Comprehensive Analysis Of Emerging Trends And Future Implications Of E – Commerce On Business Models And Consumer Behavior

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Abstract

This research basically focused on the impact of the E – Commerce on the behavior of consumer, upto a large extend E –Commerce changed the structure of the global market because of all of that E- Commerce became a very important factor for the economic growth as well as for the new innovations & for the healthy competition in the market. In this research paper basically an attempt were made to find out the impact of cutting-edge technology, such as Artificial Intelligence and big data on the consumer experience and also find out their impact on the marketing strategies. The research basically revolve around the very eminence topic like mobile commerce, customization, omnichannel marketing and also on the gig economy. which are the essential factor of the e – commerce industry. In this research both qualitative and quantitative data were collected, quantitative data were collected related to the market trend and qualitative data were collected after the interview from the experts, after the analysis of data it has been observed that a significant changes were recorded in the consumer preferences, competitive policy adopted by the merchant and it also concluded that from a elementary transactional platform, e commerce converted into a refined eco system of interrelated services, experiences & modernization. Further study also provide the suggestion to enterprises to include the above techniques & methods to improve the participation of the customer & for the long term growth of business as well as for the customer.

Introduction

Over the last 20 years, E Commerce market recorded a drastically changes, Earlier it was very difficult for the consumer to interact with the brands, but now a days, a consumer can easily interact with brands and also registered their feedback, E – Commerce market were started as a substitute of the Traditional market but now a days, E Commerce were became a major platform for shopping in compare to the traditional shopping, Alibaba, Amazon, Shopify & Meeshow, completely changed the concept of International Trade as well as the concept of E – Commerce, with the help of the latest technology as well as the advancing customer demands. The future of the E - Commerce totally depend upon the, process of delivery ,delivery time period, safe payment methods and how E commerce were able to cope up with the market trends. This study was able to find out that how E Commerce changed the consumer behavior and also changed the structure of the market, E commerce were not provide the opportunity but also hurdles for the market players. To gain a competitive advantage enterprises need to understand the complexity of electronic E – Commerce but also focus on the advance digital methods to satisfy the customer needs, In this research paper an attempt were made to identify the future trend and direction of the E Commerce market.

Review of Literature

Chen,L. & Thompson, G. (2024). The Study stated that after COVID – 19 pandemic, a drastically changed were noticed in the growth of e commerce industry. After pandemic companies were adopt the agile strategies and also used the cloud computing technology, and focuses on virtual market to gain the competitive advantages

Davis, P., & Wong, T. (2024). The Study analyzed the impact of the artificial intelligence in increasing the interaction with consumer and customized experiences. Research basically suggest to focus on the positive and dynamic benefit of AI based suggestions and role of chatbot on Increasing the satisfaction of the consumer as well as the sales growth.

Martinez, R., & Zang, H. (2024). The study examined the incorporation of blockchain technology into the domain of e-commerce logistics. The argument posits that blockchain technology has the potential to substantially mitigate fraudulent activities, enhance transparency in supply chains, and bolster consumer confidence.

Nguyen, H.T., & Smith, J.P.(2024). The study concluded that sustainability were a very important factor in the growth of ecommerce and in this paper basically focused were on effective implementation of those warehouse which are energy efficient , sustainable packaging & carbon neutral shipping by the enterprises.

Allen ,R., & Garcia, P. (2024). The study revealed that mobile shopping were became very popular now a days and digital literacy as well as the 5G data , safety of payment and smart payment app increasing the graph of the E – Commerce.

Singh, A., & Peterson, D. (2024). The Study concluded that e commerce were emerged as a important driver of the global market and the combination of the digital as well as the physical sales improved the involvement of consumer engagement and loyalty, as well as the attraction of the consumer towards e commerce.

Brownn, M., & Green, T. (2022). The Study Stated the in the growth of e commerce omni channel marketing were played a very important , through which firm were able to cope up with the challenges in the future & to meet the future risk.

Li, W., & Chang, H. (2021). The study revealed that uses of the artificial intelligence in the e commerce, and also the uses of the chatbot, personalization and predictive analytics to massively increased the satisfaction level of the customer.

Research Gap

After studied a lot of research paper, it revealed that lot of exemplary research were done on the various important elements of e commerce but still it became a matter of doubt that whether AI and big data analytics were played a very vital role in influencing customer behavior as well as the business practices. In case of small and medium scale enterprises, a large study were focused on the latest technology without considering that how they became fit into broader stage of e commerce. This study were an attempt to fulfill the gap between the customer behavior, latest business model & technologies of e commerce by providing the valid interconnection between these elements.

Research Objectives

1. To find out the factor responsible for transformation oftraditional model through the e commerce

2. To find out the exact impact of the emerging technology on growthof e commerce market.

3. To find out the changes noticed in consumer behavior in responseto, technology, personalized – driven e – commerce experiences.

4. To find out the challenges and opportunities faced by the e commerce industry in future

Research Methodology

In this research both qualitative and quantitative data were used to study the exact impact of the e commerce as well as its growth and challenges, quantitative data were collected from the reliable sources, journal, newspaper, websites, government reports as well as qualitative data were collected after conduct face to face interview with experts of e commerce and business leaders and for analyzing the data regressive analysis method were used.

Data Analysis

To examine the developments and impacts of e-commerce on business models and consumer behavior, data was collected from various industry reports, surveys and statistical databases. The study reveals significant changes in customer behavior, technology usage and business models in

the e – commerce sector.

Table 1 (E – Commerce Revenue)

Year	Global E – Commerce revenue (in trillion USD)	Annual growth Rate (%)
2020	4..28%	25%
2021	4.89	14.3%
2022	5.55	13.5%
2023	6.31	13.7%
2024	7.12.	12.8%

(Source: Statista, Mickney E – Commerce Reports)

After analyzing the table – 1 it clearly shown that during the year 2021, 14.3% highest annual growth rate were recorded among all the years, but a slightly downfall were shown in the annual growth rate of E – Commerce from 2022- 2024, but in year 2024, 7.12 US Dollar in Trillion (Global E - Commerce revenue) were recorded which is a very good sign of Sustainable growth rate of E Commerce. All these showed that E Commerce became a major market in global world.

Table 2: Percentage of Consumer who preferred Online Shopping (Year – 2024)

Mode for E Commerce	% of Consumers using Regularly
Mobile	67%
Desktop E – Commerce	23%
Others Methods (IoT Devices, Smart TVs)	2%
Social Media Commerce	8 %

(Data Source: Global Consumer E – Commerce Survey, 2024)

After analyzing the Table – 2, It clearly showed that, a large percentage of Consumer were used Smart Phone for E Commerce and also indicating that, E Commerce companies should launch Mobile friendly sites as well as APP, to enhance the growth of E Commerce at Global level.

Table 3: Key Technologies Driving E – Commerce Growth (2020- 24)

Technology	Adoption Rate (%) in E – Commerce	Effect on Consumer Behavior
Artificial Intelligence (AI)	78%	Personalization, Automation
Big Data Analytics	65%	Targeted Marketing, Insights
Blockchain	45%	Transparency, Trust
Augmented Reality/ Virtual Reality	39%	Immersive Shopping Experiences
Mobile Payment (Phonepe, Paytm)	85%	Convenience , Security

(Data Source: E – Commerce Technology Adoption Reports 2024)

After analyzed the table it has been clear that, Artificial Intelligence and Big Data Analytics played a very important role in the field of the personalized marketing and automating the distinctive aspects of the online retail. Block chain also played a very important role intransparency and trust and mobile payment app like Phonepe, Paytm, Google pay increased the convenience and the security forthe e commerce.

Table 4: E Consumer features preference by E – Commerce (Data collected from 100 respondents)

E- Commerce Feature	Percentage of consumer who rate
fast delivery (same day / next day) as "very important)	74%
Recommendation for the personalized product	62%
Secured payment methods	80%
User – friendly interface for mobile devices 68 percent	68%
Environmentally friendly packaging	51%
Virtual Try on (AR Functions)	35%
Highly flexible return policies	70%

After analyzed the table it has become evident that, when consumer choose the online shopping option then fast delivery, secure payment and flexible return policies are the features that consumer valued more in compare to all other features of e commerce. Virtual Try on (AR Features) basically a new emerging feature of e commerce but currently preferred less by the e commerce consumer.

Table 5: Analysis of E commerce Platforms Preferences by Age Group (Graph)

Age Group	E Commerce Platform	Preferences
18- 29	45%	Mobile Apps
30 – 45	38%	Desktop Websites
46- 60	30%	Websites and Mobile Apps
60 – 100	55%	Traditional Websites

After analysis the above data , one thing is clear that young generation between the age group 18 – 29 were used mobile app for the online shopping as well as old age customer were done the online shopping through traditional websites, one thing clear after analysis the above table is that different age group were preferred different method for e commerce.

Table 6: Frequency of E – Commerce purchase by Product Category (Primary Data from 100 Respondents)

Product Category	Daily (%)	Weekly (%)	Monthly (%)	Occasionally (%)
Home & Furniture	1%	5%	30%	64%
Fashion related products	5%	15%	40%	40%
Gadgets & Electronic items	2%	10%	45%	43%
Personal care & Beauty products	8%	22%	50%	20%
Groceries & Essentials products	20%	45%	25%	10%

It has been clearly shown that Groceries & Essential products are frequently purchased by the respondents through e commerce in compare to all other types of the products category as well as Home & Furniture related products were bought less frequently, which clearly shown in the table that 64% of respondents purchased that type of products occasionally.

Table 7: Challenges faced by the E – Commerce industry experts (Primary data collected from the 20 Industry experts)

Pricing Pressure & Competition	85%
Data Security & Consumer Trust	75%
Supply Chain Disruptions	65%
Advanced Technologies adoption	50%
Sustainability & Environmental Concerns	40%

85% of industry experts experienced that pricing pressure as well as the competition were the main challenges faced by them & 75% of respondents faced that Data security and consumer trust were also a main challenges faced by the expert of the industry. And 40% of experts experienced that sustainability and environmental concern also a type of concern for the E-commerce industry experts.

Findings

(1) Shifting towards Mobile Commerce: After analyzing the primary data, it has been clear that consumer who's age group between 18 – 29 were prefer the mobile app for online shopping, which showed the need of the mobile in the growth of online shopping. & business who want to target young people should develop such type of app, which is easy to use and all the features as per the young generation demanded.

(2) Secure Payments and Fast Delivery: around 74% of the consumer were preferred that in online shopping Fast delivery feature should be available (whether on the same or next day) , while as the 80% of the consumer were preferred that during payment time highly security features should be there so that their payment can be safe.

(3) purchase of essential commodities: Around 20% of the respondents were frequently purchased the essential items & groceries while home and furniture items were less purchased by the respondents, which shows that consumer preferred more online shopping for essential items.

(4) Sustainability: 51% of respondents stated that eco friendly packaging was very important for them and 85% of respondents were showed that payment through secured mode is very important feature for them, so e commerce players should adopt all these things to promote e commerce business in India.

(5) Challenges for the E Commerce: According to the e commerce experts, competition, pricing strategy data security, consumer trust were the main areas where e commerce market needs to take more steps for upgradation of that crucial areas. loyalty programmes, adoption of new technology and full proof data security measures should be implemented by the e commerce players and most importantly data of consumers were not leaked at any cost to increase the consumer trust on e commerce business.

Conclusion

After analysis the primary data it has been concluded that due to change in consumer preferences as well as technological advancement, e commerce gone through a phase of rapid transformation. Increased role of the mobile commerce, increasing demand of online shopping, focused toward environmental sustainability increased the brighter scope of e commerce in future, but to ensure the stability and consistency in e commerce growth, business players should increase their efforts to deal smoothly with competitive strategy, pricing pressure & security of data of customer, priority should be given to the customer centric approach & to gain competitive advantages innovation and digitalization should be needed in the e commerce market at global level.

Suggestions

1. E commerce players should invest on developing that kind of e commerce friendly app, which are easy to use not for the rural peoples but also for the less digital literacy peoples.
2. E commerce companies should take the step to reduce the delivery time of the product to end consumer for that e commerce players should shake hand with the logistics company and also try to take advantage of domestic warehouse.
3. E commerce players should try to increase the role of AI in customer feedback, customer satisfaction and marketing.
4. To protect the consumer information and to build the trust of the consumer it is the need of the time that e commerce related companies should invest in advanced high tech cyber security solutions.
5. E commerce business players should focus towards environmental friendly packaging, and also try to provide carbon neutral shipping options.

References

1. Chen, L., & Thompson, G. (2024). Exploring digital transformation in e – commerce post – pandemic: Business model innovations and market disruptions, journal of digital commerce, 52 (1), 13 – 24.
2. Davis, P., & Wong, T. (2024). AI – enhanced customer experience: How artificial intelligence is reshaping online retail. Journal of Applied Marketing Technology, 41(3), 56-78.

3. Martinez, R., & Zang, H. (2024). Blockchain technology and its potential to revolutionize e – commerce logistics. International Journal of Suppl Innovations, 37(2), 88- 110.

4. Nguyen, H.T., & Smith J.P. (2024). Sustainability in e – commerce: Balancing economic growth with environmental responsibility, Journal of Sustainability in Digital Markets,, 28(1), 66- 89.

5. Allen, R., & Garcia, P. (2024). Mobile commerce on the rise: The influence of 5 G technology on consumer behavior. Journal of Research in Digital Markets, 47 (1), 31- 52

6. Singh, A., & Peterson, D. (2024). The effectiveness of omnichannel marketing strategies in the digital age, Journal of Integrated Marketing, 33 (2), 44- 71.

7. Li, W., & Chang, H. (2021). Artificial intelligence and its transformative impact on e – commerce: A critical review, Journal of Artificial Intelligence Research, 12 (1) , 88-112.

8. Brownn, M., & Green, T. (2022). Omnichannel strategies in e – commerce: Bridging the gap between online and offline retail, Journal of Marketing Research, 29 (5), 99-121.