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## A STUDY ON IMPACT OF IOT IN MARKETING 4.0 : IN PERSPECTIVE OF DIGITALIZATION AND E-COMMERCE

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### ABSTRACT

Marketing has become part of everyone's daily life either in something or the other directly or indirectly we are associated with marketing. Thus, transition in marketing becomes necessary as there is a faster digital transformation. So, taking the marketing to the next level as marketing 4.0 arises. Most of the marketing activities are digitalized in recent times and are depended on E-commerce. E-commerce Involves Internet of Things, which plays a major role in Purchasing decision. Due to many changes in Marketing with the growth of IOT it becomes necessary to do a study on Impact of IOT in Marketing 4.0 from the side of Digitalization and E-commerce. This study also aims to analyse the influence of E-Commerce in purchasing decision and to Examine the factors affecting Digitalization . In this Research Quantitative Method has been used and research data has been obtained through online Questionnaire consisting Likert Scale and Multiple-Choice Questions, which is shared on social media by applying Convenient Sampling Method. The obtained data was analysed with the result of the analysis we can able to understand the level of impact of IOT in Marketing 4.0

**Keywords-** Digital Marketing, E-Commerce, Internet of Things, Marketing 4.0

### I. INTRODUCTION

Marketing is about more than the data driven marketing context of the Internet of Things. IOT enables Marketers to create totally different experience in bridging the digital and physical world. The use of IOT in Marketing is really thinking outside the box and offering relevant services in the most valuable ways for the customers or in other words a holistic customer centric and integrated marketing opportunity. IOT are connected with internet, all collecting and sharing data. IOT changes the way people make purchases. It connects the consumer and is a great source of data for marketing. E-commerce platform fulfils the demands of consumer and satisfies them in all ways. Digitalization plays a powerful role in marketing in the future. So it becomes necessary to study about the Digital transformation in marketing.

## II. REVIEW ON LITERATURE

**Sultan Nezihe Turhan, 2022**, This Research Article is all about Internet of things and Big Data which have gained greater in recent years in the Technology and communication field in Marketing 4.0. This study discusses the Positive impact of IOT and big data analytics in Digital transformation of Organization. It sheds light on available opportunities and provides useful implication for Marketers.

**Kapila Fonseka, Adam Amril Jaharadak and Murali Raman,2022**, This paper aims to examine the impact of E-commerce adoption (EC) on business performance (BP)- the moderating role of using artificial intelligence, the author suggested the strategies with digitalised platforms to survive in the competitive market.

**Chiara Bartoli, Enrico Bonetti and Alberto Mattiacci,2021**, This paper analyses the Impact of digitalization in the Marketing of geographic indication (GI) Products. It describes the key concepts dominant in the discourse of informants concerning digitalization and its influence on the GI Market. The study suggest important practical implication that stress the need for increased digital technologies in all business areas.

**Aylin Caliskan, Yesim Deniz Ozkan Ozen and Yucel Ozturkoglu, 2020**, This Study focuses on developing the understanding of 7P's based on contemporary perspectives of industry 4.0. Further impacts of industry 4.0 on the marketing mix strategy were analysed. Result of this article indicated that product, process and physical evidence are the most affected marketing-mix factors by considering Industry 4.0.

**Huseyin Guven , 2020**, this study aims to narrate the acceleration needed for marketing 4.0 . E-commerce and Digital Marketing is a tool which is studied in detail. New approaches and trends in Modern Marketing are studied . This research was an awareness to marketing managers to adapt the transformation and to make use of media and techniques in Digital Marketing.

## III. OBJECTIVE OF THE STUDY

- To Analyse the Impact of Internet of things in Marketing 4.0.
- To Examine the influence of E-Commerce in Purchase Decision
- To Identify the factors affecting Digital Marketing.

## IV. RESEARCH METHODOLOGY

**Research Design**-This Study used Descriptive research design .

**Source of Data Collection** -Primary data were used for this study. Research data has been obtained through online Questionnaire consisting Likert Scale and Multiple-Choice Questions, which is shared on social media

**Sampling Method**- Convenient Sampling Method is used for this study

**Sample Size**- the sample size was 200 out of which 170 respondents favourably responded to the questionnaire.

**Sampling Technique** - The data were analysed using Frequency analysis, Chi Square Test and Independent T-Test Sampling Technique .

**Reliability Statistics**- Cronbach's Alpha value is .916.

## V. LIMITATIONS OF THE STUDY

- The sample size was restricted to only 200 respondents
- The study was done only within Chennai city.
- The data collected from the respondents might be subject to bias.

## VI.DATA ANALYSIS

TABLE 6.1: DEMOGRAPHIC PROFILE OF THE RESPONDENTS

➤ DEMOGRAPHIC PROFILE		FREQUENCY	PERCENTAGE	TOTAL
GENDER	Male	30	17.6	170
	Female	140	82.4	
AGE	Below 20 Years	88	51.8	170
	21-30 Years	78	45.9	
	31-40 Years	4	2.4	
EDUCATIONAL STATUS	UG Graduate	124	72.9	170
	PG Graduate	36	21.2	
	Others	10	5.8	
OCCUPATIONAL STATUS	Business-..	5	2.9	170
	Student	137	80.6	
	Home Maker	25	14.7	
	Others	3	1.8	

(Source- Computed Data)

Table 6.1, shows that the majority of the respondents are Female (82.4%), in the age group of below 20 years (51.8%), undergraduate (72.9%), most of the respondents are students (80.6%).

Table-6.2 Impact of IOT in Marketing 4.0 in perspective of Digitalization and Commerce

Impact of IOT in Marketing 4.0 in perspective of Digitalization and E-Commerce	FREQUENCY	PERCENTAGE	TOTAL	
Does Internet has Replaced the traditional Marketing	Yes	132	77.6	170
	No	38	22.4	
To what extent Internet of Things has widened the scope and benefits of Marketing	To Greater Extent	93	54.7	170
	To Some Extent	74	43.5	
	To Very Less Extent	3	1.8	
Does E-commerce have a long term beneficial influence in Marketing	Yes	153	90.0	170
	No	17	10.0	
Is that there is a positive Effect of Digitalization in Marketing	Yes	152	89.4	170
	No	18	10.6	
Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about	Positive	103	60.6	170
	Negative	3	1.8	
	Neutral	64	37.6	

(Source - Computed Data)

Table 6.2, shows that majority of 77.6 % of respondents says that internet has replaced the traditional marketing, 93% of the respondents says that Internet of Things has widened the scope and benefits of Marketing, 90.0% of the respondents agrees that E-commerce have a long term beneficial influence in Marketing, 89.4% of them says there is a positive Effect of Digitalization, 60.6% of the respondents feels that there is a positive impact created by Digitalization and E-commerce in the field of Marketing.

Table 6.3 : Chi-Square

## Association of Age and Impact of Digitalization and E-Commerce in Marketing 4.0

			Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about			Total
			Positive	Negative	Neutral	
4.Age	31-40 Years	Count	1	1	2	4
		% within Age	25.0%	25.0%	50.0%	100.0%
		% within Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about	1.0%	33.3%	3.1%	2.4%
		% of Total	0.6%	0.6%	1.2%	2.4%
	21-30 Years	Count	43	1	34	78
		% within Age	55.1%	1.3%	43.6%	100.0%
		% within Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about	41.7%	33.3%	53.1%	45.9%
		% of Total	25.3%	0.6%	20.0%	45.9%
	Below 20 Years	Count	59	1	28	88
		% within Age	67.0%	1.1%	31.8%	100.0%
		% within Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about	57.3%	33.3%	43.8%	51.8%
		% of Total	34.7%	0.6%	16.5%	51.8%
Total	Count	103	3	64	170	
	% within Age	60.6%	1.8%	37.6%	100.0%	
	% within Digitalization and E-Commerce have taken the Marketing to the next version, What do you feel it's impact is all about	100.0%	100.0%	100.0%	100.0%	
	% of Total	60.6%	1.8%	37.6%	100.0%	
<b>Chi Square Test</b>						
<b>Pearson Chi Square</b>		<b>Degrees of Freedom</b>		<b>Significance (2- Tailed)</b>		
<b>16.051<sup>a</sup></b>		<b>1</b>		<b>.003</b>		

(Source - Computed Data)

Table 6.3, reveals the Chi-square test on the summarized cross tabulation . The verification of association reveals that the Pearson Chi-Square value is 16.051<sup>a</sup> and the significant value is .003 which is less than the table value 0.005 at 1 degrees of freedom and these are statistically significant , Therefore it can be concluded that there is an association between age and Impact of Digitalization and E-Commerce in Marketing 4.0. This implies that the people in different age group are influenced more with Digitalization and E-commerce in the field of Marketing.

**Table 6.4 - Effects of Digitalization in Marketing 4.0**

<b>Independent T-Test</b>					
<b>Effects of Digitalization</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
Increases Competition	170	4.29	.727	77.025	.000
Increases Productivity	170	4.24	.675	81.864	.000
Instant Access of Information from one place	170	4.17	.800	68.006	.000
Encourage Innovation	170	4.15	.807	67.109	.000
Increases Internet Hacking and Crime	170	4.08	.850	62.555	.000
Data Security	170	3.81	.863	57.564	.000
Manipulation of Digital Data	170	4.01	.754	69.410	.000
Overloading of Content	170	4.03	.780	67.344	.000

(Source - Computed Data)

From the Table 6.4, it is found that the mean values of the respondents views on the Effects of Digitalization ranges from 3.81 to 4.29. The standard deviation of most of the variables are ranging from .727 to .863. The significant value reveals that there is an Positive effect of Digitalization in Marketing 4.0.

## VII. FINDINGS

From the study it is found that most of the respondents were female (82.4%), who are within the age group of below 20 years (51.8%) , who were Pursuing their UG (72.9%) , nearly 80.6% of the respondents were students. From this study it is analysed that the Internet has replaced the traditional marketing. It is Proved that IOT has widened the scope and benefits of Marketing. The research says that E-commerce have a long term beneficial influence in Marketing . From the analysis it is found that there is an association between age and Impact of Digitalization and E-Commerce in Marketing The analysis says there is an Positive effect of Digitalization. The study implies that there is an strong impact of IOT on Marketing Activities and which in turn increases the digital attachment .

## VIII. CONCLUSION

Based on the results it is proved that there is an significant positive impact on IOT in Marketing 4.0. This significant effect is an indication that the respondents experience high level of benefits with Digitalization and E-Commerce in Marketing. IOT plays a major role in modern marketing and takes the Marketing to next level in future. So it is concluded that this digital transformation influences marketers in developing the marketing activities and Consumers are influenced in their purchasing Decision .

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