

Role of E-advertising in E-commerce Business in India

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Abstract

Today, in this digital world everything is turned into digitized form. From a little thing to big thing, everything is done through digital technology. Now, there is no need to go outside, if we have to purchase and sell anything and any other transactions. Today, everything is online. People do shopping by sitting at home. Due to the digitalization, the E-commerce business in India has seen exponential growth over the last decade. This growth is due to many contributory factors, including digital technology, rapid adoption of technology by Indian consumers, large increases in the number of internet users, new enabling technologies, innovative business models and alternative payment options offered by E-commerce companies. Moreover, the high growth in E-commerce continues unabated, with the sector expecting to witness a steep increase in revenues in the coming years. This paper is to know the impact of e-advertising on e-commerce. Secondary data have been collected from the period 2012 to 2017 to achieve the objective. By applying regression technique and with regression model it is found that e-advertising has a significant impact on e-commerce.

Keywords:E-Commerce, GMV, B2C, GDP

Introduction

Apart from the traditional methods used by companies in order to establish a strong customer base, a new technique has been increasingly developing in the last years: electronic advertisement. This new method of advertising has obtained a broader share of the market, while its effectiveness is rapidly increasing, even in physical sales. As a result of this new trend, an effort has been observed to bill this new type of advertising, as well as an increasing effort to improve it. With the Internet as an open network environment, e-Commerce refers to a variety of business activities in the wide range of worldwide commercial trade, based on browser/server

application mode. In e-Commerce, buyers and sellers do not meet each other but realize the consumers shopping online, merchants online, payment online and a variety of business activities, trading activities, financial activities and activities related to integrate a new e-Commerce business services model, which use the information technology and network communication technology for commercial activities. The E-commerce industry was worth Rs. 351 (5.4 billion US \$) billion in 2012 grew at a CAGR of 37% to touch Rs. 1257 billion in 2015, and was estimated to become a Rs. 2,110 billion (31 billion US \$) industry by 2017.

Review of Literature

Kalita, B. (2016) attempted a study on impact of e-commerce on Indian economy. Secondary data had been taken to complete the study. In various reports she found that market of e-commerce was increased from \$4.4 billion in 2010 to \$ 13.6 billion in 2014. It was found in the last that e-commerce industry is emerging as an important tool for Indian economy. Increasing internet penetration in e-commerce had an attractive option for the retailers to expand their selves. So, to promote this industry investment should be made in supporting infrastructure and innovative things.

Liu, S. (2013) executed an empirical study on e-commerce's effects on economic growth. By using data stationary test and co-integration test it was found that GDP was positively correlated with all other variables. Among these explanatory variables, the coefficient of the scale of online advertising was the highest, indicating that in recent years, the development of e-commerce had accelerated rapid expansion of online advertising investment.

Harfoushi, O., Faris, H., et al. (2013) made a study to know the impact of internet advertisement and its features on e-commerce retail sales and found that search advertisement has strong positive relationship and it generates positive influence for the E-commerce sales as compared to the classified advertisement and display advertisement. Firms and marketers which are investing in online advertisement will find these results useful as they can get better sales and can use these features of online advertisement in order to maximize the sales of their products and services.

Objectives of the Study

- To study the trend pattern of size of GDP, E-Advertising and E-Commerce industry from the period 2012 to 2017.
- To know the impact of E-Advertising on E-Commerce.

Research Methodology

- **Period of Study:** To achieve the objectives, the data for the period 2012 to 2017 have been taken.
- **Analysis Method:** The collected data are analyzed with the help of Linear Regression.
 - **Sources of Information:** This study is based on Secondary data, the data are collected from various sources: Handbook of Statistics on the Indian Economy
 - National Report on E-Commerce development in India
 - Publications
 - Journals
 - Internet

Analysis and Interpretation

1. E-commerce size in India

The E-commerce business is expected to form the largest part of Indian economy with a value of approximately USD 100 billion by 2020. Evolution of technology led innovations such as digital payments, hyper-local logistics, mass customer engagements and digital advertisements have enabled the E-commerce industry to grow speedily.

Table: 1 Size of GDP, Digital Advertising and E-Commerce Industry

<i>YEAR</i>	<i>GDP (in Billion)</i>	<i>Digital Advertising (in Billion)</i>	<i>E-Commerce (in Billion)</i>
2012	1822.99	15.4	351
2013	1828.99	21.7	473
2014	1863.21	30.1	533
2015	2042.44	43.5	815
2016	2095.4	60.1	1257
2017	2263.52	76.9	2110

Source:National Report on E-Commerce Development in India

2. Regression Analysis

- Regression Analysis of Size of E-Commerce Industry and E- Advertising.
- The impact of E-Advertising on E-Commerce over the financial years from 2012 to 2017.
- Independent variable: Size of E-Advertising

Dependent variable: Size of E-Commerce

Table: 2 Descriptive Statistics

	Mean	Std. Deviation	N
Size of E-commerce	923.17	665.428	6
Digital Advertising	41.2833	23.68986	6

Source: Researcher’s Calculation

Table: 3 Pearson Correlations Coefficients

		Size of E-commerce	Revenue from Digital Advertising
Pearson Correlation	Size of e-commerce	1.000	0.968
	Digital Advertising	0.968	1.000
Sig. (1-tailed)	Size of e-commerce	.	0.001
	Digital Advertising	0.001	.

Source: Researcher’s Calculation

Table: 4 Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.968 ^a	0.937	0.921	186.542	0.937	59.624	1	4	0.002	1.398

a. Predictors: (Constant), Revenue from Digital Advertising

b. Dependent Variable: Size of e-commerce

Source: Researcher’s Calculation

Table 3 & 4 indicates the strength of relationship between the model and the dependent variable i.e. E-Commerce. Table 3 shows the correlation between the dependent variable (E-Commerce) and Independent Variable (E-Advertising). Value of R= 0.968 which indicates high degree of correlation between predictor (**E-Advertising**) and outcome (E-Commerce). In the model summary (Table: 4) value of R² tells about how much variations in E-Commerce are due to variations in**E-Advertising**. Value of R² = .937 shown in table 4 indicates that 93.1% variations in E-Commerce are due to variations in**E-Advertising**.

Table: 5 ANOVA^a

Model		<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
1	Regression	2074781.335	1	2074781.335	59.624	0.002 ^b
	Residual	139191.499	4	34797.875		
	Total	2213972.833	5			

a. Dependent Variable: Size of e-commerce

b. Predictors: (Constant), Digital Advertising

Source: Researcher’s Calculation

Table 5 presents the ANOVA analysis in which value of F= 59.624 which are significant at 5% level of significant as p value is 0.002 i.e. (p< 0.05).

Table:6 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-199.403	164.118		-1.215	0.291
Digital Advertising	27.192	3.522	0.968	7.722	0.002

a. Dependent Variable: Size of e-commerce

Source: Researcher's Calculation

Table 6 of coefficients executes the estimates of b-values (Unstandardized coefficients) that explicate the individual contribution of independent variable to the model. The negative value shows the negative relationship between the predictor and outcome variable and vice-versa.

When we replace the B values in equation we find the model as:

$$\begin{aligned}
 GDP &= b_0 + b_1 (\text{E-Advertising}) \\
 &= -199.403 + 27.192 (\text{E-Advertising})
 \end{aligned}$$

The value of $b_1 = 27.192$ indicates that as size of e-advertising increases by one unit, e-commerce increases by 27.192 units. Therefore, every additional unit of e-advertising is associated with an extra 27.192 unit's increment in e-commerce.

The standardized beta values in the table 6 indicate the volume of change in standard deviation outcome due to one standard deviation change in the predictor. This value indicates that as size of e-advertising increases by one standard deviation (23.689), e-commerce increases by 0.968 standard deviation. This is true only if the effects of other factors held constant.

Testing of Hypothesis:

H01: There is no significant impact of E-Advertising on E-Commerce.

The P-value related to e-commerce is less than 0.05. So, Null Hypothesis is rejected and concluded that there is significant impact of e-advertising on e-commerce.

Conclusion

With the help of regression analysis process it is found that the association between e-advertising and e-commerce becomes increasingly important. The E-commerce industry was worth Rs. 351 (5.4 billion US \$) billion in 2011 grew at a CAGR of 37% to touch Rs. 1257 billion in 2015, and

was estimated to become a Rs. 2,110 billion (31 billion US \$) industry by 2016. It is concluded that there is significant impact of e-advertising on e-commerce.

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