

Information and communication technology: A growth and current challenges in small scale industries in Cuddalore District

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ABSTRACT

In this paper we illustrate some research results concerning the attitude of small companies towards ICT based solutions. Small scale industries have a significant role in the growth of the Indian economy. But, the performance of small scale industries has declined in recent years. Through a literature study the factors are identified which influence the growth of small scale industries. On the basis of these factors personal interviews were conducted with 377 entrepreneurs of different small scale industries located in the Cuddalore District, TamilNadu, India. Through the interviews it was identified that infrastructure support from government, information technology, globalization, awareness of policy and programs of government and technology influence the growth of small scale industries. Given this context, information technology was seen as a significant factor which influences the growth of SSIs in Tamilnadu, India.

Keywords: ICT, Small Scale Industries, Economy, Growth,

INTRODUCTION

Information and Communication Technologies (ICT) offer enterprises a wide range of possibilities for improving their competitiveness: they provide mechanisms for getting access to new market opportunities and specialized information services such as distance consulting, continuous training, new advisory modes, etc.; organizations can exchange real-time information and build closer relationships with their customers, suppliers

and business partners; immediate customer feedback allows companies to react fast to changing customer demands and recognizing new market niches. This means that organizations that are able to exploit the potentials offered by ICT can handle innovative processes, such as Supply Chain Management, Customer Relationship Management, Knowledge Management, more effectively.

SMALL SCALE INDUSTRIES

The development of small scale industries (SSI) has been one of the major planks of India's economic development. Small scale industries have a significant role in Indian economy in view of its contribution to production, employment and

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(Received on 20.01.10, accepted on 26.03.10)

export.. However, since 1991 small scale industries in India find themselves in an intensely competitive environment due to globalization, domestic economic liberalization and dilution of sector specific protective measures . Due to the increased competitive force in the globalize market place it is important for a small business to know their customers, have open lines of communication, provide quality service and offer competitive price to maintain market share. Small scale industries play a vital role in the economic development of India, however the performances of such enterprise have declined in recent years. Through a study of literature it is observed that information technology is a significant factor which influences the growth of small scale industries. Information Technology can be used to create competitive opportunities for the organizations.

SCOPE OF THE STUDY

The present study focuses on the use of information and communication technologies in small scale industries The scope of the study is confined to the small scale industries in cuddalore district.

OBJECTIVES OF THE STUDY

In order to pursue the study, the following objectives are framed.

1. To identify the Area wise distribution of Relative advantage in utilizing the Information and Communication Technologies in Small Scale Industries.
2. To identify the Nature of business of Relative advantage in utilizing the Information and Communication Technologies in Small Scale

Industries.

HYPOTHESES

1. The small scale enterprises do not vary in their level of Realization of Relative advantage in utilizing the Information and Communication Technologies in their area of operation.
2. The small scale enterprises do not vary in their level of Realization of Relative advantage in utilizing the Information and Communication Technologies in the Nature of Business.

METHODOLOGY

The present study aims in the utilization of information and communication technologies among the small scale Industries in Cuddalore district of TamilNadu. Research design is purely and simply the framework or plan for a study that guides the collection and analysis of the data. The research design indicates the methods of research i.e. the method of gathering information and the method of sampling. Besides this the level of Computer usage, level of Software application used in various business routines, level of Information and Communication technologies uses in various business transactions have been studied.

DATA COLLECTION

An interview schedule method was adopted in measuring the variables and other relevant information required for this study. The Entrepreneurs have been identified by interviewing personnel in community agencies

such as Chamber of Commerce, Small Scale Entrepreneurs Association, Referrals from other Business, Telephone Directory, Regional marketing section of Bharat Sanchar Nigam Limited and Computers and other Information and Communication Technologies sale agencies.

TOOLS USED

For the classification and presentation of data, Various statistical methods and techniques are used. They are as follows.

1. Frequency Distribution
2. Chi-square test and one way ANOVAs

ANALYSIS AND INTERPRETATIONS

Table 1: Area wise Distribution of Relative advantage in Utilizing the ICT's in business

ICT's	Area	Relative Advantage				Average
		Rel.1	Rel.2	Rel.3	Rel.4	
Telephone	Developed	4.18	4.08	4.13	4.17	4.14
	Backward	3.96	4.30	4.26	4.07	4.15
	Most Backward	4.33	3.90	4.00	3.67	3.98
	Average	4.16	4.09	4.13	3.97	4.09

Table 2: ANOVAs summary Result

Source of variation	Sum of Square	Degrees of freedom	Mean Square	F-Ratio	F-Critical Value
Between Columns	0.061292	3	0.020431	0.49572	4.757
Between Rows	0.07605	2	0.038025	0.922626	5.143
Error	0.247283	6	0.041214		
Total	0.384625	11			

Table 1 shows the Area wise distribution of relative advantage in utilizing the ICT's (telephone) in business. It seen that the Relative

Advantage is more (4.15) in Backward area followed by developed (4.14) and among its components Rel.2 is seen high (4.30) in Backward. Rel.3 stands second (4.26).

It could be seen from the ANOVA applied in Table-2 that the variations in the components of Relative advantage and the area of business are statistically identified as insignificant with respect to the respondent's views in the influence of area in the impact of relating advantage in utilizing Telephone.

It is clearly seen from the above discussion that the Relative advantage in utilizing Telephone is seen more in backward area and it may be due to the fact that ICT helps reduction of cost in various operation in business.

Table 3: Area wise Distribution of Relative advantage in Utilizing the ICT's in business

ICT's	Area	Relative Advantage				Average
		Rel.1	Rel.2	Rel.3	Rel.4	
Cellular	Developed	1.40	1.05	1.27	1.32	1.26
	Backward	1.04	0.96	1.22	1.30	1.13
	Most Backward	1.57	1.29	1.57	1.71	1.54
	Average	1.34	1.10	1.35	1.44	1.31

Table 4: ANOVAs summary Result

Source of variation	Sum of Square	Degrees of freedom	Mean Square	F-Ratio	F-Critical Value
Between Columns	0.193367	3	0.064456	9.401945	4.757
Between Rows	0.342067	2	0.171033	24.94814	5.143
Error	0.041133	6	0.006856		
Total	0.576567	11			

Table 3 shows the Area wise distribution of relative advantage in utilizing the ICT's (Cellular) in business. It is seen that the relative advantage in the utilization is seen (1.54) high in most backward area. Among its components Rel.4 is seen more (1.71) in most backward area. Rel.1 and Rel.3 are seen in second and equal (1.57) in the same area.

It could be seen from the ANOVA summary Table-4 that the variations in the components of Relative advantage and the Area of Business are statistically identified as significant with respect to the respondents views on the influence of area in the Relative advantage in utilizing Cellular.

It is clearly seen from the above discussion that the Relative advantage in utilizing cellular is seen more in Most Backward area and it may be due to the fact that this ICT helps in providing timely information for Decision making.

Table 5: Nature of business wise distribution of Relative advantage in utilizing the ICT's(Telephone)

ICTs	Nature of Business	Relative advantage				Average
		Rel.1	Rel.2	Rel.3	Rel.4	
Telephone	Manufacturing	4.90	4.55	4.55	4.32	4.58
	Retail & Wholesale	4.35	4.21	4.17	4.13	4.22
	Service	3.99	3.93	4.06	4.01	4.00
	Finance	4.80	4.00	4.20	4.00	4.25
	Others	4.50	3.83	3.33	4.00	3.92
	Average	4.50	4.10	4.05	4.09	4.19

Table 6: ANOVAs summary Result

Source of variation	Sum of Square	Degrees of freedom	Mean Square	F-Ratio	F-Critical Value
Between Columns	0.672495	3	0.224165	4.048858	3.4903
Between Rows	0.1.07598	4	0.268995	4.858575	3.25916
Error	0.66438	12	0.055365		
Total	2.412855	19			

Table5 shows the Nature of Business wise distribution of relative advantage in utilizing the ICT's (Telephone) in business. The Relative advantage is found more (4.58) in Manufacturing among its components Rel.1 is found more and it is placed top (4.90) in Manufacturing.

It could be seen from the ANOVA applied in Table-6 that the variation in the components of Relative advantage and the Nature of Business is statistically identified as significant with respect

to the respondents views on the influence of Nature of business in the impact of Relative advantage in adopting Telephone.

It is clearly seen from the above discussion that the Relative advantage in utilizing Telephone is high in Manufacturing. It may be due to the Telephone is much helpful in better communication with others

Table 7: Nature of business wise distribution of Relative advantage in utilizing the ICT's (Cellular)

ICTs	Nature of Business	Relative advantage				Average
		Rel.1	Rel.2	Rel.3	Rel.4	
Telephone	Manufacturing	3.09	2.86	3.32	3.14	3.10
	Retail & Wholesale	0.90	0.73	0.81	0.85	0.82
	Service	1.23	0.82	1.04	1.18	1.07
	Finance	1.00	0.40	0.80	1.00	0.80
	Others	1.80	1.50	2.00	1.50	1.70
	Average	1.60	1.26	1.59	1.53	1.50

Table 8: ANOVAs summary Result

Source of variation	Sum of Square	Degrees of freedom	Mean Square	F-Ratio	F-Critical Value
Between Columns	0.387215	3	0.129072	6.026458	3.4903
Between Rows	14.97623	4	3.744058	174.813	3.25916
Error	0.25701	12	0.021418		
Total	15.62046	19			

Table7 shows the Nature of Business wise distribution of relative advantage in utilizing the ICT's (Cellular) in business. Among all the Nature of Business Relative advantage is seen more (3.10) in Manufacturing. Among the components of Relative advantage Rel.3 is seen high and it is placed top (3.32) in Manufacturing.

It could be seen from the ANOVA applied in Table-8 that the variations in the components of Relative advantage is significant and the Nature of Business is statistically identified as high significant with respect to the respondents views on the influence of Nature of Business in the

impact of Relative advantage in utilizing Cellular.

It is clearly from the above discussion that the Relative advantage is utilizing cellular more in Manufacturing. It is also seen that the Cellular increase the profitability of the business.

FINDING AND CONCLUSION

The findings on Area wise distribution of relative advantage in adopting the ICTs in SSIs reveal the following facts.

It is clearly seen from the above discussion that the Relative advantage in utilizing Telephone is seen more in backward area and it may be due to the fact that ICT helps reduction of cost in various operation in business.

It is clearly seen from the above discussion that the Relative advantage in utilizing cellular is seen more in Most Backward area and it may be due to the fact that this ICT helps in providing timely information for Decision making.

The findings on Nature of business wise distribution of relative advantage in adopting the ICTs in SSIs reveal the following facts.

It is clearly seen from the above discussion that the Relative advantage in utilizing Telephone is high in Manufacturing. It may be due to the Telephone is much helpful in better communication with others

It is clearly from the above discussion that the Relative advantage is utilizing cellular more in

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