

Factors Affecting Online Advertisement Effectiveness



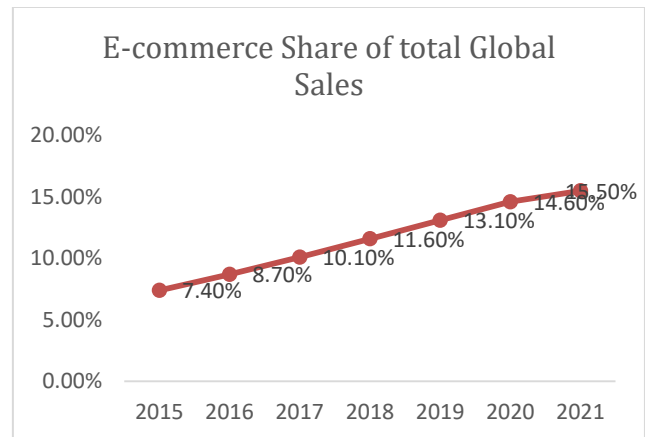
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Abstract: Digitalization has conquered each and every sector with a fast phase. World has become a global village. E-commerce has become very common and easy. This paper begins with brief outlines of the growth of e-commerce. Online advertisements have become very common and companies are it to promote their company and product. This paper explores the factors affecting online advertisements effective. Data is collected through online as well as offline. Sample size of 423 was contacted for this paper. Exploratory factor analysis and demographic analysis was carried out to analyze the collected data.

Keywords : e-commerce, online advertisements, digitalization

I. INTRODUCTION

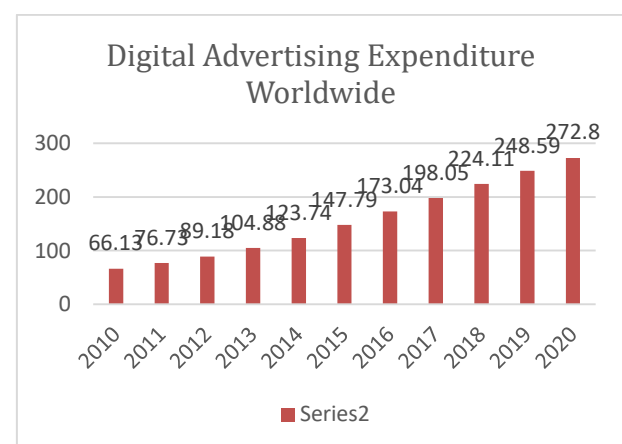
Internet offers marketers the widest spectrum of advertising tools and formats. As per Interactive Advertising Bureau (2009), 70% of total advertising revenue comes from web space advertisements. The other digital tools, like e-mail, websites, display advertising, blogs, games, podcasts, social networks, virtual worlds, widgets, wikis etc. also contributes to the growth of the company. This paper explores the factors related to web space advertisement effectiveness. For this, the researcher has collected the data from 423 respondents. Both online and off line method was used to collect the data. Initially 500 questionnaires were circulated through both the methods. Out of 500, only 423 were accepted, which means the acceptance percentage of the responses was 85%. 15% was discarded due to the incompleteness of the data. Digitalization has conquered each and every sector. In order to sustain in this highly competitive and volatile business environment, companies need to move, as the trend is. They need to embrace the change and adapt themselves according to the emerging technologies and techniques. This will help them to gain competitive edge on others. Below Graph depicts the growth of e-commerce share of total global retail sales from 2015 to 2021. It is showing a continuous growth.



Source : Available online:

<https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-worldwide/>

The digital advertising ecosystem has developed in parallel with the retail e-commerce market. Due to widespread use of mobile devices—particularly smartphones, has amplified the Internet usage and on-line shopping. Companies have realized the role of advertisement for branding and promoting the business. They are preferring online advertisements in place of print media. Because of this trend, companies allocate increasingly higher amounts of money spent on digital advertising in mobile advertising. In 2019, the spending is to reach the level of over USD 195 billion, and the dynamics of their growth between 2013 and 2019 is to reach 430%. It should also be noted that in the USA, for example, the mobile advertising revenue already accounted for 50.52% of the total revenue from digital advertising in 2016.



Source : online:

<https://www.statista.com/statistics/273717/global-internet-advertising-expenditure/>

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II. OBJECTIVE OF THE STUDY

The objectives of the study are as follows:

1. To identify the factor effecting web space advertisement effectiveness.
2. To study whether demographic has an impact on online purchase.

III. PROPOSED METHODOLOGY

A: Development of Instrument:

The questionnaire included questions/variable extracted from the literature review. Total 37 questions were there and was divided into four parts as below:

Number of demographic questions	4
Number of questions related to internet usage	3
Number of questions used to explore the factors affecting effective web space advertisement	30

Number of topic related questions	37
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Out of 365 respondents, 342 respondent's uses internet daily and the percentage is 93.7 % and 23 respondents don't use internet daily and the percentage is 6.3%. Out of 365 respondents, 50 respondents use internet less than 5 hours per week the percentage is 13.7, 95 respondents use for 6-10 hours per week, the percentage is 26 %, 67 respondents use internet for 11-15 hours, the percentage is 18.4 % and 153 respondents use for more than 15 hours per week and the percentage is 41.9%. 79.7 % of respondents have an experience of online shopping and 20.3 %, don't have the experience of online shopping. 29.9% of respondents use internet for searching information, 1.9 % for entertainment, 0.5 % for shopping and 67.7% for all purpose, namely information search, entertainment and shopping.

IV. TO CHECK THE INFLUENCE OF DEMOGRAPHIC VARIABLE ON ONLINE SHOPPING

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Internet usage time	Equal variances assumed	0.219	0.64	5	421	0	0.63	0.127	0.387	0.889
	Equal variances not assumed			4.91	129.05	0	0.63	0.129	0.381	0.895
Internet daily	Equal variances assumed	110.671	0	-5.23	421	0	-0.14	0.027	-0.199	-0.09
	Equal variances not assumed			-3.43	93.756	0.001	-0.14	0.042	-0.2285	-0.06
Purpose of internet usage	Equal variances assumed	29.222	0	10.38	421	0	1.4	0.141	1.193	1.751
	Equal variances not assumed			9.06	113.854	0	1.47	0.162	1.15	1.793
Gender	Equal variances assumed	2.023	0.156	-2.09	421	0.036	-0.12	0.059	-0.242	-0.008
	Equal variances not assumed			-2.07	129.952	0.04	-0.12	0.06	-0.244	-0.005
Age	Equal variances assumed	0.424	0.515	0.042	421	0.966	0.008	0.191	-0.368	0.385
	Equal variances not assumed			0.042	130.292	0.966	0.008	0.193	-0.374	0.39
Education	Equal variances assumed	0.838	0.36	0.583	421	0.56	0.056	0.097	-0.135	0.248
	Equal variances not assumed			0.613	140.75	0.541	0.056	0.092	-0.126	0.24
Occupation	Equal variances assumed	3.366	0.067	0.873	421	0.383	0.163	0.187	-0.205	0.533
	Equal variances not assumed			0.914	140.014	0.362	0.163	0.179	-0.19	0.518
Income	Equal variances assumed	0.667	0.414	1.15	421	0.248	0.308	0.266	-0.215	0.833
	Equal variances not assumed			1.17	134.668	0.241	0.308	0.262	-0.21	0.827

Above analysis shows that demographic factors like age, education, occupation and monthly income are not impacting online shopping. But gender, Internet usage time, purpose of internet usage, Internet usage daily, do have an influence on online shopping. In the first case, significance level is more than 0.05 and in the second case, it is less than 0.05.

Effectiveness. Factors were identified using the Eigen value criteria that suggests extracting factors with Eigen value greater than 1.0 Principal Component Analysis and Varimax Rotation were considered for obtaining a component matrix. For confirming the adequacy and sphericity of the data set, Kaiser-Meyer-Olkin(KMO) and Bartlett's Test values were also obtained.

V. EXPLORING THE FACTORS AFFECTING WEB SPACE ADVERTISEMENT EFFECTIVENESS

Results: Factor analysis was conducted in order to identify the factors that affect affecting Webspace Advertisement

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.911
Approx. Chi-Square	8102.278
Bartlett's Test of Sphericity	
df	435
Sig.	.000

KMO score is 0.911. It is above the recommended value of 0.5. Further Bartlett's Test of Sphericity exhibits significance value of less than 0.05 (.000). Thereby ensuring the appropriateness of factor analysis.

Communalities

	Initial	Extraction
VAR00001	1.000	.759
VAR00002	1.000	.614
VAR00003	1.000	.675
VAR00004	1.000	.719
VAR00005	1.000	.646
VAR00006	1.000	.686
VAR00007	1.000	.710
VAR00008	1.000	.722
VAR00009	1.000	.823
VAR00010	1.000	.758
VAR00011	1.000	.604
VAR00012	1.000	.749
VAR00013	1.000	.537
VAR00014	1.000	.620
VAR00016	1.000	.573
VAR00017	1.000	.575
VAR00018	1.000	.756
VAR00019	1.000	.732
VAR00020	1.000	.597
VAR00021	1.000	.712
VAR00022	1.000	.758
VAR00023	1.000	.702
VAR00024	1.000	.624
VAR00025	1.000	.589
VAR00026	1.000	.632
VAR00027	1.000	.669
VAR00028	1.000	.494
VAR00029	1.000	.692
VAR00030	1.000	.842
VAR00031	1.000	.837

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Tot al	% of Variance	Cumulative %	Tot al	% of Variance	Cumulative %	Tot al	% of Variance	Cumulative %
	1	11.07	36.92	36.92	11.07	36.92	36.92	6.22	20.73
2	2.97	9.90	46.82	2.97	9.90	46.82	3.23	10.79	31.52
3	2.34	7.81	54.63	2.34	7.81	54.63	2.93	9.78	41.31
4	1.71	5.72	60.35	1.71	5.72	60.35	2.74	9.14	50.46
5	1.24	4.15	64.51	1.24	4.15	64.51	2.72	9.06	59.52
6	1.05	3.51	68.02	1.05	3.51	68.02	2.54	8.49	68.02
7	.92	3.07	71.09						
8	.87	2.90	73.99						
9	.71	2.38	76.38						
10	.67	2.24	78.63						
11	.60	2.00	80.63						
12	.51	1.72	82.36						
13	.51	1.71	84.07						
14	.45	1.52	85.59						
15	.42	1.42	87.01						
16	.39	1.32	88.34						
17	.38	1.28	89.63						

Extraction Method: Principal Component Analysis.

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18	.35	1.18	90.8						
			1						
19	.32	1.09	91.9						
			0						
20	.29	.98	92.8						
			8						
21	.28	.93	93.8						
			1						
22	.25	.86	94.6						
			8						
23	.25	.84	95.5						
			2						
24	.25	.83	96.3						
			6						
25	.22	.76	97.1						
			2						

26	.21	.70	97.8						
			3						
27	.20	.68	98.5						
			1						
28	.17	.58	99.0						
			9						
29	.14	.47	99.5						
			6						
30	.13	.43	100.						
			00						

Extraction Method: Principal Component Analysis.
Total variance explained is 68.023 % with emerged 6 factors. This means that there are 31.977 % of hidden factors, which need to be further explored to study factors affecting online advertisement effectiveness.

Component Transformation Matrix

Component	1	2	3	4	5	6
1	.675	.360	.106	.367	.385	.348
2	.095	-.360	.910	.111	-.078	-.119
3	-.609	.605	.358	-.061	.332	.144
4	.395	.478	.143	-.588	-.214	-.450
5	.080	-.223	.080	-.662	.040	.706
6	-.038	.309	.073	.255	-.830	.379

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix^a

	Component	
VAR001	Online advertisements are good source of product/service information	.797
VAR006	It is a very convenient source of information about the product/service	.792
VAR003	It provide timely information about the product/service	.787
VAR004	It is a good sources of up-to date information	.785
VAR005	Online Advt. makes product information immediately accessible	.763
VAR002	It provide relevant information about the product/service	.723
VAR026	Online advt. has become a very important part in creating awareness in consumers	.698
VAR027	Online advt. plays a major role in forming the consumer attitude	.565
VAR025	It provides valuable information, which I am looking for	.556
VAR024	Online advt. are very useful for taking purchase decisions	.536

VAR009	Online Adv. are enjoyable in nature	.836
VAR008	It is a very pleasing experience to watch online advertisement	.785
VAR010	Online Adv. are exciting in nature	.781
VAR007	Online advt. are of entertaining in nature	.763
VAR012	Online Adv. disturbs the internet usage	.850
VAR011	Online Advertisements are irritates the user	.763
VAR014	Due to Online Adv. I lost interest in surfing internet	.751
VAR013	Online Adv. is a time waster	.693
VAR016	Online advt. are trustworthy	.655
VAR030	Online advt. encourages me for impulsive buying	.846
VAR029	The offers /gifts in online advertisement encourages me to change my brand	.841
VAR028	The offers /gifts in online advertisement encourages me to change my product/service choice	.715
VAR022	I can extract the customized information from the online advertisements	.730
VAR021	It provides me a good communication experience	.727
VAR023	It gives me valid information to build up my positive/negative view about the product/service	.657
VAR020	Online advt. has high degree of user involvement	.633
VAR018	I think the information provided in Online advertisements are reliable	.809
VAR019	Online advertisement facilitates two way communication	.753
VAR017	I don't have any issues with the credibility of online advt.	.619

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

In total 30 items were considered for study and the items were converged into 6 factors. Researcher have the autonomy to give names to the variables looking to the way the questions have been asked. Below table exhibits the same.

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Factor No.	No. of Items	Factor Name
FACTOR 1	10	INFORMATIVE
FACTOR 2	4	ENTERTAINING
FACTOR 3	5	INCONVENIENCE
FACTOR 4	4	BENEFITS
FACTOR 5	3	INFLUENCING
FACTOR 6	3	CREDIBILITY



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VI CONCLUSION:

Company's opting for digital media, for Branding and Brand visibility need to focus on the above 6 parameters while planning their promotional campaign. Online advertisement is an effective media of advertising due to its benefits it offers. But in order to get the expected outcome companies need to plan it thoroughly.

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