A STUDY ON THE INFLUENCE OF ENTERPRISE RELATED VARIABLES TOWARDS WEBSITE ADOPTION IN SMALL AND MEDIUM ENTERPRISES

Ravilochan Rao*

Abstract :

The Small and Medium Enterprises (SMEs) 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 to domestic market and to the exports and thereby playing an important role in the sustainable development of the economy as a whole. This was evidenced in the annual reports of Ministry of MSME, that there are around 26 million MSME enterprises 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). However, the performance of the Small and Medium enterprises in India is not comparable with that of SMEs in other Asian economies. There are several reasons for this including policy matter, governance issues, capacity crunch, financial constraints, poor adoption of technology etc. The adoption of Internet Technologies in Small and Medium Enterprises is relatively faster and majority of these enterprises quickly adopted internet for e mail transactions and website development and use. This study is an effort to find a possible relationship between the enterprises owning a website and some of the independent factors such as ownership pattern, qualification of the entrepreneur and period of establishment of the enterprise. The study is conducted on 118 Small and Medium Enterprises in Karnataka State. A structured questionnaire was administered to the entrepreneurs and data collected was used to find a possible relationship between these independent factors mentioned above and enterprise owning the website. The results projected the correlation between the enterprises owing the website and ownership pattern, qualification of the entrepreneur and period of establishment of the enterprise.

Key words : *Small and Medium Enterprises, Website, Ownership pattern, Period of Establishment and Qualification*

Introduction

The globalization process that was initiated in 1991 in India created a challenging business environment and many Small entrepreneur-driven enterprises were exposed to challenges from global counterparts but some of them may have grown to become globally competent players. The Small and Medium Enterprises (SME) have been considered as an engine of economic growth and as key instrument for promoting equitable development of an economy. This sector constitute more than 90% of total enterprises in most of the economies and are credited with generating the highest rate of employment growth and account for a major share of industrial production and exports. The major advantage of this sector is its employment potential at low capital cost. Therefore, these enterprises play a pivotal role in the economic and social development of the economy with their effective, flexible and innovative entrepreneurial spirit. The Indian SMEs play a significant role in the overall industrial economy of the country as in many other developing economies. The SMEs contribute significantly to the country's manufacturing output, employment and exports. In recent years, this sector has consistently registered higher growth rate compared with the overall industrial sector. With its agility and dynamism, the sector has shown admirable innovativeness and adaptability. This sector also helps in industrialisation of rural and backward areas, reducing regional imbalances and assuring

Ravilochan Rao*, Associate Professor, Justice K S Hegde Institute of Management, Nitte
Email ID: raviloc@yahoo.co.in

more equitable distribution of national income and wealth.

The SME sector in India is highly heterogeneous in terms of the size of the enterprises, variety of products and services, and levels of technology. There are around 26 million Micro Small and Medium Enterprises (MSME) 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). These enterprises manufacture more than 6,000 products ranging from traditional to high tech items. In Financial Year (FY) 2011, total production of MSMEs was equivalent to about 14.28% of India's GDP. The total production of MSMEs for FY2011 was Rs. 10,957.6 billion. Between FY2007 and FY2011, the sector's total production grew at a CAGR of 11.5%, clearly indicating the substantial contribution of MSMEs to the Indian economy. The MSMEs were considered as priority sector and therefore a few major initiatives were undertaken by the Government of India in FY12 to revitalise this sector. This includes creating an opportunity for Indian SMEs to raise funds from capital markets with approval from SEBI for SME platforms in BSE and NSE. The Ministry of MSME organized skill development programmes for 478,000 persons during this period. In addition to this, a cluster-based approach for select sectors to improve the productivity, competitiveness and capacity building was introduced (Economic Survey 2011–12). Further in the budge 2012-13, the Government had set up an India Opportunities Venture Fund with SIDBI worth Rs. 50 billion for equity to the MSME sector. The allocation for the Prime Minister's Employment Generation Programme was increased by 23% from Rs 10.37 billion to Rs 12.76 billion. Under the Public Procurement Policy for Micro and Small Enterprises (MSEs), Ministries and Central Public Sector Enterprises (CPSEs) are required to make a minimum of 20% of their annual purchase from MSEs. Further, an increase in the turnover limit from Rs. 6 million to Rs.10 million for SMEs for compulsory tax audit of accounts and for presumptive taxation was introduced.

In spite of all this encouragement, in order to be competitive in the market, SMEs have to move with time and adopt Information Technology and Internet in their business in addition to technology absorption for manufacturing. Also, the performance of the Small and Medium enterprises in India is not comparable with that of SMEs in other Asian economies. There are several reasons for this including policy matter, governance issues, capacity crunch, financial constraints, poor adoption of technology including internet for business transactions. Internet is a powerful tool used for easy access to information, reach the people across the globe instantaneously, shrink the cycle time of the ordering process in business etc. The adoption of Internet Technologies in Small and Medium Enterprises is relatively faster and majority of these enterprises adopt internet for e mail transactions and website access. It is significantly useful for the Small and Medium Enterprises to have a website for better visibility and reach to the market. However, many of the SMEs have several constraints in owning the website which could be on account of ownership pattern, qualification of the entrepreneur and/or period of establishment.

Literature Review

Grover and Goslar (1993) found that most of the SMEs have their PC embedded with modem, but have limited themselves in using their web site as a medium to promote their products and services. The study also revealed that most of these SMEs are just interested in showing that their companies are all computerized and most of the managers lack skills and knowledge on surfing the internet. In addition to this, these managers perceive that learning and adopting the web site is a waste of time and it is one of the costs that may burden their company if they spend money to train their

employees. Some of the observations made in the article, "Small and Medium enterprises and ICT" by Kotelnikov (2007) are as follows:

a) Many SME owners are unfamiliar with operating a computer and are skeptical about the concrete benefits to its core business and assume that ICT is only for larger companies. Even if they have the will and financial resources to integrate ICT into their core business, SME owners are often at a loss while choosing the most appropriate and cost-efficient product.

b) Adopting ICT is a difficult task for companies of all sizes, whether they are in developed or developing countries. In fact, the organizational changes are required in order to effectively adopt ICT because they change the way firms do business. While the changes may be beneficial in the long run, they often hurt one department and strengthen another.

c) The lack of ICT literacy is a major problem affecting all sectors of the economy in every part of the world. When business and technology are managed on two different tracks, companies spend a large part of their revenues on technology, and most of them are not satisfied with this investment. Such expensive failures have led many observers to question whether ICT can ever produce a defensible long-term competitive advantage.

In a study by Kutlu and Ozturan (2008) on the usage and adoption of IT among SMEs in Turkey, the responses to the question related to the existence of a web site indicated that almost 67.5% of the SMEs had web sites. The question related to the purpose of the web sites' usage revealed that 91.7% of them contained product/service information whereas 46.2% of them were doing e-business through their web sites. Further, in the concluding remarks, authors observed that business owners and managers with positive attitude are inclined to be more successful in adopting and implementing new technology.

According to Narayanasamy, (2008) traditional business owners and consumers think that they can provide or get more information from the direct interaction with the sales person, compared to just going through the web sites. SMEs are not willing to spend extra money or invest more, to solve problems related to their web site, such as security problems, bandwidth and consultation fees.

Objectives of the study

The study is taken up to understand the website adoption and use by SMEs and to find out the influence of some of the independent variables in the organization such as period of establishment, entrepreneurs' educational qualification and ownership pattern. These variables are generally not given due attention while studying website use in SMEs.

The specific objectives of the study are:

- To know about the Small and Medium Enterprises owning the website
- To understand the different independent variables such as period of establishment of the enterprise, ownership pattern of the enterprise and educational qualification of the entrepreneur.
- To find out the relationship between the enterprise owning the website and period of establishment of the enterprise, ownership pattern of the enterprise and educational qualification of the entrepreneur.

Hypothesis

The following hypothesis is developed and tested using Statistical Tools.

H_0: There is no significant relationship between enterprise owning a website and period of establishment of the enterprise, ownership pattern of the enterprise and educational qualification of the entrepreneur.

Scope of the Study

For the purpose of the study 118 Small and Medium Enterprises in Karnataka State were approached with a structured questionnaire. The scope of the study was restricted to manufacturing SMEs in the Karnataka State. As the study is related IT applications, the enterprises located in urban Karnataka State covering Bengaluru, Mangaluru and Mysoru districts were approached. In view of the limited time frame and uncertainty of availability of entrepreneurs during the Survey, Non probability Convenience Sampling Method was adopted. The questionnaire covered the questions on availability of the website by the enterprise, ownership pattern (Family owned, Private limited, Public limited), period of establishment (before the beginning of (1991) globalization process in India, during the globalization period (1991-2000) or decade after globalization in India) and educational qualification of the entrepreneur (Post graduate and above, Technical graduate, Graduate or below graduation). The responses from the enterprises were gathered, tabulated and tested using Statistical Tools.

Data Analysis and Interpretation

Among the 118 enterprises visited only 83 enterprises were having the website which implies that only about 70% of the Small and Medium Enterprises visited have the website. The association of these enterprises with the independent variables, namely period of establishment, ownership pattern and qualification of the entrepreneur is shown in the Tables 1 to 3. The Table also gives the details of these independent variables.

Table1 Period of establishment and Website availability

Period of establishment	Number of enterprises with website	Percentage
Established before globalization	46	55
Established during the period of globalization	25	30
Established a decade after globalization	12	15
Total	83	100

Chi Square value=20.12 degree of freedom is 2 and significance level is 0.000.

Among the enterprises that own website, it is observed that professionally managed enterprises have a share of about 65%. Also, all Public Limited enterprises own the website. Family owned enterprises with website constitute only 35% of the enterprises.

Table 2 Ownership pattern and website availability

Ownership pattern	Number of enterprises with website	Percentage
Family owned business	29	35
Private Limited	33	40
Public Limited	21	25
Total	83	100

Chi Square value=20.12 degree of freedom is 2 and significance level is 0.000.

Among the enterprises that own website, it is observed that professionally managed enterprises have a share of about 65%. Also, all Public Limited enterprises own the website. Family owned enterprises with website constitute only 35% of the enterprises.

Table 3 Qualification of entrepreneurs and website availability

Qualification	Number of enterprises with website	Percentage
Post graduate and above	18	22
Technical graduates	38	46
Graduates	20	24
Diploma/ITI	07	08
Total	83	100

Pearson Chi Square value =8.14 and degree of freedom is 3 and significance level is 0.043

It is observed that about 92% of the enterprises with website are run by the entrepreneurs/CEOs with graduation or above qualification. Also, technically qualified entrepreneurs account for about 46% of the enterprises with website. It implies that education qualification of the entrepreneur matters in owning the website by the enterprises.

In all the three cases above, significance level was <0.05 in the Person Chi Square test and therefore, the null hypothesis is rejected. It implies that there is a significant relationship between enterprises having a website and period of establishment, ownership pattern and qualification of the entrepreneur. In order to know the relationship between the enterprises having the website and period of establishment, educational qualification of the entrepreneur, and ownership pattern, Pearson Correlation Test was administered. The results of the test is shown in Table 4

Table4 Correlation between Enterprises owning the website and the independent variables

Pearson Correlation	Period of establishment	Ownership Pattern	Qualification of the entrepreneur
Correlation coefficient for Enterprises owning the website	0.26	-0.41	0.2
Significance level	0.002	0.000	0.017
Number of samples	118	118	118

The Table 4 shows the Karl Pearson Correlation method used to test the correlation between the dependent variable owning the website with the independent variables period of establishment, ownership pattern and qualification of the entrepreneur. It is evident from the results that the correlation is significant between the enterprises owning the website and period of establishment, ownership pattern and qualification of the entrepreneur with significance level of 0.002, 0.00 and 0.017 (<0.05) respectively. However, Pearson coefficient is low for period of establishment and qualification of the entrepreneur. It is negatively correlated with ownership pattern of the enterprise. In order to test this relationship further, logistic regression analysis is attempted. Here, the dependent variable is dichotomous, and therefore, applying logistic regression is justified.

Logistic regression

It is known that 83 enterprises have website and 35 enterprises are without website. It implies that 70% of the enterprises have the website. The website is the dependent variable and it is binary variable with 0 = website available and 1=website not available. The predictor variables are period of establishment, ownership pattern and qualification of the entrepreneur.

BLOCK 0

Block 0 output is for the model that includes only the Constant. Given the base rates of the two decision options (83/118 = 70% own the website, 35% do not own the website and the best strategy is to predict, for every case, that the enterprises own the website. Using that strategy, it will be correct 70% of the time.

Table 5 Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step1	Step	27.328	3	.000
	Block	27.328	3	.000
	Model	27.328	3	.000

BLOCK 1 METHOD=ENTER

The predictor variables, period of establishment, ownership pattern and qualification of the entrepreneur are added.

Omnibus Tests of Model Coefficients gives a Chi-Square of 27.328 with 3 degree of freedom, significance level 0.000 < .05. This is a test of the null hypothesis that adding the three predictor variables to the model has not significantly increased the ability to predict the decisions made by the respondents.

Table 6 Model Summary

	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	116.151(a)	.207	.294

a Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Under Model Summary, the -2 Log Likelihood statistics is 116.151. This statistic measures how poorly the model predicts the decisions -- the smaller the statistic the better the model. The Cox & Snell R Square and Nagelkerke R Square can reach a maximum of 1. As the estimation terminated at iteration number 5 against the requested 20 iterations it is difficult to project the probability of the enterprises owning the website in terms of ownership pattern, period of establishment and educational qualification of the entrepreneur. Hence, further analysis is abandoned.

Summary of the findings

As the null hypothesis is rejected, it is clear that there is a significant relationship between enterprises owning the website and period of establishment, ownership pattern of the enterprise and educational qualification of the entrepreneur. This is strengthened with the Karl Pearson Correlation Test where the relationship was proved to be significant. Further attempt to test the relationship using regression analysis could not be executed as iteration terminated

after 5 levels. Hence, the relationship is restricted to correlation between enterprises owning the website and other independent variables as explained in the study.

From the study it is also evident that the enterprises, irrespective of period of establishment, adopt technology that is useful to their business, such as having the website.

The educational qualification of the entrepreneur matters in enterprises adopting technology based services such as owning the website.

Bibliography

1. Annual Report, 2009-10, Ministry of Micro Small and Medium Enterprises, Government of India, 2010

2. Economic Survey of India Report, 2011-2012, Ministry of Finance, Government of India, New Delhi, 2012.

3. Kutlu, B Rgul, and Ozturan, Meltem, "The Usage and Adoption of IT among SMEs in Turkey: An Exploratory and Longitudinal Study", Journal of Information Technology Management, Publication of Association of Management, ISSN #1042-1319, 2008, Volume XIX, Number 1, pp 12-24

4. Kotelnikov, Vadim "Small and Medium Enterprises and ICT" Asia Pacific Development Information Program, UNDP-APDIP APCICT, Bangkok, 2007 ISBN 978-974-8283-93-7

5. Grover, V. and Goslar, M. "Technical Correspondent – Information Technologies for the 1990s: The Executives' View", Communications of the Association of Computing Machinery, 36(3), 1993, pp17-19,102-103.)

6. Narayanasamy, Kogilah, Santhapparaj, A. S., Uchenna Cyril Eze, "An empirical study of website adoption among Small and Medium Enterprises (SMEs) in Malaysia", Communication of the IBIMA, Volume 2, 2008, pp 50-62.