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Factors Influencing Online Customer Engagement:A Psychographic Study Of Amazon Customers

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ABSTRACT
This study investigates the components that affect online consumer engagement for Amazon, one of the best e-commerce sites worldwide. It's important to comprehend how Amazon interacts with its consumers given the expanding popularity of online purchasing. According to latest figures India has a 47% penetration rate with 627 million internet users. Amongst all Indian internet users with 20 million active users, Amazon accounts for around 3.2%. The dimension of this study is to focus on efficiency, and determining aspects of online consumer involvement for Amazon. Data were gathered via a survey from 400 individuals using a convenience sample approach. For the purpose to solidify the literature review and create a theoretical framework, the study used factor analysis and bibliometric modeling. The data were examined using SPSS yielding thorough insights. In the international market, online consumer involvement was first offered in 1999, and by 2001, researchers had started to quantify its importance. This facet of online customer engagement was available in India in 2019–2020 (COVID-19); the research measures, develop and understand the theoretical framework for Online Customer Engagement and study the factors influencing Customers of Amazon for Online Customer Engagement.

Keywords: Online Customer Engagement**,** Bibliometric, Factors Analysis, SPSS, Amazon

1. Introduction:

As the decade that came progressed, India experienced an increase in internet access and the creation of e-commerce platforms. With firms experimenting with digital marketing and e-commerce tactics, online consumer involvement made its first big steps. This era established the groundwork for a future in which consumer interactions would transcend physical bounds, from the cautious study of online markets to the formation of the first indigenous e-commerce behemoths. The widespread use of smartphones in the 2010s signified a seismic change, resulting in a new era of online customer interaction. The rising availability of the internet, along with low-cost data plans, has changed the way Indians interact, get information, and most importantly their purchase behavior. Social media platforms have become essential components of consumer engagement strategies, giving businesses a direct chance of communication with their target audiences.

Jumping to the current times, India is at the front of the digital revolution achieving flagships. The country has become a hotspot for online customer engagement due to its astonishing span of active internet users. Businesses are employing a varied set of technologies to develop meaningful interactions with their consumers, ranging from tailored marketing techniques and AI-powered chatbots to immersive social media experiences.

Looking forward to, the direction of online consumer involvement in India looks to be limitless. The amazing

combination of technology such as AR, VR, AI, and the ongoing expansion of e-commerce platforms promises to open up a new world of opportunities for businesses. The trend of OCE in India is not only a reflection of technology advancement, but also of a digitally connected consumer base by flexibility and emotion

Amazon is the dominant brand as online shopping has fundamentally altered customer behavior. Customers worldwide may now prefer an enormous assortment of products and services offered by Amazon. It has become even more important to examine the variables that influence Amazon's online consumer engagement. For a number of reasons, Amazon should understand the traits that influence online customer engagement which can assist Amazon in maintaining its competitive edge and developing its services. As more people purchase online, it is critical for businesses to learn how to communicate with potential customers online. Examining Amazon for the same can provide vital insights on how to communicate with customers in the digital age for their businesses post covid. Let us understand the different elements through a model.

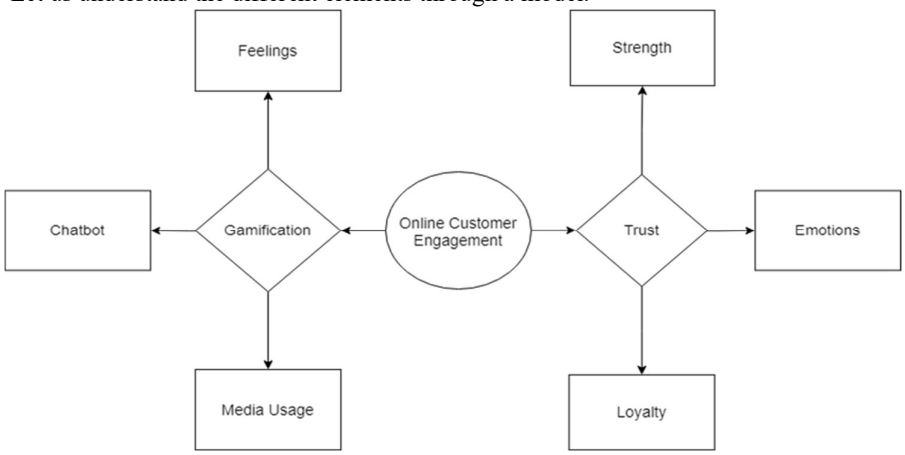


Figure 1 Model of elements for Online Customer Engagement

In figure 1 The model of elements for online engagement helps us to understand the collaborative nature of gamification and trust that is visible in the engagement space, where gamified features serve as trust-building tools that motivate users to actively participate in the knowledge that their efforts are valued and secured. Gamification and trust are mutually strengthening. Users' trust grows as they engage with gamified features, and gamification's ability to draw in and hold on to users is strengthened when trust is a strong base. Feelings driven media consumption turns gamification from an interactive tool into an emotionally intelligent environment where users feel understood and are more likely to stay engaged. The interaction experience becomes more genuine, emotionally fulfilling, and supportive of long-term user commitment when the emotions in media consumption and emotionally intelligent chatbots work together to create a synergy that fuels trust and loyalty.

The study conducted in the research article exactly tries to measure how Online engagement with customers and consumers shall be fruitful and beneficial for organizations creating brand awareness. Further in the article we look upon the authors contribution in this area of engagement.

2. Review of Literature:

In the conducted research study has rightly mentioned about how customer management has changed over time, starting with transactional marketing and ending with consumer-brand engagement (CBE).(1) The author draws attention to the transformation of customers from passive to active participants in the cocreation of value with companies.(1) The research employs Service-Dominant (S-D) logic as its theoretical framework and presents an experimentally validated model that clarifies the relationships between CBE and important drivers and outcomes.(1) In his article we have South African customers of independently chosen smartphone and social media firms were surveyed for the study.(1) Results show that S-D logic is a suitable foundation for a comprehensive model that captures the role of consumer engagement in brand results.(1) The paper's theoretical, practical, and contextual implications support S-D logic for comprehending the co-creation of customer and brand value and provide advice for brand managers.(1) Future study ideas include looking into new customer segments,

verifying the model in various circumstances, and evaluating the stages of CBE using longitudinal studies.(1)

Consumer Engagement with Brand Posts on Social Media in Consecutive Stages of the Customer by Journey, in the research study looks at how users engage with brand-generated content on social sites at various points in the customer journey, with a specific emphasis on scheduled events like conferences and trade shows.(2) The study discovered that the factors influencing consumer engagement varies depending on the stage of the customer journey, as well as between successive stages.(2) Depending on the objectives that customers have at each point in the customer journey and the amount of work they are ready to expend when interacting with brands, features that encourage consumer engagement have different effects at different phases.(2) The study adds to the event management literature by identifying and analyzing the variables that influence online consumer engagement at various event phases and gives digital marketers empirical data to guide their decisions about the material to be shared on social networking sites.(2)

The conducted research article describe about how technology helps B2B relationships with customers.(3) It examines the various points of engagement that consumers have with virtual reality technology, including brands, businesses, services, and equipment.(3) The study demonstrates that innovation in technology, personal links to the company, a fear of losing social connections, the potential to lower business risks, and business knowledge can all lead to increased involvement.(3) The study also offers management ramifications and recommendations for adopting VR apps in customer contacts, including utilising technology novelty to create memorable customer experiences and employing skilled operators to draw the consumer's attention to service features.(3) The level of detail in the application and the possibility of drawing the user's attention to information that is not helpful when making property management decisions are the last two challenges that the file highlights as potential obstacles that marketers may encounter when attempting to increase customer engagement in B2B interactions.(3)

In area of this research study looks at the effects of online consumer experiences.(4) The study evaluates cultural characteristics using data from a global corporation and national-level indicators for uncertainty avoidance, power distance, individualism, masculinity, and long-term orientation.(4) The study discovers that while both cognitive and social online customer experiences have a favorable effect on engagement, the social experiences have a larger influence.(4) The research also emphasizes how crucial it is to adapt online experiences to different cultural client needs.(4) In order to increase engagement and client satisfaction, the report advises global marketers to give localization initiatives top priority.(4)

The significance of customer engagement behavior for a company's long-term performance and profitability is examined in the research study.(5) It makes the case that traditional transactional measures have their limitations and that companies should take into account both transactional and non-transactional metrics when valuing their customers.(5) The study highlights the organic pathway and promoted pathway as the two key strategies for forming customer engagement behaviors.(5) In contrast to the promoted pathway, which involves businesses actively encouraging engagement behavior, the organic pathway involves customers developing engagement behavior naturally.(5) According to the study's findings, companies should implement a customer interaction plan that incorporates both channels and takes into account issues like resource allocation and measurement.(5)

The area of this research article examines how different types of content affect word-of-mouth (WOM) and customer engagement in the context of social media marketing.(6) Using a sample of one thousand social media users, the study looks at the correlations between financial rewards, relational content, entertainment content, positive contribution, co-creation, negative contribution, disengagement, dormancy, WOM, and customer loyalty.(6) The results show that while rewarding material has drawbacks, relational and infotainment content encourages consumer interaction and word-of-mouth (WOM).(6) Only relational content shows the co-creation's impact on both outcomes.(6) There are no discernible variations between disengagement and dormancy.(6) The findings back up hypotheses H1a, H1b, H5a, and H5b but contradict hypotheses H3a, H3b, and H4a since remunerative content has the opposite influence on positive contribution and negative contribution than was anticipated.(6)

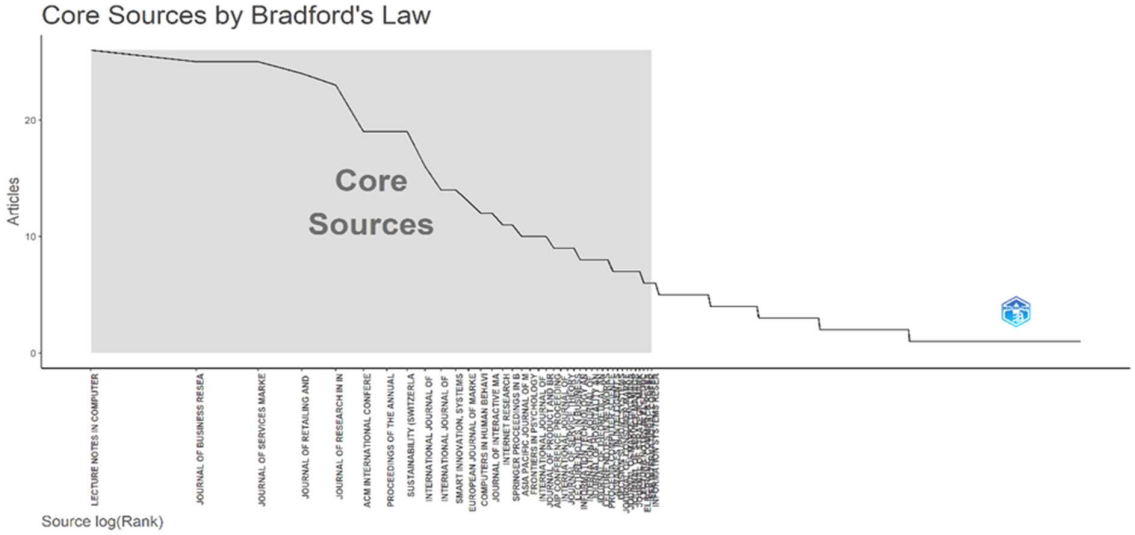
The conducted research article addresses the concept of user engagement in the context of online buying and looks into how gamification affects user engagement and how that affects OCE.(7) The authors want to validate the factors that determine engagement and comprehend their behavior collectively.(7) The results of the research indicate that gamification can significantly increase OCE in online purchasing.(7) The study emphasizes the significance of OCE and gamification in shaping consumer behavior and e-commerce website usage.(7) The study suggests a number of activities and techniques to improve online customer engagement, including the use of social media for tighter customer interaction and more content sharing. This research has practical consequences for e-commerce enterprises. (7)

Understanding the process of customer learning in social network brand communities (SNBCs) and its impact on customer engagement behaviors (CEBs) and loyalty is the main goal of the research paper.(8) The study analyzes 373 online questionnaires using partial least squares structural equation modeling and presents a customer-learning model based on the uses and gratifications perspective.(8) The empirical findings support the notion that learning motivation and collaborative learning are two essential elements of customer learning.(8) These elements positively impact satisfaction, which positively impacts CEBs and loyalty.(8) The study comes to the conclusion that SNBCs are educational platforms for customer learning that emphasize interaction, group learning, and co-creation.(8)

The conducted research offers a thorough analysis of the potential outcomes of an effective international customer engagement strategy and the performance implications of customer engagement.(9) The study analyzes the main country-level cultural, institutional, sociological, and economic contingency elements (CISE indicators) that influence customer engagement tactics in global marketplaces, as well as how customer engagement is impacted by cultural distances between countries in various markets.(9) The conducted research also examines how customer involvement improves performance and offers guidance on how relationship marketing managers can successfully promote customer engagement in global marketplaces.(9)

The area of this research looks at the elements that make sponsored blogging campaigns successful and how they affect online interaction.(10) The study is based on information gathered from actual sponsored blogger campaigns as well as a strictly regulated experimental environment.(10) We discover that campaign incentives, blogger know-how, and content quality all have a significant impact on engagement and that these elements interact in intricate ways.(10) The study offers helpful information for marketers trying to use social media influencers to boost brand engagement.(10)

By the help of bibliometrics we were able to identify the best theoretical fit and can analyze patterns and trends in literature, identify influential works, and understand the dissemination and impact of research within a particular field.



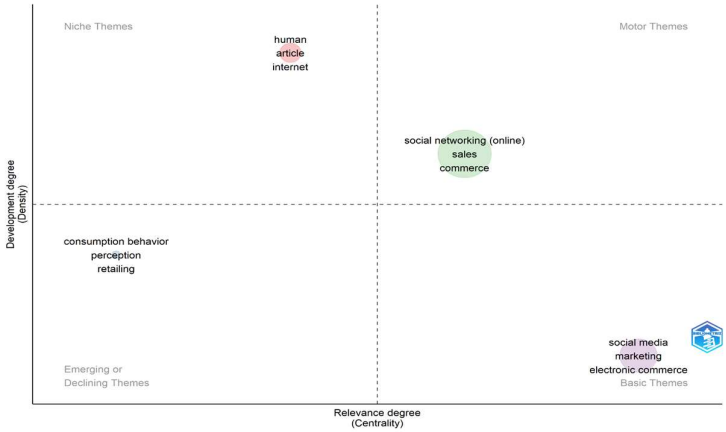


Figure 2 Bradford's Law

Figure 2's graph makes the Bradford distribution quite evident. The graph's right side has a far higher number of sources with few or no citations, whereas the left side has a far smaller number of sources with several citations. Bradford's law is in line with this. The core group of sources is comparatively tiny in this field of study. This indicates that several other sources reference a limited amount of sources. These sources are perhaps the most significant and influential ones in the area.

The field is not yet developed. The graph's obvious Bradford distribution—more common in developed fields—explains why. A long collection of sources with few citations can be found at the end. Most academic fields are like this.

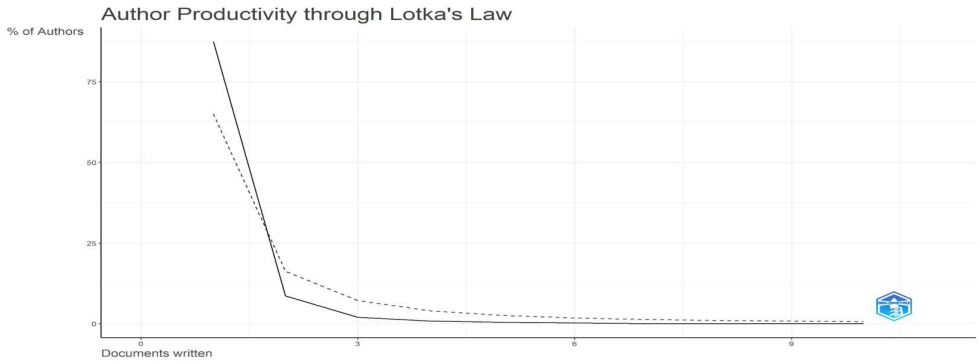


Figure 3 Lotka's Law

From the figure 3 we can identify the total number of papers worked on, the number of writers who correspond to that total, and the percentage of authors for each category are the basis for the numbers in this data and graph. A single effort with 3213 contributors shows a 0.875 %. The 2 papers authored by 318 writers represent a proportion of 0.087. This pattern is applied to writers who have completed three, four, five, six, seven, eight, and 10 papers.

The number of authors falls as the number of papers per author rises, in line with Lotka's Law, which asserts that a small proportion of writers produce the majority of publications.

Practically speaking, this means that a small number of highly productive writers produce the majority of the written papers, with a wider group of writers contributing a lesser share of the total production. To comprehend and model the distribution of scientific productivity among researchers, Lotka's Law is frequently employed.

Figure 4 Thematic MAP

From the figure 4 thematic map tells us about the Callon density of 22.41, callon main of 1.42, rank centrality of 2, rank density of 4, and cluster frequency of 246 are the characteristics of the human cluster.
Cluster: In online social networking (OSN), there are observed values for callon density (18.11), callon centrality (2.18), rank centrality (3), and rank density (3). Cluster Duration: 2314
Together: The characteristics of social media include cluster frequency, callon centrality, density, rank centrality, and, in that order, 10.77, 4.1, and 760.
Social media has the highest Callon Centrality (3.14), which represents the strongest linkages to other clusters. The Human cluster is the densest (22.41). Social media has the lowest Rank Density (1) and is the most tightly connected cluster. Social Networking (Online) has the highest frequency (2314), suggesting it is a prevalent theme.

3. Research Methodology:

The methodology for the complete research has been discussed hereby -
The two objectives for the research which are considered are To Develop and understand the theoretical framework for Online Customer Engagement. To study the factors influencing Customers of Amazon for Online Customer Engagement.

Descriptive research design was used in the study to obtain a thorough grasp of the elements impacting online consumer interaction and virtual brand communities among active Indian internet users. The researchers opted to use surveys to gather primary data in order to better control the data collection process, present original research findings, assure relevance to the research context, gain a deeper understanding of the subject, and be flexible and cost-effective.

The study's population is made up of Indian residents who are frequent internet users for a variety of reasons. A structured questionnaire was utilized by the researchers to gather information from a subset of this cohort. Effectively addressing the research objectives required the use of data collection procedures that were in line with the research design and methodology.

Without attempting to explain or anticipate the phenomenon, the overall goal of the research study was to provide a complete description of the factors impacting virtual brand community and online consumer engagement among active internet users in India. The researchers were able to acquire pertinent and helpful data by gathering primary data, which added to the body of knowledge in the field and gave important insights into the research topic. Non-probability convenience sampling method of sampling is used. The population framework for Indian active internet users can be divided into several categories based on various factors such as age, gender, location, income, and education. Cochran's formula is used to determine the required sample size for a survey or study.
Formula:

$$n_{=\frac{Z^2 \times pq}{e^2}}$$

After putting values into Cochran's formula, we get: n = (1.96)2 (0.5) (0.5) / (0.05)2 = 384.16, n0 = (Z2 * pq)) / E2 = (1.96)2 (0.5) (0.5) / (0.05)2, n0 = 384.16. To look forward to the outliers if any we consider to collect the data of 400 individuals.

The hypothesis developed here
Null Hypothesis- The identity matrix and Intercorrelation matrix are similar
Alternative Hypothesis- The identity matrix and Intercorrelation matrix are not similar
Let's check post analysis whether the Ho is accepted or rejected.

4. Data Analysis:

All the above samples collected are analyzed as below

Table 1-KMO and Bartles Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.951
Bartlett's Test of Sphericity	Approx. Chi-Square	9589.416
	df	780
	Sig.	.000

In table 1, the KMO value is 0.951, which is close to 1.0. A high level of sampling adequacy is indicated by a KMO value that is near 1.0. Stated differently, the data is deemed appropriate for factor analysis. In common, a score greater than 0.5 seems acceptable, as it suggests a more favorable match for factor analysis.

- Approx. Chi-Square: 9589.416
- Degrees of Freedom (df): 780
- Significance (Sig.): 0.000 (or very close to 0)

To get whether the correlation matrix differs considerably from an identity matrix—a matrix in which all diagonal elements are equal to 1 and all off-diagonal elements are equal to 0—Bartlett's Test examines whether the observed variables intercorrelate significantly. With 780 degrees of freedom and a Chi-Square value of 9589.416, this value is highly significant (Sig. = 0.000). This shows that the variables may have meaningful relationships with one another, proving that the correlation matrix is not an identity matrix.

Said in simpler meaning, the data are suitable for factor analysis according to the significant Bartlett's Test results. The output of communalities, a commonality of 1.000 indicates that each variable examines 100% of its variance before factor analysis.

The commonalities are decreased to values less than 1.000 using PCA. These data indicate the part of the variable's variance that can be accounted for by the factors that were obtained. There are between 490 and 736 commonalities during extraction. A larger percentage of the variance in the variable was recommended to be examined by the components covered by PCA when the values were closer to 1.000. Regards to zero, extracted values indicate that the factor solution accounts for a smaller part of the variable's variance.

Looking towards the value of P and KMO it is found that the Ho is accepted and H1 is rejected.

Table 2- Total variance explained

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.229	40.574	40.574	16.229	40.574	40.574	5.833	14.584	14.584
2	2.160	5.401	45.975	2.160	5.401	45.975	5.535	13.838	28.421
3	1.725	4.313	50.287	1.725	4.313	50.287	3.524	8.810	37.231
4	1.493	3.732	54.019	1.493	3.732	54.019	3.446	8.616	45.847
5	1.243	3.107	57.126	1.243	3.107	57.126	2.601	6.502	52.349
6	1.147	2.868	59.994	1.147	2.868	59.994	2.251	5.627	57.976
7	1.035	2.588	62.581	1.035	2.588	62.581	1.842	4.605	62.581
8	.942	2.356	64.937						
9	.895	2.239	67.176						
10	.835	2.087	69.263						
11	.808	2.020	71.283						
12	.712	1.779	73.062						
13	.678	1.695	74.758						
14	.642	1.606	76.364						
15	.614	1.535	77.899						
16	.582	1.456	79.354						
17	.549	1.372	80.727						
18	.527	1.317	82.044						
19	.510	1.274	83.318						
20	.485	1.212	84.530						
21	.471	1.178	85.708						
22	.446	1.114	86.822						
23	.415	1.039	87.861						
24	.400	.999	88.860						
25	.389	.972	89.833						
26	.377	.942	90.775						
27	.361	.903	91.678						
28	.336	.840	92.518						
29	.327	.818	93.337						
30	.310	.774	94.110						
31	.301	.751	94.862						
32	.280	.700	95.562						
33	.272	.680	96.242						
34	.259	.647	96.889						
35	.239	.598	97.487						
36	.227	.567	98.054						
37	.220	.549	98.603						
38	.197	.492	99.094						
39	.192	.479	99.574						
40	.171	.426	100.000						
Extraction Method: Principal Component Analysis.									

In table 2, it accounts for 40.574% of the variation overall, the first principal component appears to have a good representation of the underlying patterns in the data.

When additional components are taken into account, the cumulative percentage rises. Combined, the first three components account for 50.287% of the variance.

The data may exhibit more pronounced patterns or correlations upon component rotation, as suggested by the

variations in the cumulative percentage inside the rotated area.

Table 3- Rotated Component Matrix

Rotated Component Matrix[a]							
	Component						
	1 - Cutomer Support	2 - AI Convenience	3 - Entertainment	4 – Payment Gateways	5 – Engagement with Satisfaction		
Speedy delivery options have solidified my strong relationship with Amazon.	.719						
The ease of browsing, ordering, and tracking my orders.	.717						
The shopping experience on Amazon is easy and accessible.	.671						
Amazon provides options like 'Amazon pay later' which allows me to manage my budget effectively.	.661						
One-click ordering and quick access to customer support.	.657						
Amazon provides exclusive deals.	.640						
Amazon motivates me to participate in writing reviews and participate in quizzes.	.577						
Amazon's personalized recommendations make me feel like a valued customer.	.517						
Amazon adds an element of fun and reward to my shopping activity.	.505						
I can find items that cater to my unique tastes and needs.							
I often lose track of time while exploring challenges, and contests.							
Chatbots enhance my trust in Amazon by saving my time.		.778					
Chatbot adds convenience and accessibility to my online shopping experience.		.734					
Amazon's Alexa helps me in my day-to-day activities.		.730					
Chatbot resolved my Amazon account issues.		.694					
Engaging with the chatbot during my online interactions is not valuable.		.660					
Amazon's online content does not trigger any emotional response in me.		.617					

Amazon Prime membership helps me to avail more discounts and offers.		.553					
It doesn't add any value to my online engagement with Amazon.		.526					
I often feel entertained and relaxed while watching Amazon Prime videos.							
I follow Amazon on social media platforms like Facebook, Twitter and Instagram.			.694				
I have used Amazon's voice assistant, Alexa, for shopping or information-related tasks.			.689				
I always watch Amazon product ads while watching Instagram stories.			.632				
Amazon sends me personalized email recommendations based on my browsing and purchase history.			.578				
Engaging with Amazon's online content does not trigger any emotional response.							
I enjoy reading Amazon's blog posts.				.777			
I subscribe to Amazon's newsletter and notifications.				.776			
Amazon's Prime Day deals and exclusive product launches always grab my attention.				.580			
I frequently participate in Amazon's online surveys and provide feedback on their website.				.579			
I received a high-quality product from Amazon and was satisfied with my purchase.					.702		
I had a great customer service experience with Amazon's online chat support.					.618		
I had an issue with a recent order, Amazon's customer service quickly resolved an issue with a damaged product.							
I regularly follow Amazon's social media accounts for product reviews and recommendations.							
I'm sometimes unsure about the authenticity of reviews and ratings on certain products.						.740	

I have found that product descriptions and reviews on Amazon are usually accurate.						.649	
I've participated in Amazon Prime Day sales and enjoyed exclusive deals.							
I love watching Amazon's product demonstration videos.							
I feel that I have made a smart and informed buying decision.							.625
I feel convenience and ease of the shopping experience.							.562
I experience a sense of enjoyment when engaging with Amazon's online content.							
Extraction Method: Principal Component Analysis. Rotation Method: Varimax without Kaiser Normalization.[a]							
a. Rotation converged in 8 iterations.							

Component 1: Positive Experience while buying on Amazon is shown in Table 3. Positive loading components for this component include Amazon's availability and special offers, as well as features like fast shipping and ease of researching, ordering, and tracking orders.
Customers that prioritize quick delivery, exclusive deals, and a seamless online shopping experience will perform well in this area.

Component 2: Technology and Chatbots: Positive Interaction This factor gives high marks to chatbots, Alexa on Amazon, and the simplicity with which they improve the shopping experience. Customers who like and utilize Amazon's technological features—such as chatbots and voice assistants—are likely to perform well on this one.

Component 3 is Social Media Engagement and Content Enjoyment. It loads smoothly when one interacts with online content, likes blog entries, and follows Amazon on social media.
If customers interact with Amazon's online community and enjoy reading the company's blog posts and social media updates, they are likely to score highly on this component.
Component 4: Trust in Ratings and Reviews: Products that are associated with reliability in their product descriptions and reviews receive good marks on Amazon website.

Even though they might not be sure if some reviews are real, consumers who think that product descriptions and reviews are accurate are likely to score highly on this component.

Component 5: represents Satisfaction and Informed Buying Decisions, This component is positively impacted by factors including feeling knowledgeable while making purchases, having high-quality products, and being satisfied with purchases. Consumers that place a high value on making educated purchases, being satisfied with customer service, and the quality of the products they receive are likely to do well on this component.

The output of Component Score Coefficient Matrix, appears that factors pertaining to product satisfaction and customer service encounters have an impact on Component 1.
Factors pertaining to the use of Amazon's technological characteristics affect Component 2.
Based on the variables with higher coefficients, same interpretations can be drawn for the remaining components.
Good encounters with customer service, superior merchandise, and contentment with purchases define a great shopping experience.
Consumers that place a high value on timely service and satisfied products are probably going to do well on this component.

Engagement with Technology refers to using technological tools such as online surveys, chatbots, and Alexa from Amazon.
Consumers who adopt and make use of technology-driven features and services help this component receive high ratings.
Participating in Prime Day sales, following Amazon on social media, and appreciating personalized email recommendations are all indicators of social media engagement.
Consumers who interact with Amazon on social media and reply to tailored material receive better marks for this category.
Have faith in reviews and ratings. This includes customers who believe evaluations and descriptions of products, yet occasionally doubt their veracity.
This element indicates the degree of confidence users have in the data the platform provides.
Contentment and Well-Informed Purchase Selections. A emphasis on premium goods, customer happiness with purchases, and well-informed decision-making are indicated by high ratings on this component.
This component is influenced by customers that place a high value on well-informed decision-making and product quality.

Table 4-Component Score Covariance matrix

Component Score Covariance Matrix							
Component	1	2	3	4	5	6	7
1	1.000	.000	.000	.000	.000	.000	.000
2	.000	1.000	.000	.000	.000	.000	.000
3	.000	.000	1.000	.000	.000	.000	.000
4	.000	.000	.000	1.000	.000	.000	.000
5	.000	.000	.000	.000	1.000	.000	.000
6	.000	.000	.000	.000	.000	1.000	.000
7	.000	.000	.000	.000	.000	.000	1.000
Extraction Method: Principal Component Analysis. Rotation Method: Varimax without Kaiser Normalization. Component Scores.							

In Table 4, The variance of each individual component score is shown by a covariance of 1.000 on the main diagonal.
Orthogonality simplifies the interpretation of each component, as they are not influenced by the same patterns in the data. The Varimax rotation method, chosen to maximize differences between loadings of different components, appears to have been effective in creating uncorrelated components. The covariance matrix supports the fundamental goals of Principal Component Analysis (PCA) in creating uncorrelated components that capture the maximum variance in the original data. The low covariances suggest that the component scores are independent of each other.

The seven Factors identified here are C1, C2, C3, C4, C5, C6, C7. As observed C5, C6 & C7 have less loading and more commonalities so terming as F5 only and would consider F1 to F5. with the factors termed as customer support, AI convenience, Entertainment, payment gateways, Engagement with satisfaction respectively.

5. Future Scope of Research:

In the ever changing world of digital commerce, the study topic of factors impacting online customer engagement has enormous potential for the future. Businesses are connecting with customers more and more through digital channels, therefore it's critical to comprehend the many factors that influence engagement. Subsequent investigations in this field may explore more thoroughly the interactions among psychological elements, technology developments, and changing consumer habits. Examining the effects of dynamic interfaces, social media integration, and personalized suggestions on online engagement may yield insightful information for companies looking to improve customer happiness and digital strategy optimization. Furthermore, new developments in the digital ecosystem, such voice commerce, augmented reality, and AI-powered chatbots,

present intriguing directions for future research. Future developments in internet commerce may be influenced by studies examining the ways in which these technologies affect client involvement, trust, and loyalty. Furthermore, considering how elements like transparency, corporate social responsibility, and user-generated content affect online engagement could offer helpful advice for companies looking to establish genuine and meaningful relationships with their online audience, given the increasing focus on sustainability and ethical consumerism. To put it simply, there are countless chances for innovation and strategic growth at the nexus of technology, consumer behavior, and social values that will shape the future field of study on factors impacting online customer engagement.

6. Conclusion:

The article and survey completed here suggests that any organizations having the digital backed support can improve much more on ROI. it suggests that the brand should Streamline the online shopping process to make it efficient and enjoyable for customers, Improve and personalize customer support services, Implement chatbots for quick and efficient responses to customer inquiries, Run promotions and campaigns to encourage user participation, Foster a sense of community around your brand, Offer exclusive deals and discounts to loyal customers, Ensure a secure and transparent handling of customer data, Communicate your commitment to data privacy and security, Regularly gather customer feedback and use it to make continuous improvements, they need to Stay updated on trends and incorporate innovations into your platform.

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