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Inventory management practices among Small and Medium Enterprises

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Abstract

The paper titled inventory management practices of small and medium enterprises is an attempt to understand the practices adopted small scale enterprises located in Kerala. Small scale enterprises are the engine of growth as far as any economy is concerned. It leads to large employment opportunities and spreading of wealth. With the markets being open to global competition it has become inevitable for small firms to become more efficient in financial management especially inventory management. The present study is done among the 143 small and medium enterprises located in the state of Kerala, India. The study is descriptive in nature and the sampling method adopted is random sampling. The study tries to find whether there is any impact of scientific inventory management on the profitability of the firms. The study shows that small scale enterprises having higher mean value in terms of inventory practices show higher rate of profitability. The study also found that the small scale units have their own unique practices for managing the inventory.

Keywords: Inventory, Management, Profitability, small scale units

Introduction

The growth of Micro, Small and Medium enterprises (MSMEs) around the world is looked at by Governments as a basic requirement for the growth of the economy. MSMEs are majorly labour intensive and enable the distribution of income across all levels. A highly capital intensive economy generally leads to concentration of wealth whereas the SMEs enables more of a wide distribution of income and wealth. Another important feature of MSME is that it leads to spreading of growth from urban areas to rural areas. Therefore Governments across the world are giving various sops for the improvement of the SME sector and there by leading to the growth of the economy. MSME sector

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which contributes 37% of the Gross Domestic Product of the nation is vital in terms of the manufacturing as well as the service sector providing jobs to more than 8 crore people(Fourth All India Census of MSME 2006-07) in India. Any large economy in the world requires MSME to grow as that indirectly supports the growth of large scale units as well.

Though many measures have been taken by Governments, the failure rate of SMEs is also a major concern for them. There are many studies which have been carried out to find out the reasons for the failures of SMEs, both in the Indian and global context. There is sufficient literature which shows that poor or careless financial management as the reason for the failures of small business (McMahon 1991, Berryman 1983, Peacock 1985, Potts 1975). Specifically in financial management, inventory management of small scale units have led to the success or failure of many units (Kesseven Padachi, 2006), (Majidul Islam, 2005) etc. The current study tries to identify whether the small and medium enterprises in Kerala have a strong inventory management practice and whether that has got any association with the profitability of the firms.

The definitions of SMEs differ from one country to another. There are various criteria, based on which SMEs are defined. Investment in Plant and Machinery, Number of employees, Value of sales, value of assets, energy consumption etc are some of the most commonly used basis. In India, the Ministry of MSME, Government of India, has defined MSMEs on the basis of their investment in Plant and Machinery (for manufacturing enterprises) and on equipments for enterprises rendering or providing services[3]. The present ceilings on investment are as follows:

Table 1

Classification	Manufacturing Enterprises (Maximum Limit)	Service Enterprises (Maximum Limit)
Micro	Rs. 25,00,000	Rs. 10,00,000
Small	Rs. 5 Crore	Rs. 2 Crore
Medium	Rs. 10 crore	Rs. 5 crore

Source: www.msme.gov.in

Review of literature

Any research work needs to understand the existing literature available in the topic for identifying the gap existing in the literature. With this purpose the researcher has done extensive literature review on the inventory management practices of enterprises and its implications on the profitability of the firm. This is more so important in the case of small and medium enterprises as they face severe competition from similar as well as large firms. It is inevitable for their survival in the era of globalization and acute competition from large firms. Here an effort has been made to identify the

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variables for the inventory management practices of small and large firms from the existing literature. Review is also conducted to know whether similar studies have been conducted and their findings.

Brown (2017as cited in Garcia R, 2017) found out in his study that the major reason for failure of small and medium enterprises is the lack of proper financial management. The inability to control and manage cost was cited as a major reason for failures. Non-availability of sufficient capital and time to manage their accounting books was cited as other main factors leading to failure of firms. Ames (2017) in his book titled Small Business Management had emphasized the problem of lack of financing as a major problem faced by SMEs leading to their failure.

Kesseven Padachi (2006) in the research paper Trends in Working Capital Management and its Impact on Firms' Performance: An Analysis of Mauritian Small Manufacturing Firms presents the findings of study conducted among 58 small manufacturing firms over a period of 5 years. The study shows significant relationship between efficient management of working capital and the performance of the firm. The study finds that organisations having high inventories and receivables are having low profitability.

Factoki (2012) in a study conducted among three towns of South Africa namely, Alice, Fort Beaufort and King Williams' town through a structure questionnaire has published the work titled "An investigation into the financial management practices of New Micro enterprises in South Africa. The paper talks of financial management practices in terms of the following heads, i.e., financial planning, analysis and control, accounting information, pricing strategy and objective, working capital management, investment decision. The micro units don't calculate reorder levels for stock replenishment, but reorder as soon as the stock runs out. The study concludes by saying that the findings are agreeing with the literature existing till that point, i.e., micro units covered under the study don't have much financial management practices enabling better decision making and better financial performance.

Islam (2005) studied the management accounting practices adopted in China in the work "The development of quality management accounting practices". The author finds that better management accounting practices enables management in taking well informed decisions leading to effectiveness. In a competitive market quality management accounting practices are considered to be a pre requisite for successful management of the organisation. The Chinese as they are open to foreign investments are getting more interested in adopting modern management accounting practices to become more competitive.

Mcmahon and Holmes (1991) studied the financial management practices of small business units in North America. The study was conducted as a review of the existing literature on the relevant area. Less than 15% of the firms in majority of the studies had proper inventory management practices. No evaluation of the investments made in inventory was done by the firms using any techniques as prescribed by the text books. Less than 10% of the firms in a study had adopted economic order quantity method of evaluating the inventory levels for better success of the units.

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Tabot (2015) in the thesis submitted "The Working capital management practices of small medium and micro enterprises in the cape metropole" studied the importance of working capital management practices for the success of SMEs. Koury, Smith and Mackay (1998), Sunday (2010), Yiadom & Agyei (2006) all have found out that poor working capital management practices has contributed heavily to the closing down of SMEs (as cited by Tabot, 2015).

Bandara & Rathnasiri (2016) have tried to identify the working capital management practices adopted by small and medium enterprises in Srilanka and its impact on the small units. Sample sizes of 60 units have been covered for the study and covered receivables, cash and inventory under the purview of the present study. The study found out that small and medium enterprises do have unique ways of maintaining cash records and receivables and inventory, but those methods are not scientific. Lack of scientific methods in managing working capital has affected the small and medium enterprises to achieve the full potential of these methods.

Gorton (1999) researched on the financial management techniques of UK based small and medium sized enterprises. The study was necessitated as it is evident that good decision making is driven by quality and timely information. This information on financial areas are mainly provided by quality financial management practices.

Research gap

Though there are many studies related to financial management of small firms and their impact on profitability, there is not much study conducted on the inventory management practices adopted by small and medium enterprises and their correlation to the profitability of the firms. There is severe shortage of similar topics in the Indian context and specifically in the state of Kerala. As India is looking for more employment opportunities and projecting itself for MAKE IN INDIA, it is essential for the small and medium enterprises to survive and compete with large firms by improving their efficiency. Towards the same having a sound financial management system in place is essential. Inventory management happens to be a vital important area in financial management which decided the fate of small and large firms.

Inventory management

Inventory management refers to the management of investment in inventory in the form of raw material, work in progress or even finished goods. High investment in inventory is considered to be poor management as it leads to idle funds in inventory. Shortage of inventory or lack of sufficient investment in inventory is also dangerous as it might lead to stoppage of production, loss of good will etc. So there has to be an optimal investment in inventory leading to efficiency.

Methodology

The current study tries to measure the inventory management practices of small and medium enterprises located in the state of Kerala. The study is descriptive in nature. For the data collection,

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the state has been grouped into three regions, Travancore, Central and Malabar based on the geographical areas. The data has been collected from 143 small and medium enterprises from these three regions. Population of the study constitutes the small and medium enterprises registered under the MSME Development Act, 2006 as per the list provided by the Kerala Board for Industrial Promotion. All those units which are registered and still operational constitute the sampling frame for the study. The sampling has been done using Random sampling method. The sample units have been selected using the random number function in MS Excel. Out of the 150 units selected through the process 7 units were either non operational (during the current year) or have been reluctant to cooperate with the study. Therefore the final sample size has been limited to 143 units from the three zones of the state.

Discussion and Analysis

The present study collected from 143 small scale units across Kerala. 48 units from Travancore, 50 units from central part of Kerala and 45 units were selected from the Malabar region. An equitable distribution was done for selecting of ample from three regions (Table 2). However the lack of availability of the selected units for response or their non-existence has contributed to the slight difference in the sample size between regions. The study uses basic frequency analysis, ANOVA and other statistical tools for bringing meaning to the data collected.

Table 2- Zone Wise classification

	Frequency	Percent
Travancore	48	33.6
Central	50	35.0
Malabar	45	31.5
Total	143	100.0

Table 3- Nature of Inventory

	Frequency	Percent
RAW MATERIAL	123	86.0
SEMI FINISHED	13	9.1
FINISHED GOODS	7	4.9
Total	143	100.0

Among the 143 units covered under the study, 123 units dominant nature of inventory was in the form of raw material which constituted 86 % of the respondent firms. Semi finished goods was handled by 9.1% and only 4.9% of the firms used finished goods as their inventory. The ranges of firms covered under the study were manufacturing units only.

Table 4-VALUATION OF STOCK IN BOOKS

	Frequency	Percent
COST PRICE	132	92.3
NET REALIZABLE VALUE	11	7.7
Total	143	100.0

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Table -5 - **NO OF DAYS OF STOCK KEPT**		
	Frequency	Percent
LESS THAN 3 DAYS	13	9.1
3-7 DAYS	21	14.7
1-3 WEEKS	39	27.3
ABOVE 3 WEEKS	70	48.9
Total	143	100.0

Table 4 and 5 show the valuation method adopted by SME units and the duration for which they hold inventory. More than 92.3 % of the firms valued the inventory at the cost price and didn't even bothered to compare the same with the net realizable value. However the remaining 7.7% of the firms did value stocks at net realizable value. They adopted the method of comparing cost price with net realizable value and adopted the lowest of the two as prescribed by the accounting standards. Inventory kept for longer duration leads to huge cost of inventory through idle investment in inventory.

Among the units covered under the study majority of the small scale units, i.e., 48.9% of the units had the practice of keeping inventory for a period of more than 3 weeks. They were not having the practice of maintaining stock levels as prescribed by the theory. Only 13 units out of 143 had the practice of keeping inventory for less than 3 days. In total, 76.2% had stock of more than a week. Most of the units covered under the study mentioned that the specific nature of the materials and the non availability on a regular basis were the major reasons for the over stocking of the materials. According to the study majority of the firms opined that Just in Time inventory system was not possible in the context of Kerala due to unpredictable strikes (hartals) announced by various political parties.

Profitability Vs number of days that stock is kept

TABLE 6- ANOVA					
PROFITABILTY VS NUMBER OF DAYS STOCK KEPT					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.343	3	1.114	1.164	.326
Within Groups	133.038	139	.957		
Total	136.381	142			

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Table 7- Descriptives								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
LESS THAN 3 DAYS	13	2.6410	1.37074	.38017	1.8127	3.4694	1.33	5.00
3-7 DAYS	21	2.5556	1.11721	.24379	2.0470	3.0641	1.33	5.00
1-3 WEEKS	39	2.4359	.89231	.14288	2.1466	2.7252	1.00	4.67
ABOVE 3 WEEKS	70	2.2238	.89501	.10697	2.0104	2.4372	1.00	4.67
Total	143	2.3683	.98001	.08195	2.2063	2.5303	1.00	5.00

The ANOVA-test was conducted to check whether there is any significant difference in profitability in relation to the number of days of stock that is held. The results found that there is no significant difference in profitability (p value=0.326). The mean value analysis reveals higher value of profitability for organisations with lower stock period. Inventory management theory states that the more the period of inventory kept, more the cost of inventory. This will inversely affect the profitability of the firm. The same has been found to be true in the case of small and medium scale firms covered under the study.

Table 8- NO OF SUPPLIERS		
	Frequency	Percent
LESS THAN 5	25	17.5
5-10	24	16.8
ABOVE 10	94	65.7
Total	143	100.0

Table No. 9- GET CREDIT FOR PURCHASE		
	Frequency	Percent
YES	98	68.5
NO	45	31.5
Total	143	100.0

Table No. 8 shows the no. of suppliers of materials which the small scale units are having for majority of the inventory items. The data shows that more than 65% of the small scale units have more than 10 suppliers for majority of the inventory items. Only 17.5% of the items have suppliers less than 18%.

The major reason for the shortage of suppliers of few materials is due to the fact that such items are mostly imported and not available in the local market. Almost 69 % of the units get credit for their purchases (Table 9), however the remaining firms don't get any form of credit for their material purchases. The same also is due to the non availability of the material in the local market. Majority of

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the firms who buy materials from the domestic market do get credit and also have large number of suppliers to choose. Both are good for a healthy inventory management system.

Profitability of SME units Vs Number of suppliers

Table 10- ANOVA					
PROF					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	6.515	2	3.257	3.512	.033
Within Groups	129.866	140	.928		
Total	136.381	142			

The ANOVA-test was conducted to check whether there is any difference in profitability with number of suppliers. The results found that there is a significant difference in profitability (p value=0.033) with number of suppliers. The mean value analysis reveals higher value of profitability for organisations with higher number of suppliers.

Table 11- Descriptives								
No of suppliers of inventory								
					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
LESS THAN 5	25	1.9733	.70000	.14000	1.6844	2.2623	1.00	4.33
5-10	24	2.2083	.82129	.16765	1.8615	2.5551	1.33	4.67
ABOVE 10	94	2.5142	1.05031	.10833	2.2991	2.7293	1.00	5.00
Total	143	2.3683	.98001	.08195	2.2063	2.5303	1.00	5.00

Any inventory management system to be better needs to have sufficient number of suppliers so that the firm has better bargaining capacity and timely supply of materials. Also it is essential to have better inventory management practices for firms to have greater efficiency. The ANOVA-test was conducted to check whether there is any difference in **Inventory Management** practices with number of suppliers. The results found that there is no significant difference in **Inventory Management** practices (p value=0.281). The mean value analysis reveals that **Inventory Management** practices is slightly higher for organisations with above ten suppliers (mean value =2.1879).

On the extent of inventory management practices adopted by SMEs 67% of the units responded that they have a scientific way of managing inventory. However the methods adopted for managing the inventory where not similar to those prescribed in theory. Only 14% of the firms had a practice of preparing the economic order quantity while placing material purchase orders. Almost 90% of the

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small scale units studied didn't adopt Just in Time concept and didn't had the practice of calculating various stock levels.

Findings and Conclusion

The study titled inventory management practices of small and medium enterprises was a study limited to the state o Kerala. Out of the 143 units covered under the study most of the units didn't had proper scientific inventory management practices suggested by theory. However they had unique ways of managing inventory. Though statistically there is no significant difference between firms with inventory practices and without inventory practices on the profitability of the firms, it is found that small scale units with higher mean averages of inventory practices seems to have higher profitability. Therefore we can conclude more focus on better inventory management practices can improve the efficiency of the firms thereby leading to better profitability. This is vital for small scale firms as they are struggling to compete with large firms in today's market of global competition. Further studies could be conducted in understanding the unique practices of small and medium enterprise in managing inventory which are missing in the existing theory or literature.

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