variables were tested according to their own model.

Normality test was performed to assess data normality to ensure that the general assumptions in this study are not violated (Ghasemi & Zahediasl, 2012). Cronbach's Alpha was used to measure the internal consistency of the data collected as it is the most suitable test for likert-scale items. The acceptable threshold would be between the 0 and 1 range (Gliem & Gliem, 2003). The result of the normality for all the variables was considered normal. Based on the recorded skewness and kurtosis, the range was between 2 and -1. The Cronbach's Alpha value for all variables were within the 0 and 1 range (Gliem & Gliem, 2003). The Cronbach's Alpha value for skills and knowledge was 0.885, 0.728 for information technology, 0.627 for financial resources and 0.648 for inventory management practices.

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Correlation Matrix

The level of multicollinearity was assessed through the correlation matrix and the value of tolerance and variance inflation factor (VIF). Multicollinearity needs to be at a low level before performing regression analysis as high level of multicollinearity might cause disturbing consequences of multicollinearity (Paul, 2008). Table 5 shows the correlations between all variables in this study. The correlation value for skill and knowledge and inventory management practices was 0.686. This indicates a strong positive relationship between these two variables. The correlation value between information technology and inventory management practices was 0.381. This indicates a medium positive relationship. Both skill and knowledge, and information technology have a significant positive relationship towards inventory management practices. However, financial resources shows a small positive relationship towards inventory management practices, which is 0.028. This indicates that there is a weak relationship between these financial resources and inventory management practices. The correlation value for inventory management practices and inventory turnover ratio is 0.062, an indication of a weak but positive relationship.

Table 5: Correlations Matrix

Variables	IMP	SK	IT	FR
IMP	1			
SK	.686**	1		
IT	.381**	.484**	1	
FR	.028	-.156	-.070	1
ITR	.062	.053	-.064	-.152

*. Correlation is significant at the 0.01 level (2-tailed).

Tolerance and VIF

The level of multicollinearity can be assessed through tolerance and VIF. According to Paul (2008), the value of VIF should not exceed 10 as a higher VIF leads to a larger chance of high multicollinearity. The value of tolerance should be more than 0.1 to avoid a high level of multicollinearity (Jesshim, 2003). Table 6 shows the recorded values of all tolerance when the dependent variable which is inventory management practices are more

than 0.1, and the value for the VIF is not exceeding 10. When the dependent variable is inventory turnover ratio, tolerance value is still more than 0.1, while the VIF not exceeding 10. Thus, this shows that all variables in this test hada low level of multicollinearity.

Table 6: Tolerance and VIF

Variables	Inventory Management Practices	
	Tolerance	VIF
Skills and Knowledge	0.751	1.332
Information Technology	0.766	1.306
Financial Resources	0.976	1.025
Inventory Management Practices	.	.

Hypotheses Testing

To examine the influence of the independent variables on inventory management practices among the retail SMEs in Malaysia, a regression analysis was performed based on the following linear regression model equation:

Inventory Management Practices = α + β1 (independent variables) + ϵ

Where:

α = constant
βi = regression coefficient, i = 1
ϵ = error
IV = skills and knowledge; information technology; financial resources

Skill and Knowledge and Inventory Management Practices (H$_1$)

Table 7 shows the results of simple linear regressions conducted to test the influence of skill and knowledge towards inventory management practices among retail SMEs in Malaysia.

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Table 7: Regression Model Results for Skill and Knowledge and Inventory Management Practices

Variable	Coefficient	T-statistic	Sig.
Constant	15.306	8.589	0.000
Skill and Knowledge	0.380	9.337	0.000
R²	0.471		
Adjusted R²	0.465		
F-statistic	87.179		
P-Value	0.000		

Note: Significant at the 0.05 level (2-tailed)

The results from the correlation analysis show a strong positive correlation between the two variables (r = 0.686) (*see appendix 2*). Regression analysis indicates that 47.1% of the variation in inventory management practices can be explained by variation in skill and knowledge. The results show a high significant value with p<.05 and F (1, 98) = 87.179. The standard error of the estimate is 2.86097. This indicates that the skill and knowledge have a significant influence on inventory management practices in retail SMEs. Therefore, Hypothesis 1 is supported.

The result is consistent with Umeji and Obi (2014) who stated that skills in controlling the inventory among SMEs is important to improve inventory management practices. Moreover, low skill and knowledge regarding inventory control enhances the failure rate of a business (Umeji & Obi, 2014). This study also supports Kasim et al.'s (2015) findings when they found that most SMEs have a limited ability to apply the theories related to inventory control in inventory management practices due to lack of experience in handling the inventory. Inventory control skills significantly influence inventory management practices in retail SMEs. This indicates the importance for the SMEs to have adequate skills and knowledge in managing the inventory to avoid difficulties in the future.

Information Technology and Inventory Management Practices (H$_2$)

The results of the simple linear regressions in testing the influence of information technology on inventory management practices of retail SMEs are shown in Table 8. It shows that the correlation value between

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information technology and inventory management practices is a moderate positive correlation (r = 0.38). The regression model for these variables is inventory management practices = 20.314 + 0.362*Information technology, with an adjusted R² of 14.5%. The result explains that 14.5% of the variation in inventory management practices can be explained by variation in information technology. The results show that the significant p-value is equal to .000, where (p<.05). This indicates a significant relationship, with F (1,98) = 16.639. The standard error of estimates is 3.63615. Thus, Hypothesis 2 is supported.

Table 8: Regression Model Results for Information Technology and Inventory Management Practices

Variable	Coefficient	T-statistic	Sig.
Constant	20.314	7.198	0.000
Information Technology	0.362	4.079	0.000
R²	0.145		
Adjusted R²	0.136		
F-statistic	16.639		
P-Value	0.000		

Note: Significant at the 0.05 level (2-tailed)

The result shows that information technology significantly influences inventory management practices. Such a result is consistent with the study by Ng'ang'a (2013) that found poor computerised systems in inventory control provides a negative impact on the effectiveness of inventory management. Anokyewaa (2015) provided similar findings as lack of computerised record keeping systems among SMEs leads to a negative impact on business operations. Using computerised record keeping would significantly influence the inventory management practices as it smoothen the business operations.

Financial Resources and Inventory Management Practices (H₃)

The results of simple linear regressions in testing the influence of financial resources towards inventory management practices of retail SMEs are shown in Table 9.

**Table 9: Regression Model Results for Financial Resource
and Inventory Management Practices**

Variable	Coefficient	T-statistic	Sig.
Constant	31.145	14.683	0.000
Financial Resource	0.032	0.281	0.779
R^2	0.001		
Adjusted R^2	-0.009		
F-statistic	0.079		
P-Value	0.779		

Note: Significant at the 0.05 level (2-tailed)

Table 9 shows that the correlation analysis between financial resources and inventory management practices has a weak positive relationship (r = 0.028). The result shows that the estimated regression model is inventory management practices = 31.145 + 0.032*financial resources. The adjusted R^2 is 0.1%, which indicates that it is not significant, with p>.05 and F (1,98) = 0.079, as the p-value is equal to 0.779. The standard error of the estimate is 3.93116. In addition, the results explain that 0.1% of the variation in inventory management practices is explained by the variation in financial resources. The results indicate that there is no significant influence between financial resources and inventory management practices in retailers under SMEs. Thus, Hypothesis 3 is not supported.

The result in this study is not consistent with the findings in previous studies as most studies found that financial resources has a significant influence on inventory management practices. This result could be due to the difficulties faced by the retail SMEs in getting financial resources to finance their businesses. Findings by Ahmed Fouad (2013) stated that shortage of finance in SMEs caused difficulties in expanding the business operations and issues in financing their business activities. The result also shows that most of the SME retailers do not borrow money to finance the business. This could indicate that they used their own money in conducting the business, rather than borrowing from third parties. Padachi (2012) stated that financial skills and knowledge of owner managers of SMEs are important factor that might influence development of the SMEs, rather than difficulties in getting financial resources

CONCLUSIONS

This study provides evidence that the retail SMEs in Malaysia have good inventory management practices. Result are consistent with Tuan Mat and Abdol Kadir (2016) and Dumas (2008a) who found that on average, retail SMEs perceived that it is important to have effective inventory management practices to improve business performance. Ahmad Mahyadin et al., (2015) also provided the same conclusion when they stated that it is crucial to assess the level of inventory management practices as it serves as a proper guideline in achieving business excellence. This study contributes to the management accounting literature especially on the inventory management practices in SMEs context. It is crucial to consider the factors such as skills and knowledge, information technology and financial resources in adopting inventory management practices.

Skills and knowledge are necessary in order to properly manage inventory, thus SMEs need to recruit competent personnel with adequate qualifications, at least with basic knowledge on inventory management. Lack of skills and knowledge create difficulties to the business. Experience alone is not sufficient in handling an inventory, thus SMEs need to equip their employees with sufficient knowledge on inventory management by sending them for training.

Information technology plays an important role when adopting an effective inventory management practices as information technology can assist businesses in achieving competitive advantage since there is no barrier in technology. Information technology is expanding over time and it is important to have information technology to compete in the new IT business environment. The employees of retail SMEs need to be trained as to have adequate ICT skills to handle the system related to inventories. In addition, innovations in information and communications technology will improve inventory management practices to be more efficient and thus, enhance the overall performance of SMEs.

Inventory management practices might not be considered as an important investment, among retail SMEs. Thus they do not place the right amount of funds to invest in a proper inventory management system in their business. Moreover, retail SMEs prefer to use their own money, rather

than to borrow from third parties and this causes them to have insufficient financial resources in managing the business. It is crucial for retail SMEs to invest in inventory management as a good inventory management practices will provide growth and success in the longer term.

In addition, both academics and practitioners of management accounting could identify the factors influencing inventory management practices in retail SMEs in Malaysia. Interested parties could also determine the relationship between inventory management practices and inventory turnover ratio performance. This research area is wide and could be explored further by researchers in future as it provides meaningful information for references. Moreover, the findings could help SME retailers to understand factors that might affect their inventory management practices and subsequently, could help them in achieving high inventory performance. Future research may explore on other external and internal factors that may influence inventory management practices. Findings from this study are useful for future reference in helping the SMEs to achieve competitive advantage through proper inventory management and control.

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