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# A STUDY ON INTERNET APPLICATIONS IN SMALL AND MICRO ENTERPRISES

**Ravilochan Rao**

Associate Professor, Justice K.S.Hegde Institute of Management, Nitte, India
Email: ravilochan@nitte.edu.in

## ABSTRACT

*The Fourth MSME Census show an overall scaling up of MSME units both in number and average investment size in India. According to the Ministry of MSME, the share of this sector in the manufacturing is 45.25%.and contributes 8% to country's GDP. It employs 60 million people through 26 million enterprises. However, liberalisation has exposed the Indian MSMEs to market competition, whereas technological developments are providing them with the opportunities to improve competitive strengths so as to deal with open market competition. This sector has been facing tough competition in all fronts which include new design, reduced cost, improved quality, product with higher performance, better service - all delivered simultaneously to enhance value to the customers but the sector has been slow or reluctant to use technology and entrepreneurs are generally found to be engaging themselves with the day to day problems of the enterprise. The barriers to the adoption of information-communication-Technology (ICT) were mostly related to costs and skills rather than to do with problems with the technology. Therefore, MSMEs need to work more strategically in relation to the use of ICT. This pilot study was taken up to find out how well the small and micro enterprises have used the internet in their business. Twenty one select enterprises at the convenience of the researcher were taken up for the purpose of the study and entrepreneurs were administered with a structured questionnaire. The responses were recorded and tabulated and data analysis is carried out using MS Excel and SPSS. The observations of the study are analysed and reported in this article.*

***Keywords:*** Internet, Micro Small and Medium enterprises (MSME), e-mail, website, online applications

## INTRODUCTION

Micro, small and medium enterprises (MSME) play a vital role in the sustainable growth of both emerging and developed economies. According to United Nations Industrial Development Organization (UNIDO) estimates, small and medium enterprises around the world account for about 90% of all enterprises and 50-60% of total employment. The Economic Survey of India 2009-10 states MSMEs contribute about 8% to the GDP of India, 45% to the manufactured output and about 40% to exports. These enterprises manufacture more than 6000 products that range from traditional to high tech items. However, SMEs generally struggle with limited resources in terms of time, money and expertise (Wymer, 2005) and lack the internal expertise compared to the larger firms. It is the skill and enthusiasm of the owner-manager that typically drives the business forward. SMEs characteristically lack the managerial skills to conceive, plan and implement ICT and

reluctantly update technology (Caldeira, 2002). Also, most of the SMEs lag behind the large firms in their use of ICT, both operationally and strategically. Large firms, for example, have adopted ecommerce much faster than SMEs (Pool, 2006). In the globalized economy, MSMEs are facing many challenges to survive and compete in the market place and therefore, have the compulsion of embracing ICT.

## OBJECTIVES OF THE STUDY

The MSME sector in India is facing severe competition from global players. In order to face this challenge the sector has to upgrade its technology, communication and must innovate. Primarily ICT applications are the most immediate need and takes highest priority. Among the ICT applications, primarily internet is used to access email services by the MSME sector. In addition to this, having a website and using internet for other online applications is significant. Therefore, a study was conducted with an objective to understand the Internet use by MSME sector on the following:

- Existence of email account and email id
- Website availability and work mail id among the enterprises
- Usage pattern of e mail and other Internet applications
- Connection between business turnover and internet use

## REVIEW OF LITERATURE

### MSME and ICT

Studies on ICT use amongst SMEs conducted in Australia show the levels of Internet usage were at 64% for micro businesses, 75% for small enterprises and 92% for medium business. Furthermore the percentage of SMEs with a web site or home page was significantly less with only 14% of micro businesses, 32% of small firms and 56% of medium enterprises (ABS, 2003). In another study in Yorkshire, whilst 63% of SMEs were connected to the Internet, 46% had a website and 36% traded on-line, 30 % (mostly micro businesses with less than 10 employees) did not use computers at all (Pritchard, 2006).

According to Parasuraman (2002) 'Internet technology has the potential to alter almost every aspect of business operations'. Prashanthamy ( 2004) argued that the Internet offers applications that facilitate network relationships, enabling firms to interact more widely and intimately with other actors, including customers, suppliers, and collaborators. The Internet potentially lowers the cost of accessing and leveraging network relationships by facilitating the enhancement of firms' visibility, efficiency and intimacy, with respect to their network relationships. The Internet's ease of use, universal standards, and remote electronic access result in tools of communication and information-sharing (Morgan, 2004), enhancing visibility; collaboration and commerce (Tiessen, 2001), enhancing efficiency; and communities and privileged access networks (Tapscott, 1999), enhancing intimacy. Subba Rao (2003) proposed that use of the Internet in a company's strategic development took place in four stages: presence; portals; transactions integration; and enterprises integration.

Technology and product innovations are critical for the growth of MSMEs and to maintain their competitiveness. Therefore, there is an immediate need to sensitise and disseminate knowledge about new and modern technologies to these MSMEs and to support them in acquiring, adapting to and implementing these technologies. (Mohan 2011) One of the

results of the study conducted by Dibrell (2008) the impact of innovation (both product and process) on performance (both profitability and growth) was primarily indirect and instead fueled by IT. The initiatives of innovation and IT were complementary. In order to optimize investment in innovation activities, IT initiatives should be aligned with innovation (Dibrell, 2008). The Internet holds great promise in facilitating the internationalization of SMEs – especially as a marketing tool, and the communications - the degree of internationalization (DOI) is positively correlated with the degree of electronic commerce (DOEC) (Yi Long Jaw, 2006)

### Motivation and barriers to ICT

The general motivations for ICT investment by MSMEs are to increase their operational efficiency, followed by being competitive and then to improve customer service and improve staff satisfaction. The most popular benefit experienced as a result of ICT adoption is greater productivity and the second most experienced benefit is improved quality of the service or product and then related to this, a faster response time to customers. The cost is the first and important perceived barriers to ICT investment by SMEs and uncertainty of the benefits to the business is the other factor (Dyerson, 2009). The government of India offered incentives to this sector to purchase computers and use information technology in business. The enterprises bought the PCs and do not seem to be aware of the full potential of the computer applications and how to get maximum benefits from this investment.

## SCOPE AND METHODOLOGY

For the purpose of the study micro, small and medium enterprises located in Belgaum, Hyderabad and Mangalore were selected. Hyderabad is the State capital and other two are Tier II/Tier III cities with good infrastructure for industrial development. The ICT infrastructure is provided in the industrial area of these cities to facilitate the IT use by enterprises. A structured questionnaire was administered to the Owners/Managers/Officers of the MSME enterprises in these cities. Convenient Sampling Method was adopted as the survey was possible in select enterprises in these cities. The study was carried out in twenty one MSME enterprises. Of these, seven are from Belgaum, eight from Hyderabad and six from Mangalore. Amongst these, five are micro enterprises, fourteen are small enterprises and two are medium enterprises. The two medium enterprises were selected for the comparison purposes, during the study.

## ANALYSIS AND FINDINGS

### Email account and email id

All the five micro enterprises and two medium enterprises surveyed have the email account and email id but out of the fourteen small enterprises only twelve have the email account and email id. In other words, about 90% of the MSME enterprises use e-mail in their business environment.

### Website availability among the enterprises

It is found that only about 52% of MSME enterprises have their own website. While both the medium enterprises have their own website only 60% of the micro enterprises and about 43% of Small enterprises have their own website.

### Work mail id

Both small and medium enterprises with the website have created the work mail id and use it for email correspondence. But only 33% of micro enterprises have the work mail id. In all, only 82% of enterprises with website use work mail id.

### Using e mail to send messages

In response to the question on sending messages using E mail facility, 84% of the enterprises with email id always send the mail through e-mail on continuous basis whereas 16% of the enterprises sometimes send the e-mail. Among these, both the small and medium enterprises with email id always use email facility to send the message whereas three of the micro enterprises use the e-mail facility at times. None of the respondents replied in negative which clearly indicates the 100% awareness of using the e-mail facility among the MSME sector.

### Frequency of checking e mail

All except one of the respondents check their mail everyday and one of the small enterprise responded that mail check is done on alternative days. Amongst the enterprises using the e mail services everyday, 66% remain on line, 28% of the respondents said they check the mail twice in a day and the rest check the mail four times in a day.

### Acknowledging the mails

42% of the respondents using the e-mail facilities said that they acknowledge the messages immediately after reading the message whereas 68% responded that the acknowledgement is not always. But none said they never acknowledge the mails.

### SMS alert on mobile phones

53% of the respondents have the recent technological update of receiving SMS alert on their mobile phone for incoming mail and others responded negatively.

### Online services

58% of the respondents acknowledged that they use the online services available on the net whereas rest of the respondents are not using the net for any other purpose than checking the mails.

**Table 1.** Breakup of the responses to the questions from MSME enterprises

| | Micro | Small | Medium |
|---|---|---|---|
| No of enterprises | 5 | 14 | 2 |
| Website available | 3 | 6 | 2 |
| Email account/id available | 5 | 12 | 2 |
| Work mail id | 1 | 6 | 2 |
| Send mail – yes always | 2 | 12 | 2 |
| Send mail – Sometimes | 3 | - | - |
| Check mail everyday | 5 | 11 | 2 |
| Check mail alternate days | - | 1 | - |
| Always online | 2 | 8 | 2 |
| Check mail four times a day | 0 | 1 | 0 |

**Table 1.** Breakup of the responses to the questions from MSME enterprises (Contd….)

| | Micro | Small | Medium |
|---|---|---|---|
| Check mail twice a day | 3 | 2 | 0 |
| Always acknowledge mail | 3 | 5 | 0 |
| Sometimes acknowledge mail | 2 | 7 | 2 |
| SMS alert on mail | 1 | 7 | 2 |
| Using other online services | 1 | 8 | 2 |

As the number of enterprises visited were 21 and 19 confirmed about different internet applications in their business, t-test was applied to test the hypothesis of internet applications by MSME sector. The calculated value of t=3.274 which is less than table value for v = n-1 =8 (where n is no of applications considered during the study) $t_{0.05}$=3.355 accept the hypothesis on internet use by MSME sector. The 95% confidence limits of population mean varies from 9.32 to 19.12 indicating more than 52% of population use internet in their business. This needs a marked improvement.

## IT Applications and Business turnover

Fourteen of the twenty one respondents provided data on their business turnover. Based on the annual turnover for 2010-2011 for these enterprises an analysis on availability of work mail id, enterprises that use net services continuously and remain online and use of SMS alert was taken up. The results were tabulated as below.

**Table 2** Relationship between business turnover and IT apllications

| **Turnover (lac Rs)** | **No of enterprises** | **Micro** | **Small** | **Medium** | **Work mail** | **Always on line** | **SMS alert** |
|---|---|---|---|---|---|---|---|
| Upto 100 | 3 | 2 | 1 | 0 | 1 | 2 | 0 |
| 101-500 | 5 | 1 | 4 | 0 | 0 | 3 | 2 |
| 501-1500 | 3 | 0 | 2 | 1 | 3 | 3 | 2 |
| 1500 & above | 3 | 0 | 2 | 1 | 2 | 3 | 3 |

It is observed that companies with higher turnover (above Rs 500 lakhs) remain online all the time.

83% of companies with turnover of above Rs.500 lakhs have the work mail id and SMS alert facility for email.

Among the 8 enterprises with turnover less than 500 lakhs, only one (12.5%) has work mail id, 2 (25%) have SMS alert on mail receipt and 5(62.5%) remain online for checking mails.

In other words, when the business turnover is high the enterprises feel the importance of faster communication needs and invest in technology such as high speed internet access, website and gadgets for SMS alert. It can also be interpreted that a small percentage of business turnover invested in technology is acceptable to MSME sector.

## INTERPRETATION OF THE FINDINGS

In spite of the advances in technology, the IT penetration in MSME sector needs improvement. In this pilot study, only 90% of the enterprises use IT in the business.

The IT use is mostly restricted to email checking. It is observed that only 57% of MSME enterprises approached remain online for IT applications (mainly mail checking). It is also found that only 52% of the enterprises surveyed own their website and it clearly indicates the lack of knowledge and purpose of having website for business purposes. Both micro and small enterprises have a long way to go in this regard.

Awareness on the significance of having a work mail id is very low. Overall, only 42% of enterprises surveyed have work mail id. Among the enterprises with their own website only 82% have the work mail id. Others are using mail id from dotcom service providers in spite of having the website.

Only 76% of the respondents surveyed said they always send their message using e-mail facility. This clearly indicates the need for creating better awareness on reliability of using e mail for correspondence among MSME sector. The companies who sparingly use e mail facility appear to be acknowledging every mail whereas those who depend on email for all their transactions appear to be selective in acknowledging mails.

Use of advance technologies such as SMS alert for mails in inbox needs to be educated as less than fifty percent of the respondents using email in business responded positively. Similarly the internet use for online transactions among MSME sector is poor and needs a lot more attention and guidance as many of the respondents replied in negative.

The study clearly indicated that medium enterprises and the enterprises with higher turnover use the internet facilities and other net services aggressively. Companies with turnover of Rs.500 lakhs and above are using e-mail, website services and other net services to their advantage.

## CONCLUSION

Following hypotheses can be developed and tested based on this pilot study:

1. Irrespective of type of the enterprise (micro, small and medium) internet applications have a significant contribution to the business of the enterprise.
2. Penetration of Internet applications is significantly low among Micro and Small enterprises.
3. Investment on internet technology by Micro and Small enterprises is significantly low.

It is not enough to offer incentives to use technology in MSME sector but also it is very important to create an environment for better use and application of the technology. Formal training and measures to use internet technology is essential especially for micro and small enterprises. A good understanding of how to use the websites for business purposes is essential among the micro and small enterprises and significance of work mail id should be made known to the entrepreneurs who already are familiar with internet applications.

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