



Impact of ICT on Information Seeking Behaviours of SSIs Users

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ABSTRACT

Application of Information and Communication Technology has changed the picture of today's intellectual society. Libraries and Information Centres are not exception in using the ICT for their services and they are ahead of all other institutions in using the ICT. The role played by the small and medium scale industry in the economic activity India is momentous. The small scale industrial sector continues to remain an integral part of Indian economy with significant contribution to GDP, industrial production and employment generation in India. Information plays vital role in making these small scale industries more competitive and efficient in the competitive market world. ICT become the spine of information services to provide right information at right time to the users of SSIs. In this paper we have made an attempt to reveal impact of ICT in information seeking behavior of SSIs user community. The analysis is represented here on the basis of survey conducted on information seeking behavior of small scale industries in Bangalore city.

KEYWORDS : Small scale Industries; Information; ICT; Information Seeking Behavior

Introduction:

Being a rapidly developing nation India needs a greater intellectual input to strengthen the industrial activities which need strategic access of information and knowledge. For meeting the strategic information needs of the firm information communication and dissemination must be supported with relevant ICT infrastructure. The present study focuses on the impact of ICT on information seeking behavior of small scale industries in Bangalore city. The analysis is represented here on the basis of survey conducted on information seeking behavior of small scale industries in Bangalore city. Small scale industries are playing very important role as they considered as backbone of the Indian economy. Now a days Information and communication technology is playing very important role in all the fields, but when it comes to small scale industries most of the people even in small scale industries depending on information and communication technology for one or another work. When we see large scale industry and other type of industries they are not having that many financial problems when compared to small scale industries so they will easily spend on ICT. When we completed the survey we come to know that how ICT impact on information seeking behavior of SSI users.

Analysis and Discussion

The following data obtained by conducting a survey using questionnaires to know the impact of ICT on information seeking behaviors of the users in SSIs.

Table 1: Methods of communicating business information

Sl. No	Methods of Communicating Business	Scales					ANOVA		
		Often	Some time	Rarely	Almost	Always	NR	F	Sig.
A	Press release	149 (46.3)	159 (49.4)	12 (3.7)	—	—	2 (0.6)	1.027	0.393
B	Newspapers / Magazines / Journals	64 (19.9)	—	—	76 (23.6)	181 (56.2)	1 (0.3)	1.397	0.235

C	Radio	—	12 (3.7)	305 (94.7)	2 (0.6)	—	3 (0.9)	1.274	0.28
D	Television	—	2 (0.6)	316 (98.1)	—	—	4 (1.2)	1.205	0.308
E	Workshops / Seminars / Conferences	80 (24.8)	197 (61.2)	—	42 (13)	—	3 (0.9)	1.742	0.141
F	Training Programmes	8 (2.5)	89 (27.6)	—	42 (13)	—	3 (0.9)	0.075	0.99
G	Face to Face meetings	4 (1.2)	4 (1.2)	—	12 (3.7)	301 (99.7)	1 (0.3)	1.999	0.094

Note: Figures in parenthesis indicates percentage.

* NR Indicates no response

The above table reflects methods used for communicating business information. Data proves that majority of the respondents (46.3%) depends on press release to get the business information followed by, Newspapers / Magazines / Conferences (19.9%). For accessing business information most of the respondents are using internet and other online resources. Concerning point here is that contribution of training programmes and face to face meeting is not significant so SSIs need to improve the availability of business information through training programmes and face to face meeting.

Table 2: Storage of information

Sl. No	Type of Information	Hard copy/ File Storage	Database	Both	NR	Chi-Square	Asymp. Sig.
A	Inventories / Stock control	202 (62.7)	18 (5.6)	101 (31.4)	1 (0.3)	0.903	0.825

B	Sales & invoicing	71 (22)	95 (29.5)	152 (47.2)	4 (1.2)	5.206	0.157
C	Production Records	250 (77.6)	23 (7.1)	46 (14.3)	3 (0.9)	1.292	0.731
D	Accounts / bookkeeping	173 (53.7)	42 (13)	101 (31.4)	6 (1.9)	2.749	0.432
E	Staff records	268 (83.2)	25 (7.8)	25 (7.8)	4 (1.2)	0.722	0.868
F	Suppliers / Customers records	154 (47.8)	62 (19.3)	102 (31.7)	4 (1.2)	4.43	0.219
G	Marketing and distribution	152 (47.2)	61 (18.9)	106 (32.9)	3 (0.3)	4.322	0.229
H	Banking records & statements	241 (74.8)	16 (5)	60 (18.9)	5 (1.5)	1.88	0.598
I	Knowledge Management Industries	203 (63)	54 (16.8)	24 (7.5)	41 (7.5)	1.597	0.66

The above table 2 explains the various modes of storage of information related to small scale business. The data shows that majority of the information related to small business preferred to be stored in hard copy. Though majority of the information stored in hard format significant number of respondents shown their interest in storing information sources both in hard and e-format. In changing phase of information storage and dissemination preserving information in hard format may be given preference in way to avoid security problems. But for easy organization, access and dissemination storing information in soft format is very essential. Users must try to store business information in both the formats to be secure and easily accessible.

Table 3: Expenses on types of services

Sl. No.	Types of Service				ANOVA	
		Yes	No	NR	F	Sig.
a	Information searches	224 (69.6)	97 (30.1)	1 (0.3)	2.686	0.031
b	Use of Internet	167 (51.9)	154 (47.8)	1 (0.3)	0.701	0.592
c	Packaging of special information	167 (51.9)	154 (47.8)	1 (0.3)	0.913	0.456
d	Market research reports	210 (65.2)	111 (34.5)	1 (0.3)	0.841	0.500

The analysis of the table 3 elucidates that the expenses on various information services in the firms. With above data it is clear that majority of the respondents shown their interest in spending more in Information searches, using Internet, Packaging of special information and Market research reports. By observing the above trend here there is a need of integrating all these services through ICT tools to satisfy various information service needs of various users. Few respondents are not interested to spend in these services so firms should create awareness about these services among those users who are less interested. By looking into the above table we will come to know that the

result of ANOVA test is found to be significant in case of information searches and other cases it is non-significant at 5% level of significance.

Table 4: Business communication modes

Sl. No	Communication Modes	Scales					ANOVA		
		Regular	Some time	Average	Rarely	Not Used	NR	F	Sig.
a	Telephones / Cell phones	257 (79.8)	63 (19.6)	---	---	---	2 (0.6)	1.458	0.215
b	Fax	86 (26.7)	46 (14.3)	91 (28.3)	33 (10.2)	62 (19.3)	4 (1.2)	0.354	0.841
c	Face to face	235 (73)	83 (25.8)	---	---	---	1 (0.3)	0.296	0.881
d	Internet	266 (82.6)	51 (15.8)	---	---	---	5 (1.6)	0.771	0.545
e	Posts / Courier	201 (62.4)	118 (36.6)	---	---	---	3 (0.9)	0.714	0.583
f	Online forms	91 (28.3)	125 (38.8)	30 (9.3)	---	---	3 (0.9)	0.349	0.845
g	Media (Newspapers / Radio / TV)	---	84 (26.1)	154 (47.8)	71 (22)	12 (3.7)	1 (0.3)	1.18	0.319

Communication is one of the most basic functions of management in any organization. Its importance can never be over emphasized. It is the process of transmitting ideas, thoughts, information, opinions, and plans between various parts of an organization. The above table shows the business communication modes used in the SSIs. Internet (82.6%) dominates the given list majority of the business communication carried out by internet communication followed by telephone and face to face interaction. With these there are some other modes like posts, online forms and fax for business communication in SSIs. To meet all these needs integrating all with ICT tools in a way to facilitate more efficient communication is the need of the hour.

5: Computer and peripherals

Sl. No	Computer Application Software's	Scales					ANOVA		
		Very Useful	Useful	Uncertain	Less Useful	Not Useful	NR	F	Sig.
a	MS Office	313 (98.4)	2 (0.6)	2 (0.6)	---	---	5 (1.6)	0.787	0.535
B	Desktop publishing	138 (42.9)	140 (43.5)	---	---	---	44 (13.7)	0.327	0.86
c	Accounting / Financial Management packages	75 (23.3)	246 (76.4)	---	---	---	1 (0.3)	2.697	0.031
d	Other Computer programmes	---	142 (44.1)	98 (30.4)	36 (11.2)	2 (0.6)	44 (13.7)	0.609	0.657

The above table shows the computer and peripherals used in SSIs. About MS Office 98.4% said it is very useful, 0.6% replied useful and 0.6% replied as uncertain. When we look into these responses regarding various computer applications in SSIs it is very clear that almost all the respondents are using MS office for their day to day activities

in the firm and they feel that is very useful for their activities. With MS office DTP application is also having importance in the SSI's activities. SSIs need to educate the workers to make efficient use of these useful computer applications. The result of ANOVA test is found to be significant in case of Accounting/Financial Management packages and other cases it is non-significant at 5% level of significance.

6: Problems in conducting business over Internet

Sl. No	Problems	Scales					ANOVA			
		Often	Some time	Rarely	Almost	Always	NR	F	Sig.	
a	Low Internet Speed	130 (40.4)	---	28 (8.7)	---	163 (50.6)	1 (0.3)	0.231	0.921	
b	Unreliable payment methods	185 (52.5)	84 (26.1)	---	---	52 (16.1)	1 (0.3)	0.369	0.831	
c	Unreliable suppliers	188 (58.4)	4 (1.2)	32 (9.9)	87 (27)	10 (3.1)	1 (0.3)	0.427	0.789	
d	Uncertainty over contract terms of delivery and guarantees	36 (11.2)	75 (23.3)	---	52 (16.1)	158 (49.1)	1 (0.3)	1.939	0.104	
e	Unskilled personnel in E-business	30 (9.3)	28 (8.7)	14 (4.3)	174 (54)	75 (23.3)	1 (0.3)	1.489	0.205	
f	Logistical Problems	120 (37.3)	18 (5.6)	---	107 (33.2)	76 (23.6)	1 (0.3)	0.406	0.804	

The above table depicts the problems faced by industrialists while conducting business over the internet. Unreliable suppliers (58.4%) is the major problem followed by Unreliable payment methods (52.5%) and Low Internet Speed (40.4%) with these Uncertainty over contract terms of delivery and guarantees is also a significant problem faced by SSIs while conducting business on the internet. Though these are the major problems SSIs can solve these problems with modern security technology and high band width internet connections. The result of ANOVA test is found to be non-significant in all the cases at 5% level of significance. Therefore there is no difference in all the groups. Accepting the null hypothesis.

Table 7: Advertising product or services

Sl. No	Sources	Scales					ANOVA		
		Greater Extent	Great Extent	To some extent	To little extent	Lesser extent	NR	F	Sig.
a.	Website	---	4 (1.2)	222 (68.9)	67 (20.8)	28 (8.7)	1 (0.3)	0.178	0.95
b.	E-mail alerts	---	4 (1.2)	155 (48.1)	126 (39.1)	36 (11.2)	1 (0.3)	1.588	0.177
c.	Boucher	149 (46.3)	146 (45.3)	22 (6.8)	4 (1.2)	---	1 (0.3)	0.516	0.724
d.	Newspapers / Magazines / Journals	80 (24.8)	28(8.7)	61 (18.9)	103 (32)	49 (15.2)	1 (0.3)	0.443	0.778
e.	Media (TV / Radio)	---	---	83 (25.8)	14 (4.3)	224 (69.6)	1 (0.3)	0.69	0.599

The above table shows how SSI advertises their products or services using various sources. Brochure is the main source of advertisement followed by news papers, magazines and the journals. To some extent even the website used for the advertisement followed by e-mail alerts. Data shows that there is a need of utilizing the Medias like TV and the Radio for the publicity and advertise purpose so that they can reach to larger number of public in effective way.

Table 8: Obstacles to the use of e-commerce by SSI's

Sl. No	Obstacles to E-business	Scales					ANOVA			
		Often	Some time	Rarely	Almost	Always	NR	F	Sig.	
A	Products / services of SSIs are not suitable for sales through Internet	116 (36)	8 (2.5)	---	61 (18.9)	136 (42.2)	1 (0.3)	0.406	0.804	
B	Customers and other businesses are not yet ready to use E-commerce	86 (26.7)	26 (8.1)	12 (3.7)	96 (29.8)	101 (31.4)	1 (0.3)	0.212	0.931	
C	There are security concerns over payments	18 (5.6)	8 (2.5)	---	146 (45.3)	149 (46.3)	1 (0.3)	0.324	0.862	
D	There is uncertainty concerning contracts, terms of delivery and guarantees	135 (41.9)	124 (38.5)	4 (1.2)	58 (18)	---	1 (0.3)	0.349	0.844	
E	Logistical problems	186 (57.8)	---	6 (1.9)	80 (24.8)	49 (15.2)	1 (0.3)	1.388	0.238	

The above table shows the potential obstacles to use e-commerce by Small Scale Industries. About products/services of Small Scale Industry are not suitable for sales through internet as 42.2% opted always, 36% replied often they find obstacle to do e-business, 18.9% opted almost and 2.5% industrialist opted sometime. When it comes to customers and other business are not yet ready to use e-commerce 31.4% industrialists always find obstacle to do e-business, 29.8% almost find difficulty, 26.7% often find problems doing business, 8.1% sometimes find problems and 3.7% replied that rarely they find difficulty in doing e-business. Security concerns over payment for this 46.3% industrialist find difficulty in doing e-business, 45.3% almost find difficulty, 5.6% often find difficulty and 2.5% persons sometimes find difficulty. Sometimes there is an uncertainty concerning contracts' terms of delivery and guarantees. 57.8% persons often find difficulty, 24.8% almost face the problem, and 15.2% always find the obstacle and 1.9% rare cases find the obstacle to e-business.

The above discussed obstacles are really a greater drawback for the competitive growth of SSIs in the e-Commerce world. Realizing the problems SSIs must work out the solutions for these obstacles to exist in the market. If one SSI is unable to solve these problems like minded and similar SSIs must come together to address these problems with collective approach.

Table 9: Updating business information requirements in SSI

Sl.No	Obstacles to E-Business	Scales					ANOVA		
		Monthly	Quarterly	Half yearly	Annually	No Updates	NR	F	Sig.
A	Market Information	277 (86)	14 (14.3)	30 (9.3)	---	---	1 (0.3)	1.483	0.207
B	Financial Information	307 (95.3)	4 (1.2)	10 (3.1)	---	---	1 (0.3)	0.841	0.500
C	Business Development	57 (17.7)	254 (78.9)	10 (3.1)	---	---	1 (0.3)	0.26	0.904
D	Technical Information	123 (38.2)	170 (52.8)	28 (8.7)	---	---	1 (0.3)	3.285	0.012
E	Production Information	145 (45)	4 (1.2)	166 (51.6)	4 (1.2)	---	3 (0.9)	4.455	0.002
F	Training Information	72 (22.4)	39 (12.1)	172 (53.4)	32 (9.9)	---	7 (2.2)	3.135	0.015
G	Policy / SME development	12 (3.7)	31 (9.6)	12 (3.7)	264 (82)	---	3 (0.9)	1.295	0.272

H	Regulations / Standards	8 (2.5)	35 (10.9)	276 (85.7)	---	---	3 (0.9)	1,573	0.181
I	Others (specify)								

The above table indicates the frequency of business information updated. About market information 86% update monthly, 14.3% said they quarterly update information and 9.3% they half yearly update information. Regarding financial information 95.3% monthly update business information, 1.3% industrialist's quarterly update and 3.1% half yearly update information. When it comes to business development 17.7% users update monthly, 78.9% update quarterly and 3.1% half yearly update business information. About technical information 38.2% industrialists update monthly, 52.8% quarterly and 3.1% replied that they half yearly update the information. About production information 45% monthly update information, 1.2% quarterly, 51.6% half yearly and 1.2% annually update the production information. Training information 22.4% update monthly, 12.1% quarterly, 53.4% industries update half yearly and 9.9% update yearly training information. Regarding policy / SME development 82% industries update yearly, 9.6% quarterly, 3.7% both monthly and half yearly update policy / SME development information. About regulations and standards 85.7 % industries update half yearly information, 10.9% quarterly update and 2.5% monthly update information.

Frequency in Updating business information depends on the company's activities and the preferences. Only the recommendation as a researchers with the observation of usage of technology in updating the business data is need to be improved. Better if companies use social networking or other similar sites or technology to update the open data to the community of the company with the concern and carefulness of secret data of the company.

Findings and Suggestions

- Majority of the companies using press as the major media of communicating business information followed by workshops and seminars hence, there is a need of utilizing Internet and social networking technology for communicating business information.
- In case of Storage of information most of the companies relied on hard copies. As there are many revolutionary ICT tools for safe and organized management of the data companies should make use of better storage and file management technology for managing the data and information in an organized way.
- When we look into Expenses on various types of services it is clear that major share is invested on information search and retrieval. So to make the information search process more cost effective companies must educate the users in better information search and retrieval techniques.
- When we study the aspect of business communication modes telephone and the internet are the dominating. To make business communication companies can make use of video-conferencing and other communication tools to reach more people effectively.
- Data about the usage of Computer and peripherals shows that majority of the respondents acknowledged the usefulness of MS Office. Hence companies must educate workers to effectively utilize the MS Office application without any problem.
- Slow internet and problem in reliability of the payment are the major obstacles while conducting the business on Internet.

Companies should have access to broad band connectivity and should have secured mode of financial transaction to avoid these security and accessibility problem.

- Majority of the SSIs depends on Boucher and news paper for advertising their product and services. SSIs should utilize mass media like TV and Radio with Internet for effective advertisement of their product and services.
- Doing business through E-commerce mode is little difficult for SSIs. If one SSI is unable to solve these problems like minded and similar SSIs must come together to address these problems with collective approach.
- Frequency of Updating the Business information left to the discretion of SSI according to their functionality. But as Information is potential source of decision making SSIs must have a strategic information updating mechanism.

Conclusion

Small scale Industries are the nerves of Indian Economy. India is a nation with huge demographic dividend. SSIs are really made to make use of this demographic dividend for the economic prosperity of nation and the individual. SSI must venture in to new technology with human intellect to be more competitive, Study shown majority of the SSIs still hesitating to use the Information and Communication Technology due to some hindrances. As Isaac Newton quotes "the fishermen know that the sea is dangerous and the storm terrible, but they have never found these dangers sufficient reason for remaining ashore". In this way as fishermen the people working in SSIs must use the ICT in greater extent to make their business more competitive in stead of allowing obstacles to rule them.

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