Effectiveness of Digital Marketing Initiatives in Improving the Performance of Banks with Special Reference to HDFC Bank

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Abstract: Digital marketing is an umbrella term for all online marketing efforts by an organization. Businesses use Google search option, own and others websites, emails and various social media platforms to connect with consumers. This study aims to identify the impact of digital marketing effectiveness on sales performance, take insights from customer responses, identify gaps and give recommendations, which will boost sales productivity. Sales performance or productivity increase through retaining existing customers as well as acquiring new ones. In this study retention, approach is considered as retaining new customers is less costly and less time consuming than acquiring new ones. The major issue that is focused on this study is sales performance of the bank. The mode of increasing the sales is via digital marketing. This problem has effects on current practices and business. Low income results in low profit, which in turn means dividend paid to shareholders is less. This also means retained earnings are low which in turn implies that capital available for investment in new businesses and reinvestment in existing businesses and less. Inefficient use of digital marketing potential could mean lost sales. In this digital era, customers as well as potential customers may switch to competitors if they are unsatisfied with digital marketing of the bank. However, out of the two factors identified, only website and emails effectiveness have significant impact on sales effectiveness.

Keywords: Digital Marketing, sales, HDFC Bank, Social Networking Websites, Email Marketing, Content Marketing.

I. INTRODUCTION

In today's competitive business environment, every institutions/organizations try to reach their customers in the best possible way and this requires these firms to develop strategies that will create customer satisfaction, value and loyalty. The banking industry in India has witnessed drastic changes in the recent past and most significant change has been the adoption of information technology in their day today operations due to the customers increasing needs and demands that have forced them to limit their physical visits to the branches of bank. Bank and credit union consumers are no different. Their journey is complex and usually includes multiple touchpoints.

Due to abundant free information available over internet, consumers do extensive online research before availing bank services. Also, bank customers prefer online transactions due to convenience involved. That means banks should have strong online presence, customer service representatives should be available online to provide after sales services and sale representatives should leverage digital channels for cross selling and up selling.

For website, parameters such as reliability, simplicity and visual appeal of website are measured; for emails, their usefulness is evaluated; for Facebook page, its simplicity and visual appeal is measured and for twitter handle, its responsiveness to customer queries is measured.

II. LITERATURE REVIEW

Technological innovations lead to transition from traditional marketing to digital marketing. (Bhattacharya et.al. 2000) Balasubramanya S (2002) has studied on automation of banking sector which has started with banking reforms in eighties which is followed by Narsimhan Committee. Traditional Marketing functions are enhanced by using internet to extend the information technology. (Urban, 2004) Rajshekhara K. S. (2004) has analyzed the impact of IT in banking has experienced many changes with the passage of time. Digital marketing means integrated communication made with customers using digital technologies. (Smith, 2007)

III. STATEMENT OF THE PROBLEM

The purpose of the given research is to analyze effectiveness of digital marketing initiatives in improving sales, determine suitable methods for the bank to represent itself online and to provide suggestions on digital marketing strategy based on actual situation, theoretical and practical research results. From literature review, it can be revealed that digital marketing initiatives affect the sales and sales effectiveness. If digital marketing implementation is improved, improvement in sales as well as sale productivity can be witnessed. This study aims to evaluate this causal relationship for HDFC Bank Limited. In addition, factors of digital marketing are identified and their individual impact on sales effectiveness is evaluated. Here, digital marketing effectiveness is independent variable and sales effectiveness is dependent variable. In digital marketing, three options are considered, based on literature review, Website, Emails and Social Media Platforms (Facebook and Twitter).

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IV. OBJECTIVES OF THE STUDY

1. To analysis the effect of digital marketing on the performance of bank.
2. To findout the factors affecting the performance of bank through digital marketing.

V. METHODOLOGY

The general methodology adopted for the study is Survey based. Besides, descriptive cross sectional research design is used. Target population in a research includes all those people to which researchers want to generalize the findings. Here the target population is customers of HDFC bank limited. Sampling technique used is Convenience sampling. It is a non-probability sampling techniques in which group of individuals are selected, because of their proximity and closeness to a researcher. Total 110 responses are received out of which 100 are analyzed because 10 statements are discarded because of missing fields. In this study, tool used for data collection is Structured Questionnaire. Validity test is done to ensure that questionnaire actually measures what it is intended for. Data collected is coded then processed, cleaned and tabulation done. In this study, data collected is analyzed to answer research questions by using both quantitative and qualitative data analysis techniques. Analysis is done using SPSS software package v.23. The results are presented using tables and charts. Talking about sales effectiveness, frequency of online banking and loyalty are evaluated. This causal relationship is evaluated using Structural Equation Modeling. In this, the value and significance of regression coefficient indicates the impact of independent variable on dependent variable.

VI. RESULTS

Internal consistency reliability test for digital marketing effectiveness variable

Value of Cronbach's alpha is 0.922 which is greater than 0.700. Hence internal consistency reliability of DME variable is good. From item total statistics table it can be concluded that reliability cannot be improved by deleting any statement.

Internal consistency reliability test for sales effectiveness variable

Value of Cronbach's alpha is 0.837 which is greater than 0.700. Hence internal consistency reliability of SE variable is good. From item total statistics table it can be concluded that reliability can be improved by deleting statements 13 and 17.

Normality test for digital marketing effectiveness variable

In descriptive analysis, it can be seen that skewness is -0.462 and kurtosis is -0.271 respectively. Both are within acceptable range hence data is normally distributed. Normality tests used are 1 sample KS (Kolmogorov-Smirnov) and Shapiro Wilk. Sig value for 1 sample KS is 0.132 and for Shapiro Wilk is 0.064. Both are higher than the level of significance 0.05. Hence, null hypothesis i.e. variable is normal is not rejected. Histogram and Normal Q-Q Plot further verify this result. From Box plot it can be concluded that there are no outliers for digital marketing effectiveness variable.

Normality test for sales effectiveness variable

In descriptive analysis, we can see that skewness is -0.684 and kurtosis is -0.081 respectively. Both are within acceptable range hence data is normally distributed. Normality tests used are 1 sample KS (Kolmogorov-Smirnov) and Shapiro Wilk. Sig value for 1 sample KS is 0.000 and for Shapiro Wilk is 0.001. Both are less than level of significance 0.05. Hence, null hypothesis i.e. variable is normal is rejected. From Box plot it can be concluded that respondent number 79 is an outlier.

From anova table, it can be said that which variable was given how much weightage to determine to which cluster respondents should belong. F statistic value for all variables is high and is significant which means all variables have significant impact in determining clusters.

Table-I: ANOVA table for cluster analysis

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
VAR00001	32.838	1	.708	98	46.403	.000
VAR00002	45.107	1	.568	98	79.442	.000
VAR00003	23.130	1	.663	98	34.884	.000
VAR00004	30.608	1	.603	98	50.754	.000
VAR00005	24.290	1	.507	98	47.888	.000
VAR00006	33.935	1	.680	98	49.916	.000
VAR00007	57.896	1	.770	98	75.156	.000
VAR00008	35.050	1	.766	98	45.762	.000
VAR00009	53.406	1	.549	98	97.223	.000
VAR00010	42.619	1	.629	98	67.779	.000
VAR00011	58.142	1	.639	98	91.010	.000
Ward Method	3.831	1	.105	98	36.524	.000

Curve Fit is used to evaluate relationship between two variables. Models used are Linear, Log, Inverse, Quadratic, Cubic, Compound, Power, S, Growth and Exponential.

Table-II: Curve estimation

MODELS	R^2	F
LINEAR	0.518	105.191
LOG	0.510	102.187
INVERSE	0.480	90.313
QUADRATIC	0.518	52.070
CUBIC	0.521	34.873
COMPOUND	0.488	93.333
POWER	0.502	98.960
S	0.493	95.431
GROWTH	0.488	93.333
EXPONENTIAL	0.488	93.333

From table we can conclude that R^2 value of linear model is 0.518 which means 51.8 % of variability in sales effectiveness can be accounted for digital marketing effectiveness. F value of linear model is 105.191 which is largest among all models. So it can be concluded that Linear model is best fit for the dependent (SE) and independent (DME) variable.

Also, actual regression line (linear model) is-

$$y = 0.405x + 2.233$$

Linear regression

Pearson Correlation indicates the strength of relationship between dependent variable (SE) and independent variable (DME). Correlation is 0.720 which is statistically significant at 0% significance level.

Correlation (R) between DME and SE is 0.720 which is statistically significant at 0% significance level.

Durbin-Watson should be between 1 and 3, 2 being ideal value. Value 1.813 which means there is not autocorrelation.

Kaiser-Meyer-Olkin (KMO) Test is used to measure sampling adequacy of data collected. Combined KMO should be greater than 0.5. KMO value for digital marketing effectiveness is 0.906 which means sample is adequate for factor analysis and is normally distributed as well.

Bartlett's Test of Sphericity is used to test the null hypothesis that item to item correlation matrix is an identity matrix.

It is tested through Chi-Square for DME. Chi-Square statistic is significant at 0% level of significance. Hence, null hypothesis is rejected. Data is thus suitable for factor analysis.

Table-III: Factor Table for DME

Factor Name	Eigen Value	Variance Explained	Items Converged	Factor Loading
	6.222	56.563%	2(How easy was it to find what you were looking for in the website?)	0.826
			1(Overall how well does HDFC Bank's website meet your needs?)	0.804
			5(How easy is it to understand information on the website?)	0.774
			6(How much do you trust the information on the website?)	0.702
			4(How visually appealing is the website?)	0.696
			3(Did it take you more or less time than what you expected to find what you were looking for in the website?)	0.673
			7(Do you find emails and messages received from bank helpful?)	0.666
	1.164	10.580%	10(To what extent is the information on the Facebook page brief?)	0.867
			9(How easy is it to understand information on Facebook page of the bank?)	0.850
			8(Do you find bank's twitter handle responsive to your queries?)	0.740
			11(How visually appealing is the Facebook page of the bank?)	0.737

All factors loading are greater than 0.5 which is threshold for PCA method.

Kaiser-Meyer-Olkin (KMO) Test is used to measure sampling adequacy of data collected. Combined KMO should be greater than 0.5. KMO value for digital marketing effectiveness is 0.768 which means sample is adequate for factor analysis and is normally distributed as well.

Bartlett's Test of Sphericity is used to test the null hypothesis that item to item correlation matrix is an identity matrix. In other words, each variable correlates perfectly with itself but has no correlation with other variables. It is tested through Chi-Square for DME. Chi-Square statistic is significant at 0% level of significance. Hence, null hypothesis is rejected. Data is thus suitable for factor analysis.

Principle Component Factor Analysis (PCA) along with **Varimax Rotation** is used to extract underlying factors in questionnaire.

In **Total Variance Explained Table,** Cumulative percentage is greater than 50%. In other words, 62.347% of variance in SE variable is explained by this single factor.

Table-IV: Factor table for SE

Factor Name	Eigen Value	Variance Explained	Items Converged	Factor Loading
Sales Effectiveness	3.117	62.347%	14(How likely is it that you will continue banking with HDFC Bank?)	0.893
			15(How likely is it that you will continue fulfilling all your banking requirements with HDFC Bank?)	0.885
			16(Do you recommend HDFC Bank to your friends and colleagues?)	0.856
			17(Do you promote HDFC Bank through social media platforms?)	0.682
			13(What is your frequency of online banking?)	0.582

Confirmatory factor analysis: Chi-square value should be insignificant at 0.05 significance level of threshold. Chi-square value is 17.817 insignificant at 0.535 which indicates good fit of the model. The value of normed Chi-square goodness of fit should be smaller than 2. The value of χ^2/df for the CFA model is 0.938 indicating high fit for the model.

Table-V: CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	17	17.817	19	.535	.938
Saturated model	36	.000	0		
Independence model	8	429.337	28	.000	15.333

Goodness of fit (GFI) value is higher than 0.9, which indicates a good fit for the model. Parsimony Goodness of Fit is 0.504 which is greater than threshold 0.5.

Table-VI: GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.034	.955	.915	.504
Saturated model	.000	1.000		
Independence model	.472	.342	.154	.266

The value of Tucker Lewis Index (TLI) should be greater than 0.9 for good fit for the model. The Normed Fit Index (NFI) value for digital marketing effectiveness model is 0.959 and TLI value is 1.004, both indicating good fit of the model to the data. The value of Comparative Fit Index (CFI) for good fit should be larger than 0.9.

The CFI value for digital marketing effectiveness model is 1.000, indicating good fit of the model.

**Table-VII: Baseline comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.959	.939	1.003	1.004	1.000
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA is 0.000. Root Mean Square Error of Approximation (RMSEA) value should range between 0 to 0.05 and in any case it should not be greater than 0.08.The computed RMSEA for digital marketing effectiveness is 0.000 indicating good fit for the model .
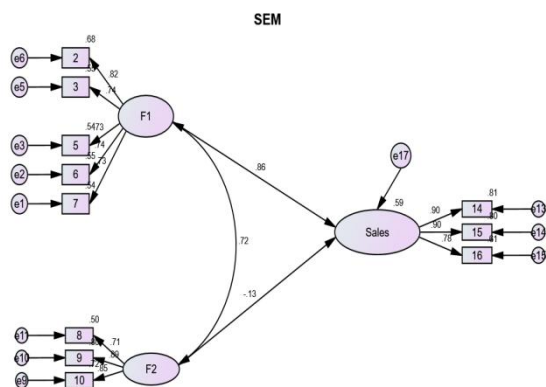
Table-VIII: RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.000	.000	.082	.773
Independence model	.381	.349	.413	.000

The value of parsimony adjusted measures should be greater than 0.5 for good fit og CFA model. Value of PRATIO, PNFI and PCFI is 0.679, 0.650 and 0.679 respectively.
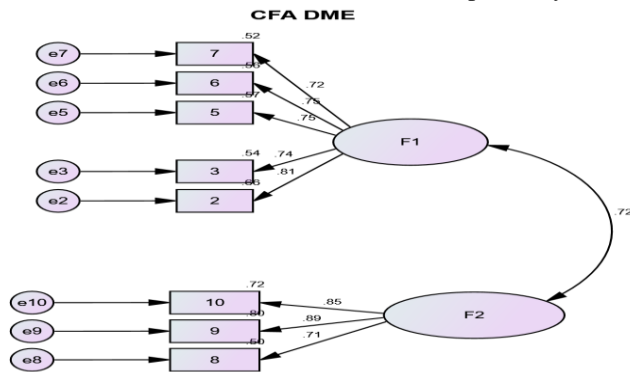
Fig. 1. CFA

Structural equation modeling

Fig.2. SEM

Calculation of Composite Reliability
Composite Reliability for factor 1 = 0.8688
Composite Reliability for factor 2 = 0.8604
Calculation of Average Variance Extracted
AVE for factor 1 = 0.5703
AVE for factor 2 = 0.6747
Criteria for Convergent Validity
- AVE > 0.5
- Factor loadings > 0.5
- Composite reliability > 0.7

As all three above mentioned criteria are satisfied for both the factors, there both factors have convergent validity.

VII. FINDINGS AND CONCLUSION

From this study, it can be concluded that if bank wants to satisfy its customers and improve sales it has to make its website more reliable and simpler to explore. This can be done by using conversion rate, optimization strategy. Using CRO, the website traffic generated using search engine optimization can be converted to leads. In addition, links to bank is social media accounts should be prominent. This will increase their visibility. Besides the emails sent to prospects should have quality, relevant and interesting content. They should be customized according to needs and buying propensities of clients. This can be done by using content marketing with email marketing. In addition, email drip campaigns can be used to give people the right information at the right time.

VII. IMPLICATION OF THE STUDY

This study will help the bank in following ways:
- Will benefit staff and management of l banks.
- Will offer an understanding on the effectiveness of digital marketing on the performance of the banks.

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AUTHOR PROFILE

Chetanya Singh, presently working as Management Associate in ICICI Prudential Life Insurance, Mumbai. Completed PGDM (Full Time 2017-2019) from Institute of Management Technology (IMT), Ghaziabad with Marketing as major specialization with an aggregate of 77%. Prior to that completed Bachelor of Engineering (B.E.) in Computer Science from Rajiv Gandhi Proudyogiki Vishvidyalaya, Bhopal. Have 3 Research Papers under publication in Marketing domain. Also done a project on Digital Marketing Initiates for Improving Sales. Was a member of Official Finance Committee of IMT Ghaziabad. Holds 2 years experience as a student volunteer in Social and Development Research and Action Group (SADRAG) and Uday Bhav Society for Women Empowerment organization.