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Effectiveness of information communication technology in rural insurance

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Information and communications technologies are a device set of technological tools and resources used to communicate rural people about to disseminate awareness, create interest and to stimulate enroll intentions of insurance. It has enabled countries to leapfrog traditional modes of service delivery and make manifold improvements in process effectiveness and efficiency. Widespread adoption and application of information communication technology across the different fields of society and the economy is presently considered to be the key factor behind boosting competitiveness and developing an informed society. In general, information communication technology and its tools that people use to share, distribute, information gathering and to communicate with insurance providers, or in groups, through the use of media such as print, visual and interconnected computer networks.

JEL Classifications: M17

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Introduction

India, over the past decade, has become a test bed for innovations in information and communication technologies (ICT) serving the rural user. Various reasons explain this emergence. The most obvious is the search for a solution to what has long been an intractable problem, that rural India has remained poor while the rest of the country has moved ahead. There exists a hope that ICT can surmount at least some of rural India's social, political, and administrative challenges and create a viable technology for the provision of health, education and other social services.

The ICT strongest calling card, an additional expectation, is that information communication technology can be used innovatively to improve access to the large, underserved market that rural India's 700 million people represent, especially considering that India has the resources (i.e., its large, skilled, cost-efficient IT workforce) to build an ICT infrastructure. The objective of this study is to explain the effectiveness of ICT towards insurance sectors and to make recommendations to improve usage.

Need for the study

The internet with its hierarchical structure is a more complex medium than print, and visual being linear sequential. By clicking through websites and choosing hyperlinks, the internet user has more control about what he actually sees, as compared to a more passive reader of a news magazine (Bezjian-Avery et al., 1998). A print reader will more likely be exposed to an ad, even if it is only by skimming through a magazine. On the contrary, an internet user directly clicks to an article of interest and will easily skip undesired information, resulting in less advertising exposure and thus less effective advertising. Moreover, the more active role in the internet requires deciding and thus concentration, whereas a printed magazine can be skimmed through without concentrating on navigation, allowing higher receptiveness.

While news magazines are printed on paper, content in the internet can only be read at screens. This is resulting in one of the fundamental differences between print and internet: a screen will not be grasped and physically manipulated as in the case with a magazine

consisting of paper. Therefore, the habit component of consuming content is different. Printed text can be touched and magazine pages turned, whereas the screen impression is controlled at distance and indirectly, through clicking on mouse, keyboard, touchpad, tracker balls, etc. All put together visual medium is very close to people. They easily understand the concept by watch and listening but they are not able to pause or forward the advertising time and method. Availability of more number of sources for getting awareness is easy for the people. But, rural people depend more on print and visual media to know about the product or services. Due to the technology development, information communication technology devices have become very important for creating awareness. Rural people are aware of the importance of information communication technology but they are not utilizing the services of information communication technology. The paper investigates the impact of information communication technology on life insurance. This study is important to analyze and find out the effectiveness of various mediums like print, visual and web and their impact among the rural customers towards insurance advertising and information.

Research methodology

The study is descriptive in nature and a non-parametric convenience sampling technique has been adopted. The study was conducted in and around of Puducherry. 72 rural people were selected and well structured, pre-tested questionnaire was used to collect information from the respondents. Information was collected on demographic characteristics such as age, education, occupation, monthly income, personal accessibility to computer and internet facilities, etc.

The questionnaire contained five main parts; each one was dedicated to a separate dimension. Part A included three statements examining awareness of insurance sectors through uses of mode of information communication technology. Part B included three statements assessing their interest towards insurance information getting from various sources of information communication technology. Part C contained three statements evaluating the purchase intention made by the insurance advertising in print, visual and web mediums. In addition, the questionnaire included some questions on demographic characteristics of the respondents (age, education, occupation and income). The attitude statements in the five main parts of the questionnaire were measured by five point Likert scale of agreement, running from strongly agree to strongly disagree (1= disagree, 2 is the mid point of the scale, and 3= agree). The highest score was more favourable attitude and so on. The constructed questionnaire was filled by the respondents those who had any insurance policy. Their comments were considered in the final version. At the analytical stage, several statistical techniques were employed to satisfy study objectives, including frequency analysis, descriptive analysis, t test and One-Way ANOVA.

Analysis and interpretation

Effectiveness of print media is displayed in the Table 1. Hypothesis 1(a) predicted that “there is no difference of opinion among the respondents towards creating awareness on insurance through print advertisement based on their educational level”. The F value significant at 1% level and we reject hypothesis 1(a). It revealed that the post-graduate respondents had more awareness from insurance advertisement in print media (mean value 5.363). According to their occupation those who were doing business had more awareness (mean value 4.09). The F value not significant at 5% and 1% levels we accept hypothesis 1(b) that “there is no difference of opinion among the respondents towards creating awareness on insurance through print advertisement based on their occupation”. Hypothesis 1(c) predicted that “there is no difference of opinion among the respondents towards creating awareness on insurance through print advertisement based on their income level” and we rejected hypothesis 1(c) at 5% level ($\alpha = 0.026$). The high income people (above Rs.10000 per month) had high awareness compare to other income groups.

TABLE 1 EFFECTIVENESS OF PRINT MEDIA AND DEMOGRAPHIC VARIABLES.

Demographic variables	Frequency	N	Creating awareness			Getting interest			Purchase intention		
			Mean	SD	F	Mean	SD	F	Mean	SD	F
Education	Up to HSc	34	3.617	.6970	41.81	3.529	.6147	105.3	3.676	.7675	179.4
	Degree/ diploma	27	3.481	.5092	($\alpha = .000$)	5.111	.8006	($\alpha = .000$)	6.407	.7971	($\alpha = .000$)
	PG	11	5.363	.5045		6.818	.6030		8.272	.7862	
	Total	72	3.833	.8881		4.625	1.368		5.402	1.918	
Occupation	Agriculture	43	3.697	.8028	1.447	3.833	.8881	5.291	4.814	1.854	6.014
	Business	22	4.090	1.0193	($\alpha = .242$)	4.232	1.342	($\alpha = .007$)	6.136	1.807	($\alpha = .004$)
	Pvt/Govt employees	7	3.857	.8997		5.090	1.150		6.714	1.253	
	Total	72	3.833	.8881		5.571	1.397		5.402	1.918	
Monthly Income	Up to Rs.5,000	39	3.794	.9228	3.830	4.333	1.363	5.798	4.769	1.912	8.503
	Rs.5,000 to 10,000	22	3.590	.5903	($\alpha = .026$)	4.545	1.056	($\alpha = .005$)	5.636	1.497	($\alpha = .001$)
	More than Rs.10,000	11	4.454	1.035		5.818	1.401		7.181	1.537	
	Total	72	3.833	.8881		4.625	1.368		5.402	1.918	

Source: Primary data computed.

Hypothesis 2(a) predicted information communication technology that “there is no difference of opinion among the respondents towards getting interests to the insurance services through print advertisement based on their educational level”. The F value significant at 1% level and we reject hypothesis 2(a). It revealed that the post-graduates had more interest towards insurance services through advertisement in print media (mean value 6.818). According to their occupation employees of both private and government had more interest (mean value 5.09). The F value significant at 1% level, we reject hypothesis 2 (b) that “there is no difference of opinion among the respondents towards getting interests to the insurance services through print advertisement based on their occupation”. Monthly income of respondents also had influence on their opinion about insurance advertising in print media. The F value 5.798 is significant at 1% level. So, we reject hypothesis 2 (c) that “there is no difference of opinion among the respondents towards getting interests to the insurance services through print advertisement based on their income”.

Another important variable is getting purchase intention towards insurance services through print advertisement. Here also the post-graduates had more purchase intentions of insurance services rather than others (mean value 8.272). It is proved by the F value is significant at 1% level. So the hypothesis 3 (a) stated that “there is no difference of opinion among the respondents have getting purchase intentions to the insurance services through print advertisement based on their education” is rejected. In case of their occupation, respondents those who were working in private and government had more purchase intention towards the insurance products. It is proved by the F value 6.014 is significant at 1% level. So, we reject hypothesis 3 (b) stated that “there is no difference of opinion among the respondents have getting purchase intentions to the insurance services through print advertisement based on their occupation”.

Monthly income of the respondents had also influenced in their opinion about purchase intention towards insurance services. The α value is 0.001 and F value 8.503 is significant at 1% level we reject hypothesis 3 (c) stated that “there is no difference of opinion among of the respondents have getting purchase intentions to the insurance services through print advertisement based on their monthly income”.

TABLE 2 EFFECTIVENESS OF VISUAL MEDIA AND DEMOGRAPHIC VARIABLES

Demographic variables	Frequency	N	Creating awareness			Getting interest			Purchase intention		
			Mean	SD	F	Mean	SD	F	Mean	SD	F
Education	Up to HSc.	34	5.058	.8507	27.67	4.823	.8694	29.04	4.147	1.104	47.52
	Degree/ diploma	27	6.333	1.732	(a = .000)	5.851	.9885	(a = .000)	6.222	1.050	(a = .000)
	PG	11	8.272	1.009		7.090	.7006		7.454	1.293	
	Total	72	6.027	1.686		5.555	1.197		5.430	1.693	
Occupation	Agriculture	43	5.674	1.554	2.743	5.302	.9889	2.505	4.907	1.630	5.895
	Business	22	6.681	1.728	(a = .071)	5.909	1.306	(a = .089)	6.136	1.489	(a = .004)
	Pvt /Govt employees	7	6.142	1.951		6.000	1.732		6.428	1.618	
	Total	72	6.027	1.686		5.555	1.197		5.430	1.693	
Monthly Income	Up to Rs.5,000	39	5.794	1.524	1.926	5.333	1.154	5.020	5.025	1.693	4.827
	Rs.5,000 to 10,000	22	6.000	1.603	(a = .154)	5.454	1.143	(a = .009)	5.500	1.472	(a = .011)
	More than Rs.10,000	11	6.909	2.211		6.545	1.035		6.727	1.555	
	Total	72	6.027	1.686		5.555	1.197		5.430	1.693	

Source: Primary data computed

Effectiveness of the visual media is explained in the Table 2. Visual media plays major role in insurance advertising. Nowadays this media is to be become a dominant. This article found the influence of demographic variables like education, occupation and income factors to the respondents' decision making factors like awareness, getting interest and purchase intention. Hypothesis 4(a) stated that "there is no difference of opinion among the respondents towards creating awareness on insurance through visual media based on their educational level". The F value significant at 1% level and we reject hypothesis 4(a). It revealed that the post-graduate respondents had more awareness on insurance advertisement through visual media (mean value 8.272). According to their occupation those who were doing business had more awareness (mean value 6.68). The F value was not significant at 5% and 1% levels and we accept hypothesis 4(b) that "there is no difference of opinion among the respondents towards creating awareness on insurance through visual advertisement based on their occupation". Hypothesis 4(c) predicted information communication technology that "there is no difference of opinion among the respondents towards creating awareness on insurance through visual advertisement based on their income level" and we accept hypothesis 4(c). Incomes of the respondents have not influence in case of visual advertising for getting awareness from insurances advertising.

Hypothesis 5(a) stated that "there is no difference of opinion among the respondents towards getting interests to the insurance services through visual advertisement based on their educational level". The F value significant at 1% level and we reject hypothesis 5(a). It revealed that the post-graduates had more interest towards insurance services through advertisement in visual media (mean value 7.090). According to their occupation employees of both private and government had more interest (mean value 6.0). The F value not significant at 5% level and we accept hypothesis 5 (b) that "there is no difference of opinion among the respondents towards getting interests to the insurance services through visual advertisement based on their occupation". Based on their monthly income also had influenced on their opinion about insurance advertising in visual media. The F value 5.02 is significant at 1% level. So, we reject hypothesis 5 (c) that "there is no difference of opinion among the respondents towards getting interests to the insurance services through print advertisement based on their income". We understood that income of the respondents had influenced on impact of insurance advertisement.

Purchase intention towards insurance services through visual advertisement was another factor. Here also the post-graduators had more purchase intentions of insurance services rather than others (mean value 7.454). It is proved by the F value is significant at 1% level. So the hypothesis 6 (a) stated that “there is no difference of opinion among the respondents getting purchase intentions to the insurance services through visual advertisement based on their education” is rejected. In case of their occupation, respondents those who were working in private and government had more purchase intention towards the insurance products. It is proved by the F value 5.895 is significant at 1% level. So, we reject hypothesis 6 (b) stated that “there is no difference of opinion among the respondents getting purchase intentions to the insurance services through visual advertisement based on their occupation”. Monthly income of the respondents had also influenced in their opinion about purchase intention towards insurance services. The α value is 0.011 and F value 4.827 is significant at 1% level we reject hypothesis 6 (c) stated that “there is no difference of opinion among the respondents have getting purchase intentions to the insurance services through visual advertisement based on their monthly income”.

TABLE 3 EFFECTIVENESS OF WEB MEDIA AND DEMOGRAPHIC VARIABLES

Demographic	Frequency	N	Creating awareness			Getting interest			Purchase intention		
			Mean	SD	F	Mean	SD	F	Mean	SD	F
Education	Up to HSc.	34	4.294	1.547	7.964	4.647	1.252	4.309	3.941	1.253	5.405
	Degree/ diploma	27	5.592	1.448	(a = .001)	5.592	1.474	(a = .017)	4.777	1.476	(a = .007)
	PG	11	6.000	1.673		5.454	1.035		5.363	1.566	
	Total	72	5.041	1.673		5.125	1.373		4.472	1.472	
Occupation	Agriculture	43	4.581	1.467	5.526	4.860	1.355	2.047	4.046	1.362	5.247
	Business	22	5.954	1.863	(a = .006)	5.500	1.371	(a = .137)	5.000	1.380	(a = .008)
	Pvt /Govt employees	7	5.000	1.154		5.571	1.272		5.428	1.618	
	Total	72	5.041	1.673		5.125	1.373		4.472	1.472	
Monthly Income	Up to Rs.5,000	39	4.692	1.558	4.167	4.897	1.465	2.012	4.153	1.328	3.638
	Rs.5,000 to 10,000	22	5.045	1.588	(a = .020)	5.181	1.220	(a = .142)	4.545	1.503	(a = .031)
	More than Rs.10,000	11	6.272	1.793		5.818	1.167		5.454	1.572	
	Total	72	5.041	1.673		5.125	1.373		4.472	1.472	

Source: Primary data computed

Finally, we discuss the web media, a new, innovative and growth full one. This is highly adoptable one for insurance and its advertising. It gives detailed information whatever and whenever the people need. Table 3 explain the effectiveness of information communication technology based on the demographic characters.

Hypothesis 7(a) stated that “there is no difference of opinion among of the respondents towards creating awareness on insurance through web media based on their educational level”. The F value significant at 1% level and we reject hypothesis 7(a). It revealed that the post-graduate respondents had more awareness from insurance advertisement through visual media (mean value 6.0). According to their occupation those who were doing business had more awareness (mean value 5.95). The F value was significant at 5% and 1% levels and we reject hypothesis 7(b) that “there is no difference of opinion among the respondents towards creating awareness on insurance through web wise advertisement based on their occupation”. Hypothesis 7(c) predicted information communication technology that “there is no difference of opinion among the respondents towards creating awareness on insurance through web advertisement based on their income level” and we reject hypothesis 7(c). Incomes of the respondents have not influence in case of web advertising for getting awareness from insurances advertising.

Hypothesis 8(a) stated that “there is no difference of opinion among the respondents towards getting interests to the insurance services through advertisement in website based on their educational level”. The F value significant at 5% level and we reject hypothesis 8(a). It revealed that the degree and diploma graduates had more interest towards insurance services through advertisement in visual media (mean value 5.592). According to their occupation employees have not implies on their opinion about interest on web advertisement. The F value not significant at 5% level we accept hypothesis 8 (b) that “there is no difference of opinion among of the respondents towards getting interests to the insurance services through web advertisement based on their occupation”. Based on their monthly income also had not influenced on their opinion about insurance advertising in web media. The F value 2.012 is not significant at 1% level. So, we reject hypothesis 8 (c) that “there is no difference of opinion among of the respondents towards getting interests to the insurance services through web advertisement based on their income”. We understood that income of the respondents had influenced on impact of insurance advertisement.

Purchase intention towards insurance services through web advertisement is another factor for this study. Here also the post-graduators had more purchase intentions of insurance services rather than others (mean value 5.3636). It is proved by the F value is significant at 1% level. So the hypothesis 9 (a) stated that “there is no difference of opinion among of the respondents have getting purchase intentions to the insurance services through web advertisement based on their education” is rejected. In case of their occupation, respondents those who were working in private and government had more purchase intention towards the insurance products. It is proved by the F value 2.047 is not significant at 1% level. So, we accept hypothesis 9 (b) stated that “there is no difference of opinion among the respondents have getting purchase intentions to the insurance services through web advertisement based on their occupation”. Monthly income of the respondents had also influenced in their opinion about purchase intention towards insurance services. The α value is 0.031 and F value 3.638 is significant at 5% level we reject hypothesis 9(c) stated that “there is no difference of opinion among the respondents have getting purchase intentions to the insurance services through web advertisement based on their monthly income”.

Table 4 indicates the effectiveness of information communication technology and other media based on age of respondents.

TABLE 4 EFFECTIVENESS OF INFORMATION COMMUNICATION TECHNOLOGY AND OTHER MEDIA BASED ON AGE OF RESPONDENTS

	Factors	Frequency	N	Mean	SD	t	Sig
Print Media	Creating awareness	< 35 Years	44	4.0227	.9997	2.339	.022
	Creating awareness	> 35 Years	28	3.5357	.5762		
	Getting interest	< 35 Years	44	5.2727	1.2642	6.238	.000
	Getting interest	> 35 Years	28	3.6071	.7860		
	Purchase intention	< 35 Years	44	6.4091	1.6610	7.393	.000
	Purchase intention	> 35 Years	28	3.8214	1.0203		
Visual Media	Creating awareness	< 35 Years	44	6.7273	1.6617	5.142	.000
	Creating awareness	> 35 Years	28	4.9286	1.0157		
	Getting interest	< 35 Years	44	5.9091	1.2726	3.361	.001
	Getting interest	> 35 Years	28	5.0000	.8165		
Internet	Purchase intention	< 35 Years	44	6.1364	1.5640	5.176	.000
	Purchase intention	> 35 Years	28	4.3214	1.2488		
	Creating awareness	< 35 Years	44	5.8409	1.4296	6.322	.000
	Creating awareness	> 35 Years	28	3.7857	1.1974		
	Getting interest	< 35 Years	44	5.6591	1.2749	4.716	.000
	Getting interest	> 35 Years	28	4.2857	1.0838		
	Purchase intention	< 35 Years	44	5.1364	1.3570	5.795	.000
	Purchase intention	> 35 Years	28	3.4286	.9595		

Source: Primary data computed.

The hypothesis (H10) states that "There is no statistical difference of opinion among rural people towards effectiveness of print media on insurance sectors based on their age group". To evaluate this hypothesis, mean scores, standard deviations, and t-values were computed to find out if there are statistical differences between the means of respondent scores according to age group of the respondents, as shown in Table 4. Similarly, figures in the table show that there are statistically significant differences in rural respondents' attitudes towards effectiveness of Information Communication Technology ($\alpha \leq 0.05$). There is significant difference in making interest of these things in Information Communication Technology among the rural customers in the age group of less than 35 years is higher than the more than 35 years of rural people. This suggests that we reject the null hypothesis (H10), which indicates that there are different of opinion among the rural respondents about effectiveness of print media based on their age group.

Conclusion

The most interesting result is that the age groups of the respondents had significant differences from only print advertisement regarding awareness, interest and purchase intention activities. Less than 35 age group rural people have interest to access more activities in terms of insurance information. Education level of the rural respondents did not influence to create awareness on insurance advertising and information from print, visual and web media. But their occupation had influenced only on getting interest from print media towards insurance. Their income level also did not demonstrate influence.

In case of visual advertising the occupation of respondents had influenced only on purchase intention. Monthly income of the respondents had not influenced on awareness of the service, but did influence on getting interest and purchase intention in regard of insurance advertising. Web medium had attracted rural customers in terms of getting awareness and purchase intention, but did not create an interest towards insurance information or advertising.

The paper intended to expand the knowledge about print, visual and internet advertising effectiveness. These topics are of interest both for scholars and for practitioners, as the internet's opportunities are not unambiguously considered and are still developing. The insurance sectors will have good business opportunities in web media also. Cross media advertisement is at least as effective as the traditional print advertisement in inducing managerial decisions among the rural people towards insurance services.

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