Volume No.02, Issue No. 07, July 2014 ISSN (online): 2348 – 7550

INTERNET AND IT - THE CHANGE DRIVERS IN SMALL AND MICRO ENTERPRISE BUSINESS

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ABSTRACT

Micro, Small and Medium Enterprises (MSMEs) have been contributing to the economic development of India in many ways such as employment generation for both urban and rural population, providing goods & services at competitive prices and to boost the exports. The globalization, liberalization and privatisation processes have made the international business a much simpler process and the information-communication-technology (ICT) applications have been the significant contributor in bringing this change to the market place. As businesses move towards reliance on knowledge assets rather than physical assets, they will rely more on better educated, better skilled people. The need for Change Management in SMEs is felt now more than in the past. In order to understand the pace at which this change is happening in Micro and Small Enterprises this study has been taken up. The findings of the study reveal that Internet and IT applications among Small and Micro Enterprises is limited to average and infrastructure is not the limiting factor for this sluggishness. However, the study also finds the IT applications and people working on IT significantly contribute to business of the enterprise.

Keywords: Change drivers, E mail, Internet and IT applications, Small and Micro Enterprises, Website

I INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) have been contributing to the economic development of India in many ways such as employment generation for both urban and rural population, providing goods & services at competitive prices and to boost the exports. There are around 26 million MSME units in India, contributing nearly 45% share of manufactured output, accounting for 40% of overall exports of the country and providing employment to about 59 million people (Annual Report MSME, 2009-10). This contribution is significant but is challenged by the ongoing globalization process with SMEs from across the border looking for business beyond the border. The globalization, liberalization and privatisation processes have made the international business a much simpler process with the information-communication-technology (ICT) applications contributing significantly to bring this change in the market place. The Small and Medium Enterprises, worldwide, have also been influenced by the ICT applications and globalization processes.

Today, Knowledge Based Economy – an economy that relies more on intellectual capital than on physical assets with increased use of internet and Information Technology (IT) has ensured borderless market place and resulted in better proximity to demanding customers. The consumers with better access to information about the markets and the competition are empowered and bargain for better prices. All these factors have driven down the prices. The improved supply chain network has reduced the transaction cost and hence reduced the barriers

to enter any country and thereby reduced the effect of economies of scale. The increasing industrialization in developing countries and cheaper labour has made SMEs all over the world to innovate more to stay ahead. As businesses move towards reliance on knowledge assets rather than physical assets, they will rely more on better educated, better skilled people. The need for Change Management in SMEs is felt now more than in the past. Hence, this study has been taken up to analyse and understand how well the Small and Micro enterprises have adopted Internet and other IT applications in business.

II LITERATURE REVIEW

The knowledge and adoption of information technology in business is essential for competing in domestic markets as well as to challenge the counterparts from foreign market for SME sector. But many of the SMEs are unaware of the latest software available in the market or technology updates. There is also a strong shortage of skilled IT and management personnel who can help SMEs to tide over these problems. (Zaidi, 2013) Therefore, the SMEs should understand and agree to adopt the changes that meet the market needs. Author Dolly Bhasin, (2008) in the article in ICICI Bank Knowledge Series states, the three drivers of the Change Management– Thought Leadership, Learning Companies and Role of ICT in development and growth are essentially important for SMEs to consider for survival and sustenance. The businesses that cope best with change are those that are led by champions of change, leaders with the vision and determination to use change as an opportunity to focus on the needs and aspirations of the future stakeholders. In addition to this, the businesses have to become institutional learners as well. A learning organization is skilled at creating, acquiring and transferring knowledge and at modifying its behaviour to reflect the new knowledge and insights (Garvin, 1993). ICT offers the SMEs an opportunity to face the challenges by adapting themselves to the Digital Economy. The use of e-documents, deliver documents to suppliers & buyers electronically, do all buying & selling online, etc are the means of adopting ICT in business. ICT also helps to develop proper workflow, and enhance productivity. Enterprise Resource Planning (ERP), Supply Chain Management (SCM) software tools contribute substantially to globally challenge the competition. Also, Quality & Process Improvements, e-Learning & Knowledge Management are the other areas of ICT application. For competitiveness, Market Research, Business Intelligence (BI), Technology Marketing, Customer Relationship Management (CRM) E-commerce, etc could be used by the SME sector.

III ICT ADOPTION IN SMES: ISSUES AND CHALLENGES

The MSME sector faces a few challenges in adopting ICT in its business and lack of automation is one of them. The software tools required to automate non-core processes (HR, Admin, Purchasing etc) are either too expensive or do not cater to the unique requirements of the SMEs. Therefore, this sector tends to opt for low cost inefficient software tools or run the business without IT support. However, it appears that significant differences exist between SMEs on ICT adoption. For example, a survey by Yorkshire Forward Regional Development Agency, found that whilst 63% of SMEs were connected to the Internet, 46% had a website and 36% traded on-line, 30 % (mostly micro businesses of less than 10 employees) did not use computers at all (Harindranath et.al, 2008; Pritchard, 2006). Some of the specific challenges are as below.

3.1 Lack of awareness about various applications of IT

The spread of information technology applications was more in service sector compared to industries. Also, the Large and Medium enterprises have adopted IT applications more rapidly and could reap benefits compared to Small and Micro sector. The Managers of SMEs are generally involved in the day to day business transaction activities and hence do not give due attention that is required to adopt IT in business.

3.2 Deciding on type of applications required for the business

In view of limited exposure to advanced technologies and unable to wriggle out of day to day administrative and operational issues the Owners and Managers of Small and Micro enterprises were unable to understand the significance of IT for business. Also, the IT sector is fast changing; the MSME sector could not catch up with changing technologies.

3.3 Choosing the right IT product for the business process

As the MSME sector was slow in embracing IT in business applications, it was distancing from IT developments and this prevented the owners of these enterprises from choosing the right product for the business in hand. There are many Indian companies providing IT Solutions to customers across the globe. However, these companies look for the business from clients abroad in view of better returns. The software packages readily available in the market are quite expensive for Micro and Small enterprises to purchase and adopt. Hence, they depend more on small local enterprises and freelancers for IT support.

3.4 Getting the right IT personnel

IT personnel are in demand and are attracted to bigger companies and MNCs. Therefore, it is very difficult for Micro and Small Enterprises to attract good IT personnel and it is even more difficult to retain them. The employees who have grown with the company may not be IT literate and often resist the changes. The Micro and Small enterprises that do not have formal procedure or where procedures are not documented, it may be difficult for the third party and/or newcomer to understand the existing business practices and match them with the IT process.

However, with all these constraints in place, many Micro and Small Enterprises have adopted IT in business and this study throws light on the internet and IT applications of such enterprises.

IV OBJECTIVES OF THE STUDY

The Micro and Small Enterprises have an opportunity to explore business prospects overseas and at the same time need to sustain and survive in the home country. The impact of globalization is that these enterprises have to change - to flourish or perish. Also, information technology plays a significant role in Micro and Small Enterprise businesses and hence a pilot study on adoption of internet and IT in Micro and Small enterprises was taken up. The objectives of the study were:

- To know the availability of email and website in Micro and Small enterprises.

- To study how well these enterprises adopted Internet and IT applications in business and to understand its relationship with type of enterprise
- To explore the relationship between spending for IT, number of people working on IT and the sales turnover of the enterprise.

V HYPOTHESES

The above objectives have been tested with the following hypotheses.

H_1: There is no relationship between type of the enterprise and owning the email id and website by the enterprise

There is no relationship between type of enterprise and number of internet applications, number of IT applications adopted by the enterprises

H_2: There is no significant relationship between the sales turnover of the enterprise and IT spending.

H_3: There is no significant relationship between the sales turnover of the enterprise and number of people working on IT.

VI SAMPLING PLAN AND SCOPE OF THE STUDY

For the purpose of the study manufacturing enterprises in industrially advanced locations namely Zone 4 of Karnataka State (Industrial Policy note, Government of Karnataka, 2009) was considered. The Government of Karnataka has identified four Zones for the purpose of development of industries in the State, namely, Zone1, Zone 2, Zone 3 and Zone 4. Zone1 has most industrially backward taluks of the State and Zone 4 has industrially advanced taluks of the State. For the purpose of study, Zone 4 was selected and it ensured the IT infrastructure is available in the population chosen. The enterprises in Baikampady and Yeyyadi industrial area of Mangalore City Corporation limits fall into this category. In this location 475 enterprises exist (MSME Development Institute, 2012) and at 95% confidence level 57 Small and Micro enterprises (12% of the population) were approached with a structured questionnaire. In view of uncertainty of availability of entrepreneurs and industries are spread in two different industrial area Convenient Sampling Method was used. The questionnaire had two parts – General information about the enterprises including seeking information on email id, website, type of enterprise, sales turnover, net profit, whether use IT in business etc. The second part of the questionnaire covered questions on the different internet and IT applications of the enterprise, period of use of the above applications, number of employees working on IT and the spending for IT related software and hardware etc., by the enterprise. The data analysis was carried out and the results were tabulated and also hypotheses test was done.

VII DATA ANALYSIS AND INTERPRETATION

The data collected from the survey revealed that 52 enterprises (91.2%) have adopted IT applications in their business and 5 (8.8%) of the enterprises are not using IT in the business transactions. Hence, data collected from 52 enterprises was used for analysis.

The enterprises in manufacturing sector where investment in plant and machinery is less than Rs.25 lakhs have been recognized as Micro Enterprises and the enterprises with investment more than Rs.25 lakhs but less than Rs. 5 Crores have been recognized as Small enterprises by the MSME Development Act, 2006. The details of Internet, IT applications, website, email etc., of the Small and Micro enterprises surveyed are as below.

It is observed from TABLE 1 that, among the enterprises that use IT, nearly 84% of Small enterprises have email id and 73% of Micro enterprises have email id and the rest do not have email id. Overall, 81% of enterprises visited have email id. It is observed that only 21% of enterprises visited have work mail id. In other words, these enterprises have the website and use the mail id from the same domain. This clearly shows that Micro and Small enterprises are not using the IT infrastructure available in the industrial estate effectively.

TABLE 1: Cross tabulation between type of the enterprise and E mail id

Use IT			Email id			
			Work mail id	.com mail id	No mail id	Total
Yes	Type of enterprise	Micro	3	8	4	15
		Small	8	23	6	37
	Total		11	31	10	52

TABLE 2: Cross tabulation between type of the enterprise and website

Use IT			Website		Total
			Available	Not available	
Yes	Type of enterprise	Micro	5	10	15
		Small	15	22	37
	Total		20	32	52

From the TABLE 2 it is observed only 39% of enterprises surveyed have the website. Among the Micro enterprises only 33% have website and 41% of Small enterprises have the website. Of the enterprises that use IT and also own a website, only eleven use work mail id (TABLE 1 & 2) which is about 55% of enterprises with website. This indicates that rest of the enterprises are not aware of work mail id and its importance in business. It was also observed during the survey most of these enterprises have not updated the website with latest

information. In many instances, originally developed website still exists. It is also observed that about 62% of the enterprises that use IT do not have the website and among these enterprises share of Small enterprises is about 60%.

TABLE 3: Type of the enterprise and Internet applications

Use IT			Internet applications				Total
			All Internet apps	5 or More Internet apps	Max 4 Internet apps	Max 2 Internet apps	
Yes	Type of enterprise	Micro	0	8	5	2	15
		Small	3	22	11	1	37
	Total		3	30	16	3	52

The response to the question on different internet applications adopted by the enterprises is shown in TABLE 3. The internet applications such as email checking, web browsing, internet in sales and purchase activities, fund transfer, etc. were enquired. All enterprises that use IT in business confirmed the internet application in business and about 58% of the enterprises use five or more internet applications. It can be inferred from the TABLE 3 nearly 60% of Small enterprises and 53% of Micro enterprises use five or more internet applications. Only about 7% of the enterprises use all the internet applications enquired in the questionnaire. This clearly indicates the limited internet use for business transactions by Small and Micro enterprises.

Information Technology (IT) applications in business processes such as accounting, finance, inventory, manufacturing, personal and administration, sales, marketing, R&D and ERP use were enquired. It is observed from TABLE 4, about 8% of the enterprises that use IT in business do not use computer for any IT applications which implies that these enterprises use computer only for internet related activities. About 35% of enterprises use a maximum of four IT applications and only about 8% of the enterprises use as many as eight IT applications in the business. This indicates the limited use of computer by Small and Micro enterprises for business transaction purposes.

TABLE 4: Type of enterprises and IT applications

Use IT			IT applications					Total
			Max 8 IT apps	Max 6 IT apps	Max 4 IT apps	Max 2 IT apps	None	
Yes	Type of enterprise	Micro	1	3	4	5	2	15
		Small	3	9	14	9	2	37
	Total		4	12	18	14	4	52

VIII HYPOTHESES TESTING

H_1: In order to test the hypothesis, Pearson correlation test (1 tailed) between type of enterprise and enterprises having the e mail id and owning the website was administered. The results are presented in TABLE 5.

Let $\alpha = 0.05$

TABLE 5: Pearson correlation between type of the enterprise and e mail id, website

		Email id	Website
Type of enterprise	Pearson Correlation	-.086	-.042
	Sig. (1-tailed)	.272	.383
	N	52	52

It is observed that the correlation between type of the enterprise, owning the email id (p=0.272) is more than alpha and therefore, not significant and the correlation between type of enterprise and enterprise having a website is also not significantly correlated (p=0.383). It can be inferred that there is no sufficient evidence to reject the null hypothesis that type of the enterprise has no relationship with enterprise owning the email id and the website.

TABLE 6: Pearson Correlation between type of the enterprise and Internet, IT applications

		Internet applications	IT applications
Type of enterprise	Pearson Correlation	-.220	-.149
	Sig. (1-tailed)	.059	.147
	N	52	52

To test the relationship between type of enterprise and number of internet applications and number of IT applications adopted by the enterprises, Pearson correlation test was administered. From the TABLE 6 it can be inferred that correlation is not significant between the type of the enterprise and number of IT applications adopted by the enterprises (p=0.147) and type of the enterprise and number of Internet applications adopted by the enterprise (0.059) as p value is greater than alpha. There is no sufficient evidence to reject the null hypothesis that there is no relationship between type of enterprise and number of IT applications and number of Internet applications of the enterprise.

H_2: In order to test the second hypothesis Pearson correlation test was administered with Sales turnover of 2011-12, 2010-11, 2009-10, IT spending as test variables. The results were tabulated in TABLE 7

TABLE 7: Correlation between Sales turnover and IT spending

		IT spending
Turnover_2011_12	Pearson Correlation	.512
	Sig. (1-tailed)	.000
	N	52
Turnover_2010_11	Pearson Correlation	.545

	Sig. (1-tailed)	.000
	N	50
Turnover_2009_10	Pearson Correlation	.525
	Sig. (1-tailed)	.000
	N	49

The Pearson's 'r' between sales turnover of 2011-12 and IT spending is 0.512 with number of observations, N=52 and significance level p = 0.000 < α (0.01); similarly r = 0.545, N=50 and p=0.000 for sales turnover 2010-11 and IT spending; also r=0.525, N=52 and p=0.000 for sales turnover 2009-10 and IT spending. The results clearly reject the null hypothesis and therefore we can conclude that there is a significant relationship between sales turnover of the enterprise and IT spending and is positively correlated.

H_3: The third hypothesis is tested using Pearson correlation – testing correlation between the sales turnover and number of people working on IT related work. TABLE 8 gives the frequency distribution of number of people working on IT.

TABLE 8: Frequency of number of people working on IT

Number of people working on IT	Frequency	Percent	Cumulative Percent
More than ten	1	1.9	1.9
More than five but less than ten	4	7.7	9.6
Between three to five	7	13.5	23.1
Less than three	40	76.9	100.0
Total	52	100.0	

The results of the correlation between sales turnover during the period 2011-12, 2010-11 and 2009-10 and number of people working on IT related work is presented in the TABLE 9. It can be observed that the sales turnover for 2011-12, 2010-11, 2009-10 and number of people working on IT related work are negatively correlated. The significance level in each case is < 0.01. The result indicates significant negative correlation between sales turnover in three consecutive years and number of people working on IT. Therefore, null hypothesis is rejected. This leads to imply that as business turnover increases the contribution of employees working on IT increases. In reality employees continue to work but result indicate negative correlation showing the impact of increased contribution of employees as turnover increases.

TABLE 9: Pearson Correlation between Sales turnover and No of people working on IT

Sales Turnover		No of people on IT
Turnover_2011_12	Pearson Correlation	-.464
	Sig. (1-tailed)	.000
	N	52
Turnover_2010_11	Pearson Correlation	-.434
	Sig. (1-tailed)	.001

	N	50
Turnover_2009_10	Pearson Correlation	-.469
	Sig. (1-tailed)	.000
	N	49

IX CONCLUSION

The Micro and Small enterprises surveyed were not using e-mail and website adequately and it was found during the survey that as many as 19% of the enterprises visited did not have the email facility and 62% did not have website in spite of the infrastructure available in the premises. This is the first challenge to be addressed amidst Small and Micro enterprises.

The internet and IT applications adopted by the Small and Micro enterprises appear to be limited to moderate. Many IT and internet applications have not been attempted by these enterprises. As the survey was carried out in industrial area and many enterprises are using IT for business applications it is evident that infrastructure is not the limiting factor.

The spending on IT products and services required for using IT in business by the enterprises was positively correlated with sales turnover of the enterprises and was significant. Therefore, it is evident that enterprises are willing to spend more on IT facilities and IT infrastructure with increase in sales turnover. In other words, as enterprises visualise the benefits of applying IT in business, it appears that, they are willing to spend more for IT facilities in the enterprise.

The correlation between sales turnover and number of people working on IT is negative and significant indicating the increase in sales turnover does not demand increase in IT personnel. This implies that IT contributes to the business and as sales turnover increases, the existing personnel can manage the work load.

Hence, from the study it can be concluded that Micro and Small enterprises that embraced internet and IT have been benefited substantially. The incremental use of IT benefits enterprises and this in turn, may encourage the entrepreneurs to spend more for IT related products and services. Building confidence in the entrepreneurs and encouraging them to adopt IT more vigorously in business is the real challenge. This realization and subsequent adoption of IT in business could help to challenge the threats that may arise due to globalization from foreign SMEs and also could be a step forward to be an effective global player for Micro and Small Enterprises.

This study has not taken into consideration other influencing factors such as educational qualification and experience of entrepreneur, business experience of the enterprise or ownership pattern, industry, etc. which could be a limitation of the study.

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