A Study on Information Efficiency of Digital Marketing Communication on Smart Phone Purchase Intention

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Abstract

Digital marketing communication provides several information while buying smart phone among the consumers. Therefore, information efficiency of digital marketing communication renders significant role in smart phone purchase. Therefore study is commenced with the sample of 100 consumers. Sampling was conducted by interviewing randomly selected consumers through the structured and non-disguised questionnaire. This study used chi-square test, Kendall's coefficient of concordance; weighted score analysis, andcorrelation for data analysis. Results confirmed that there is significant relationship between the demographic profile of consumers and their willingness to purchase smart phone. The information efficiency of DMC includes price check, quality check, find models, seek availability, price comparison, user feedback, online communities' information, phone specifications, service centre availability and phone performance have influence on purchaseintention of consumers. Communication, accessibility of news and information sharing are main factors and has positive relationship on determining in smart phone usage. It is inferredthat severe addiction on smart phone usage, disturbance of unwanted information and smart phone hacking are the main problems in using smart phone.

Key words: Smart Phone, Information Efficiency, Digital Marketing Communication,Problems, Willingness to Purchase, Consumers.

1. Introduction

Digital marketing uses the Internet and information technology to extend and improve traditional marketing functions. Communication can be general messages to a larger audience or personalized messages. A customer relationship aspect acknowledges that communication can also include relational and service elements, not just advertising and offers aiming for immediate purchasing transactions. The role of digital technology as a business enabler is substantial in cutting transaction costs, boosting efficiency and productivity, reaching markets,creating engagement with consumers, and sharing resources. Digital marketing communicationalso combines psychological, humanist, anthropological, and technological factors which willbecome a new medium with a large capacity, interactive, and multimedia. The result of the new era was the interaction between producers, market intermediaries and consumers. There are four components as the biggest drivers that make the digital marketing communication industryvery promising in the next five years. Technology will follow where money moves and it is predicted that within the next year Indonesia will become the largest e-money player in the world.

The smart phone functions with a superior mobile operating system that incorporates the functions of a personal computer, as well as advanced computer capabilities and information management, email purposes, call requirements and internet access. When providing a standardized proposal for application development purposes, a smart phone does everything a personal computer can do and much more due to its mobility. It integrates with the most advanced smart phone web features, email instant messaging, digital camera options,video gaming, positioning and navigation section, media player, voice command for messagingand voice search to ask questions on any topic. The smart phone makes human life easier and makes the whole universe aware of the advances in technology.

The smart phone allows the user to make phone calls while at the same time having certain features that allow them to perform certain functions other than computer or personal digital assistant in the past.

2. Statement of the Problem

The basis of marketing is communication and marketing can be so powerful if combined with effective communication and efficient. How to attract consumers or the publicbecomes aware, knows and wants to buy a product or service through a communication channel is not something that is easy. Buyers' expectations continue to rise, and marketing companiesneed to meet those expectations of higher profits. It is important to find out what are the key touch points that distinguish it from the overall experience. Once those touch points are clear,the marketing company should focus on its resources in these areas. However, the increase in customer satisfaction shows an increase in the revenue of marketing companies. Different aspects of the product and company may vary depending on the overall experience of the buyer.Of these, only certain features in general add more value and make up the overall experience. The buyer's experience is mainly designed by the buyer's interest in a particular brand or product. Moreover, the characteristics of the company have a direct effect on changing the buyer's experience, rather than the control of the marketing companies. Instead of designing experiences out of the box, marketing companies should focus on designing their ownmotivations that will lead the buyer to a happier experience.

Smart phone purchase intention is related to the buyer's actual purchasing decisions, which is used to measure general performance and expect behavioural response. Purchasing intention is a pre-plan to purchase a particular brand or product in the future. This does not always lead to actual purchases due to the influence of various factors that affect purchasing power. Buyers are likely to call everyone who looks appropriate, if there are only a few. The purpose of the purchase is to adapt the consumer decision-making process to the various stagesof the consumer decision-making process: recognizing needs, seeking information through theexternal environment, alternative ratings, purchasing decision-making and post-purchase experience. Purchasing purpose is one of the most common measures of performance, and is often used to anticipate reactionary behaviour.

3. Review of Literature

Saranya & Yoganandan (2019) revealed that smart phone helps to send emails, make audio and video calls, conferencing, downloading, gaming, weather, and social media are the aspects considered in brand preferred to purchase. Tran (2018) examined that quality, feature,design; brand and price are the main independent variables and their intention to purchase. Guleria (2015) examined that processing speed, product features, recreational and usage ease are the main factors that build preference among consumers. Sthapit & Sharma (2018) revealedthat product features, social influence and compatibility factors have significant influence on purchase intention of the buyers. Digital marketing and social media intensively through theirrole as consumers of goods and services as they search for information and data on the productsconsumed in addition to communicating with others about their experiences (Salloum et al., 2018).

Juwaheer et al. (2013) showed that perceived quality, reasonable price, recommendation from peer groups are the main motivations behind in the selection of mobilephones. Powers et al. (2012) found that digital marketing communication has generally been information regarding merchandise, advertising on the online, and marketing via e-mail and mobile. Zabadi et al. (2012) indicated that e-mail has a profoundly positive influence on consumer buying decisions in two phases that is, post-purchase and information search. Rakib(2019) found that price of mobile phone, features of the phone; brand name and social influenceare significant factors that influence cellular phone purchase intention. Katyal (2017) showed that smart phones are used to make calls, work like a computer device, convenience and handyuse, information searching, and perform wide functions and services.

4. Research Objectives

The present study has been commenced to test the following objectives:

1. To measure the relationship between demographic profile of consumers and theirwillingness to purchase smart phone.
2. To scrutinize the information efficiency of digital marketing communication for smartphone purchase.
3. To investigate the utilization of smart phone to the different purposes amongconsumers.
4. To examine the different problems in using smart phone among consumers.

5. Research Methodology

The study has been conducted with 100 consumers purchasing and using smart phone in Hyderabad. Descriptive research design has been used to conduct this seminal work. The study targeted the sample of consumers across different segment. Sampling is administered byinterviewing randomly selected consumers. The data is collected by presenting a structured and non-disguised questionnaire. The survey instrument is constructed with four parts, the first partdeals with demographic profile of consumers, second

part presents information efficiency of digital marketing communication, third part contains utilization of smart phone to the different purpose, and fourth part covers different problems in using social media. The respondents are asked to rate their agreement on each variable on a five point Likert scale, accordingly, score value '5' is assigned for strongly agree, '4' for agree, '3' for neutral, '2' for disagree and '1' for strongly disagree. The required primary data are collected after detailed pre-testing. Pre- test helps to ensure reliability, consistency, and sufficiency of the survey instrument in order to maintain data accuracy. Moreover, necessary secondary data has been collected from various published sources. This study widely used chi-square test, Kendall's coefficient of concordance, weighted average score and correlation for data analysis and testing hypothesis.

6. Results and Discussions

6.1. Demographic Profile and Willingness to Purchase Mobile Phone

Smart phone offers various benefits to the consumers; it helps to perform personal and professional obligations of the consumers. Consumers across different segment have expressed their interest towards the use of smart phone. Therefore, the relationship between the demographic profile of consumers and their willingness to purchase smart phone is investigated using chi-square test. The null hypothesis (H_0) states that there is no significant relationship between the demographic profile of consumers and their willingness to purchase smart phone. Its results are discussed in table-1.

Table-1: Chi-Square test

Demographic Profile	Variables	Score					χ^2 Value	Sig.*
		SA	A	N	DA	SDA		
Gender	Male	25	17	15	8	1	29.325	.000
	Female	12	9	9	4	0		
Age	Less than 30 years	16	11	9	4	1	44.527	.000
	30 – 50 years	15	10	9	3	0		
	More than 51 years	10	5	4	3	0		
Marital Status	Married	28	20	10	7	0	42.988	.000
	Unmarried	11	10	8	5	1		
Monthly Income	Less than Rs.30,000	14	11	10	6	1	37.684	.000
	Rs.30,000-50,000	11	8	10	3	0		
	More than Rs.50,000	14	6	4	2	0		
Academic Qualification	School Education	13	10	7	3	0	29.874	.000
	UG Degree	22	13	10	4	1		
	PG Degree	5	5	5	2	0		
Occupation	Business	15	10	8	2	0	45.889	.000
	Employee	11	6	9	2	0		
	Self-employed	8	5	4	3	1		
	Others	6	5	3	2	0		
Family Size	2 members	14	9	9	4	1	49.599	.000
	3 – 4 members	14	8	6	4	0		
	5 and above	13	8	8	2	0		

Source: Primary data, *** Significant at 1% level**

Table-1 reveals that the demographic profile of consumers, gender reveals that 66% are male consumers and 34% are female consumers. Age found that 41% of them are in less than 30 years of age, 37% are in 30 - 50 years, and 22% are in more than 50 years of age. Marital status shows that 65% are married consumers and 35% are unmarried consumers. Monthly income reveals that 42% of them are in the monthly income of less than Rs.30,000 per month, 32% are in Rs.30,000-50,000 per month, and 26% are in more than Rs.50,000 per month. Academic qualification demonstrates that 33% are completed school education, 50% are completed UG degree, and 17% have completed PG degree. Occupation shows that 35% are engaged in business, 28% are employed, 21% are self-employed, and 16% are others. Family size reveals that 37% are in 2 member's family, 32% are in 3 -4 members family and 31 are in 5 and above member's family. The computed chi-square values are significant at 1% level for all demographic profile.

Therefore, this framework directly supports the alternate hypotheses.Hence, there is significant relationship between the demographic profile of consumers and theirwillingness to purchase smart phone.

6.2. Information Efficiency of DMC on Smart Phone Purchase

Digital marketing communication ensures information efficiency to the consumers while purchasing smart phone. Online advertisement, social media connectivity, use of mobile applications, search engine optimization, and emails are the dimensions of digital marketing communication. The information efficiency includes price check, quality check, find models, seek availability, price comparison, user feedback, online communities' information, phone specifications, service centre availability and phone performance. The information efficiency is numbers from 1 to 10 so as to conduct Kendall's coefficient of concordance. It establishes the degree of association among numerous (k) sets of ranking of N factors. It is a suitable measure of studying the degree of association among five sets of rankings. Therefore, five setsof rankings used to work out coefficient of concordance. In order to ensure its validity, the nullhypothesis (H_0) states that there is no significant difference in opinion of consumers with respect to information efficiency of DMC.

Table – 2: Kendall's Coefficient of Concordance

$K = 5$	Factors										N = 10
	1	2	3	4	5	6	7	8	9	10	
Online advertisement	1	3	2	4	6	6	6	8	9	10	
Search engine optimization	1	2	3	4	5	6	7.5	7.5	9	10	
Emails	1	2	3	4	5	6	7	8.5	0	8.5	
Mobile apps	2	1	4	4	6.5	6.5	4	8	0	0	
Social media	1.5	1.5	3	5	4	6	7	8	9	10	
Sum of ranks(R_j)	7.5	9.5	15	21	26.5	30.5	31.5	40	27	38.5	ΣR_j =247
$(R_j - \bar{R}_j)^2$	295.84	231.04	94.09	13.69	3.24	33.64	46.24	234.09	5.29	190.44	s = 1147.6
W= S / 1/12k^2 (N^3 – N)											
= 1147.6 / 1/12(5^2) (10^3 -10) = 1147.6 / 25/12(990)											
= 1147.6 / 2062.5 = 0.5564											

Source: Primary data

Table-2 reveals that as N is more than 7, hence, chi-square test is used to determine theW's significance at 5% level. The computed value for chi-square test = k (N – 1).W with N – 1 degrees of freedom is [=5 (10 – 1) (0.5564)] 25.038. The table value of chi-square at 5% levelfor (N – 1 = 10 – 1) 9 degrees of freedom is 16.919. As a result, calculated value is is significantly more than the table value. Therefore, it straight away rejects the null hypothesis at 5% level of significance. It is inferred that there is significant difference in opinion of consumers with respect to information efficiency of DMC.

6.3. Utilization of Smart Phone

Consumers use smart phone for various purposes. The important usage of smart phoneare Communication (CM), Accessibility of News (AN), Mail Checking (MC), Social Media Connectivity (SM), Online Shopping (OS), Fund Transfer (FT), Information Sharing (IS), Weather Forecast (WF), and Business Support Tools (BS). In order to measure the quantum ofassociation between these variables, correlation analysis is administered. Use of social media is considered as dependent variable. Correlation results are presented in Table-3.

Table-3: Correlation Analysis

S. No	Variables	r	r^2
1.	Communication	0.344	0.118
2.	Accessibility of News	.0389	0.151
3.	Mail Checking	0.268	0.072
4.	Social Media Connectivity	0.117	0.014
5.	Online Shopping	0.247	0.061
6.	Fund Transfer	0.338	0.114
7.	Information Sharing	0.491	0.241
8.	Weather Forecast	0.160	0.026
9.	Business Support Tools	0.045	0.002

Source: Primary data

Table-3 reveals that there is positive correlation found amongst the variables. The coefficient of determination (r^2) shows that communication accounts for 11.8% of variation insmart phone usage. The coefficient of determination (r^2) shows that accessibility of news accounts for 15.1% of variation in smart phone usage. Likewise, the same trend continued formail checking (7.2%) and social media connectivity (1.4%). There is a high degree of positiveassociation found between information sharing and smart phone usage (24.1%). Similarly, online shopping (6.1%), fund transfer (11.4%), weather forecast (2.6%) and business support tools (0.2%) has positive relationship on determining in smart phone usage.

6.4. Different Problems in using Smart Phone

Consumers face various problems while purchasing and using smart phone. Theproblems of using smart phone is analysed through Weighted Average Score analysis. Hence,score value of consumers is computed by total consumers to get weighted average score. In this way, the problem is computed for each variable. The variables are ranked above '4' is assumed as high problems, if the variables are ranked above '3' is assumed as medium problems and if the variables are ranked below 3 is assumed as low problems and its results are given in table-5.

Table – 5: Weighted Average Score Analysis

Variables	High	Medium	Low	Score	Rank
Smart phone hacking	72	11	17	4.03	3
Poor personal interaction	67	11	22	3.83	6
Poor cyber security	67	13	20	3.87	5
Lack of internet connectivity	66	11	23	3.76	9
Deception in online transactions	71	12	17	4.00	4
Disturbance of unwanted information	71	9	20	4.06	2
Health gets affected	68	12	20	3.84	7
Virus problems in phone	49	21	20	3.75	10
Severe addiction on smart phone usage	75	12	13	4.13	1
Not able to concentrate work	65	14	21	3.77	8

Source: Primary data

Table-5 reveals that sever addition on smart phone usage is the main problem to consumers. It considerably takes their valuable time and spoils state of wellbeing; hence it ranked first with 4.13 points. Disturbance of unwanted information is happening often in social media, hence it is a significant problem to them and it gets 4.06 points. Smart phone hacking is also main problem, it gets 4.03 points. In this way, deception in online transactions (4.00points), poor cyber security (3.87 points), health gets affected (3.84 points), poor personal interaction (3.83 points), not able to concentrate (3.78 points), lack of internet connectivity (3.76 points), and

virus problems in phone (3.75 points) are ranked subsequently. It is inferredthat severe addiction on smart phone usage, disturbance of unwanted information and smart phone hacking are the main problems in using smart phone.

7.   Conclusion

Digital marketing combine the use of information technology and practical marketing techniques. Digital marketing communication helps to maintain better customer relationship practices. Digital marketing communication blends psychological, humanist, anthropological,and technological factors so as to sell its products among the different segment consumers. Demographic profile of consumers shows that 66% are male consumers, 41% of them are in less than 30 years of age, 65% are married consumers and 42% of them are in the monthly income of less than Rs.30,000 per month. 50% are completed UG degree, 35% are engaged inbusiness, and 37% are in 2 member's family. Chi-square test confirms that there is significantrelationship between the demographic profile of consumers and their willingness to purchase smart phone. The information efficiency of DMC includes price check, quality check, find models, seek availability, price comparison, user feedback, online communities' information, phone specifications, service centre availability and phone performance have influence on purchase intention of consumers. It is inferred that there is significant difference in opinion ofconsumers with respect to information efficiency of DMC. Communication, accessibility of news and information sharing are main factors and has positive relationship on determining insmart phone usage. It is inferred that severe addiction on smart phone usage, disturbance of unwanted information and smart phone hacking are the main problems in using smart phone.

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