A framework for integration of digital product presentations for enhancing market share in Indian MSME's

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Abstract:

With a tremendous growth in e-commerce, digital product presentation (DPP) has gained widespread popularity, due to the number of advantages offered such as display options, 3D views, video, and audio, etc. The present study aimed to assess the impact of DPP on consumer buying decisions and satisfaction, along with the challenges faced by MSMEs in using DPP. This study was conducted a survey of 124 consumers of different products that are marketed using DPP technology. Moreover, interviews were carried out with five MSMEs marketing representatives that use DPP for marketing of their products. The results indicated that digital product presentation have a significant impact on consumer buying decisions and satisfaction due to advantages such as enjoyable shopping experience, easy availability of product information and a simpler decision-making process.

Keywords: Digital product presentation (DPP), Micro, Small and Medium Enterprises (MSME's), e-commerce, artificial intelligence, consumer buying decisions, consumer satisfaction.

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Introduction

The present marketing environment has been complex and dynamic in nature, warranting innovative ways for marketers to advertise their products and reach the intended consumer. The rise of e-commerce has transformed consumers' shopping experience as consumers take to digital devices such as mobiles and computers to make their purchases. E-commerce sales are expected to surpass offline sales in the coming few years. This is due to the numerous benefits offered in digital presentation of products, such as picture quality, availability of product information, audio and video presentation, website design and navigation, and 3D views. DPP can be referred to as product presentation specific for e-commerce, consisting of product images, product descriptions, video and audio suited to different devices such as mobile and computers, thus adjusting the images to different sizes [1]. Considering the consumer perspective, this technique helps them to gauge the usability of product before actual purchase is made. In other words it helps them to analyze the product in real scenario [2]. Owing to its advantages the concept of digital product presentation has been welcomed with zeal across the different sectors and industries. DPP is expected to grow by 76% in coming five years and has been expected to cross the mark of 100 billion USD by year 2021 [3].Until recently, the limitation of digital technologies and the existence of prohibitive bandwidth cost, storage, and computing worked as the hindrance for the organizations in implementing digital twins. However, recent developments in the area and the availability of benefits like improved power, reduced cost, and productivity growth have led to increase in the usage of the combination of the information and operations technology [7].

Digital product presentation through the usage of virtual reality and augmented reality has helped the industries to introduce the consumer to new spectrum of shopping experience. It has enabled them to merge their perception along with virtual world so as to develop the product based on their individual specifications and also analyze how product works before making the purchase [4]. DPP helps companies digitally demonstrate their product, its quality,

design, and the wide range of functionalities. The customer can gain the real time experience since it enables them to see or feel the product [1]. Certain companies have been making use of the technology to develop working prototypes through which they can test new models and features. DPP helps making videos more realistic and provides 360 degree experience, thus letting marketers to solidify their presence [5]. The goal of companies using DPP is to deliver an enriched online shopping experience reducing perceived risk of the product, foster brand loyalty, increase sales and enhance market share [6].

Conceptual framework: The conceptual framework for this study can be demonstrated in the figure below.

-Enhance marketing practices and strategies
-Increase market share
-Enable collaborations
-Promote innovation
-Provides direction
-Help to know customer
-Gain online value proposition
-organization integrated

Importance

-Artificial intelligence
-Machine learning
-Robotic automation process
-Edge computing
-Virtual reality and augmented reality
-Cyber security
-Block chain
-Internet of Things

Mechanism

DPP

Affects

-Affects customer experience
-Affects cognitive responses
-Affects emotional responses
-Affects behavioral responses
-Affects sensory responses
-Added value proposition
-Enables dynamic and autonomous role
-Enables informed decision making

Challenges

-Technology cost transparency
-lack of awareness
-Inadequate financing
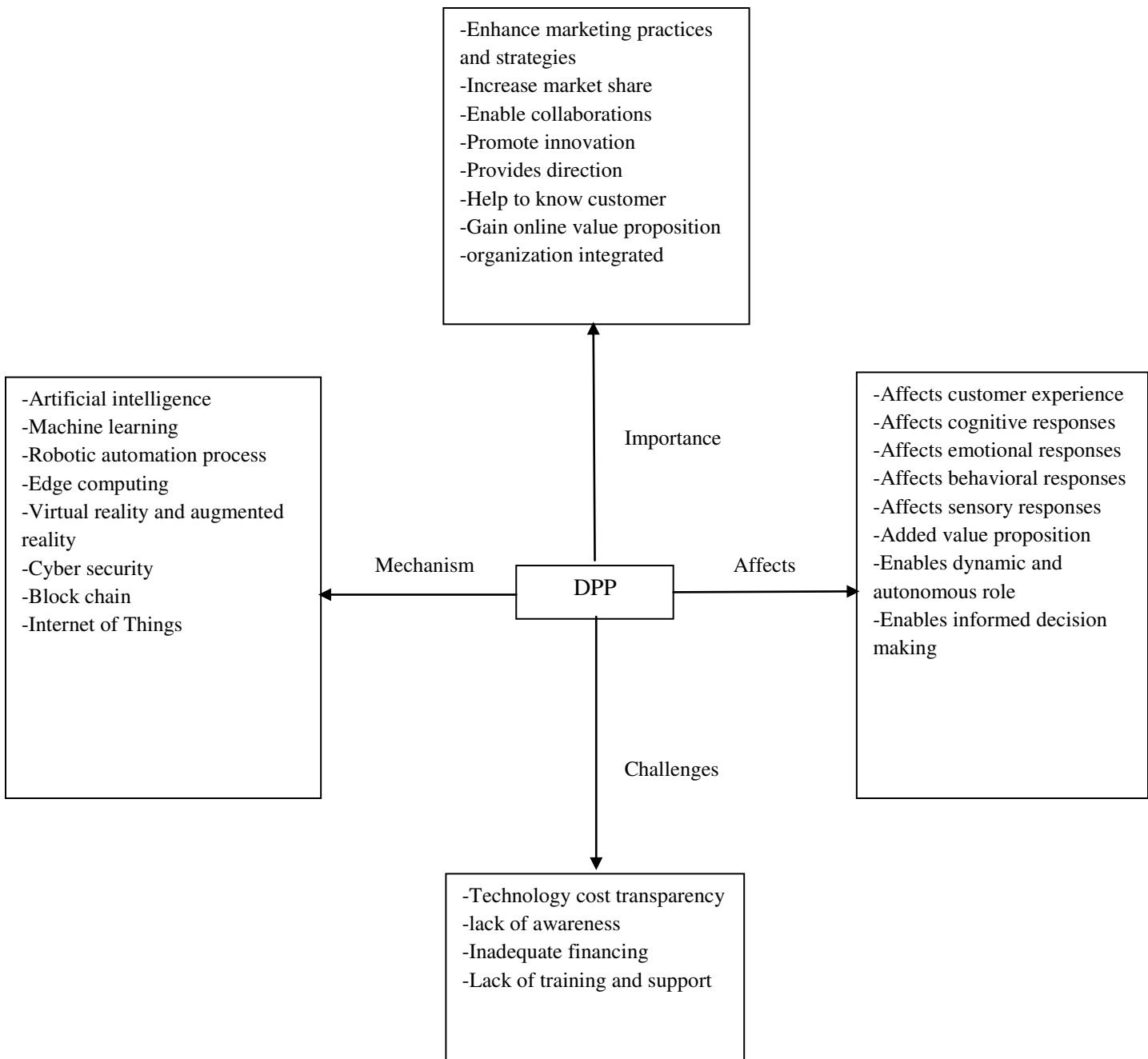-Lack of training and support

Figure.1: Conceptual framework

The figure above represents the different types of mechanism that are used within DPP which involves artificial intelligence, machine learning, roboticautomation process, edge computing, virtual reality, augmented reality, cyber security, block chain and internet of things. Next it shows how digital product presentation can affect the consumer decision. As shown, it affects consumer decision, their cognitive, emotional, behavioural, sensory responses, it adds value proposition, enables consumers to play dynamic and autonomous role in decision making and lastly enables them to take more informed decisions. It also represents certain advantages and challenges of using DPP. Benefits or advantages of DPP includes enhanced marketing strategies and practices, increased market share, enable collaboration, promote innovation, and provide directions. Some of the challenges of using or incorporating this technology in business includes cost transparency, lack of awareness, inadequate financing and lack of training and support.

Research methodology
For present study quantitative data was collected and data consisting of the survey method was collected from 124 consumers of different products to show how DPP affects their buying decision and satisfaction. Purposive sampling, which is a non-probability sampling method where the respondents are selected based on the judgement, was used. These respondents were approached using the snowball sampling method. The sample size was determined based on the theoretical considerations of the study and the available resources. It is important to select an appropriate sample size to ensure that it is representative of the target universe and is cost effective at the same. Initially, approached 150 consumers for the survey, from which only 124 valid response sheets were received. To data collection, questionnaire was designed and was administered online to the respondents using Google Forms. The questionnaire was structured and close-ended and consisted of questions pertaining to demographic profile of the respondents, their general background. Finally, they were asked to mark their preference on a Likert scale of 1 to 5 with 1 being strongly disagree and 5 representing strongly agree.

For this research employed appropriate analysis tools and software for answering the research questions. The tools for analysis used in this study included SPSS for survey. The analysis for survey comprised of frequency analysis, correlation, regression, and ANOVA while the interview conducted was analysed using thematic analysis. The quantitative data collected from the respondents was in raw form and required to be processed and analysed to draw conclusions and generalizations. The data was coded and fed into SPSS, statistical software package, to perform the descriptive and inferential analysis. The descriptive statistics aided in summarizing the basic information contained in the data, describing the general features of the population.

Data analysis
Most respondents were male 77.4%, with the highest number of them belonging to the age group of 18-25 years (37.9%), followed by 25-35 years (25.5%). Further, majority of respondents were full time employees (62.1%). Most of (97.6%) of the respondents were familiar with the concept of DPP, and 98.4% of them had already experienced it. When inquired about the advantages of DPP according to them, 27.4% said that it let them visualize the usability of product, 19.4% said that it let them to make informed decision, 18.5% agreed that it better demonstrate product its design, usage and functionality, 17.7% said that it provide complete information product and 2.4% agreed that it reduces perceived risk towards online shopping. When inquired about its disadvantages, 41.1% agreed that it is difficult for them to understand technological matters, 35.5% agreed that it requires a lot of mental efforts and for 19.4% respondents it was confusing.

a) The impact of DPP on consumer buying decisionand satisfaction

The impact of DPP on consumer decision and satisfaction has been analyzed using the correlation and regression analysis. The below table reveals the correlation results of the impact of different determinants/ variables of DPP on the consumer buying decisions and consumer satisfaction.

Consumer buying decision (A)			Consumer satisfaction (B)		
Variables	Pearson Coefficient	Significance	Variables	Pearson Coefficient	Significance
Dependent	1		Dependent	1	
A1	.884**	0	B1	.908**	0

A2	.878**	0	B2	.852**	0
A3	.738**	0	B3	.840**	0
A4	.718**	0	B4	.841**	0
A5	.716**	0	B5	.843**	0
A6	.837**	0	B6	.900**	0
A7	.814**	0	B7	.830**	0
A8	.789**	0	B8	.871**	0
A9	.834**	0	B9	.839**	0
A10	.827**	0	B10	.808**	0
A11	.831**	0	B11	.865**	0
			B12	.902**	0

**. Correlation is significant at the 0.01 level (2-tailed)

Table.1: Correlation between DPP, Consumer buying decision and Satisfaction.

As shown in the above table the value of significance for all the variables is less than the significance level of the study i.e. 0.000<0.05. Thus, there is a possibility of a significant linkage between DPP, consumer buying decision and satisfaction. Further, the Pearson Coefficient value of each variable is greater than the coefficient value required for having at least moderate linkage between the dependent and independent variable. Thus, the correlation results show that there is significant linkage between DPP on consumer buying decision and satisfaction. Further to determine the impact, below stated hypothesis was tested i.e.

H0:DPP does not have significant impact on consumer buying decision and consumer satisfaction.

The value of R2 and adjusted R2 is 0.865, 0.852 and 0.934, 0.927 which means that model stating the impact of DPP on consumer buying decision and satisfaction are represented appropriately. The value of adjusted R2 which is 0.852 and 0.934 shows that 85.2% and 93.4% of variation in consumer buying decision and satisfaction are represented by DPP. Further the F-value is 65.324 and 130.58 which are greater than the required value of 1 thus stating that with the presence of DPP as independent variable in model, the variation in consumer buying decision and satisfaction are represented more precisely.

b) Results of regression analysis is shown in the below table.

Variable names	CL	Coefficient	T-statistic	p-value	R^2	Adjusted R^2	F Ratio
Consumer buying decision (A)	Constant	-0.075	-0.511	0.61	0.865	0.852	65.324
Cognitive responses	A1	0.306	3.2	0.002			
Behavioral responses	A2	0.247	2.417	0.017			
Emotional responses	A3	0.356	1.382	0.17			
Sensory responses	A4	-0.012	-0.099	0.921			
Added value proposition	A5	-0.132	-0.455	0.65			
Dynamic and autonomous role	A6	0.161	2.153	0.033			
Decision making	A7	-0.036	-0.422	0.674			
clear and understandable image of product	A8	0.02	0.255	0.799			
Interact with product	A9	0.037	0.314	0.754			
Intention to purchase product	A10	0.13	1.364	0.175			
Information regarding performance of product	A11	-0.061	-0.534	0.595			
Consumer satisfaction (B)	Constant	-0.082	-0.796	0.427	0.934	0.927	130.58

Shopping productivity	B1	1.059	8.237	0			
Effectiveness in shopping	B2	-0.196	-1.799	0.075			
Shopping ability	B3	0.73	2.184	0.031			
Viewing the product virtually	B4	-1.031	-4.008	0			
Way to shopping	B5	0.177	0.712	0.478			
Shopping process	B6	-0.323	-1.562	0.121			
Visualize actual product	B7	-0.706	-5.06	0			
Information about product	B8	0.959	3.618	0			
Emotionally attached to product	B9	-0.296	-2.599	0.011			
Shopping experience	B10	-0.11	-1.8	0.075			
Easier to seek information	B11	0.434	6.517	0			
Trust information provided	B12	0.323	4.398	0			

Table.2: Regression analysis for hypothesis on Consumer buying decision and Satisfaction.

Further, P-value of A1, A2 and A6 and B1, B3, B4, B7, B8, B9, B11 and B12 is less than the significance level of the study i.e. less than 0.05, meaning that these variables indicate the impact of DPP on consumer buying decision and satisfaction. Thus, the null hypothesis that DPP does not have significant impact on consumer buying decision and satisfaction is rejected.

Discussion
It can be understood that DPP as a key form of digitized marketing processes has found widespread acceptance and application in businesses in recent years due to the numerous advantages it offers such as a wholesome shopping experience, better information sharing regarding the product, superior product display, and enhanced operational processes for companies. Secondary studies on the use of DPP in marketing revealed that it plays a crucial role in maximizing customer satisfaction with the product and simplifying their purchase decision making process. Although there is ample research on this impact in general context, evidence from India, particularly micro, small, and medium scale enterprises is lacking. This study aimed to bridge this gap in existing research.

To this end, the survey of consumers exposed to DPP used by different companies on the online medium revealed that it affects their buying decisions due to factors such as their cognitive emotional, behavioral and sensory responses, enables consumers to play dynamic and autonomous role, helping them in informed decision making, helping them in getting clear and understandable image of product and also by providing increased information regarding product. Moreover, DPP affects their satisfaction with a company by improving their shopping productivity, enhancing effectiveness, improving shopping ability, making their experience enjoyable, helped in visualizing product, by providing accurate information about product, letting them enjoy a superior shopping experience which is akin to their in-store experience.

On the other hand, the interviews of chosen MSMEs in India revealed that DPP can be used by marketers belonging to different industries to increase their market share. MSMEs have always been a major contributor towards Indian economy. In recent years, the MSME sector has acknowledged the need of digital marketing technologies such as DPP to increase their market share and to keep their position intact in face of intense market competition. However, certain challenges persist, such as their reluctance to implementing DPP properly in their business due to lack of required knowledge along with the understanding of appropriate marketing channels, lack of clarity regarding the financial benefits that they can gain, inadequate access and understanding of infrastructure pertaining to their marketing and sales channels, ineffectiveness in selling techniques related to internet, limited market research, lack of management in terms of long term vision, resistance by employees to face new learning curve, tools and strategies.

Conclusion

Because of benefits like as a delightful shopping experience, convenient access to product information, and a simpler decision-making process, digital product presentation has a considerable impact on consumer purchase decisions and satisfaction. It was discovered that there may be a strong correlation between DPP, consumer

purchasing decisions, and satisfaction. The introduction of DPP as an independent variable in the model also allows for a more precise representation of variation in customer purchasing decisions and satisfaction.

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