Technology Trends and Their Impact on the E-commerce Industry

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Abstract:
E-commerce allows people to buy and sell goods and services anytime and from anywhere they choose. Consumers are shifting from traditional retail toward online buying due to the reduced prices and faster response from online shopping firms/organizations. The study investigated the development of modern technology i.e. E-commerce which has changed the perceptions and buying behavior of customers. Online media is affected by the enormous amount of data that technology collects from consumer interactions with E-commerce platforms. They may register their preferences, giving them the power to manage product availability and validity while quickening the sale-purchase process. How customers see online payments and purchases has significantly changed as a result of technology use in daily life. The study used the quantitative approach to determine how the latest technology trends have impacted the E-commerce industry. The research instrument was online surveys since they are quick and convenient in collecting the responses. The dignity of the respondents was respected and informed permission was obtained from each participant. They were informed that participation was voluntary and that confidentiality would be maintained. The chatbot, augmented reality, mobile shopping, online payments, and customer evaluations are the five factors under which the research examines the effects of technological advances. This study found a significant link between modern technology and purchases made through online stores. The findings also provide us with an understanding of how global economies work, how firms operate, and how customers shop around the globe. The supporting technologies of these trends e.g. chatbots, augmented reality, online payments, user reviews, and mobile shopping will certainly have a favorable effect on the E-commerce industry.

Keywords: E-commerce, technology, chatbot, augmented reality, online payment, customer reviews, mobile shopping
Introduction

Customers can exchange services and products online, sometimes referred to as "E-commerce," without regard to place or time. Instead of online shopping, consumers are shunning traditional shops since it is frequently faster and cheaper. Additionally, E-commerce offers more convenience & flexibility in terms of customizing products & services. (Ferrera & Kessedjian, 2019)

E-commerce is the administration of commercial activities using the transmission of information through the internet. Online shopping and E-commerce are sometimes used interchangeably to refer to the selling and buying of goods and services through the internet. From consumer-focused retail portals to corporate exchanges where businesses trade goods and services, it comprises a wide range of businesses.

B2C (Business to Consumer), B2B (Business to Business), C2B (Consumer to Business), and C2C (Consumer to Consumer) are the four basic types of E-commerce. (Amin, et al., 2016)

Online media will bear the imprint of the vast amounts of data that technology collects from consumer interactions with E-commerce platforms. Their preferences might range from kind, color, region, and the payment method, to size, price, and quantity. This enables them to control product validity and stock while accelerating the sale-purchase process (George, 2019). The user experience is improved by making an effort to understand how the organization behaves.

Engineers and IT experts develop applications for both internal and external use. Business intelligence is the capacity of an organization to comprehend its financial, internal, and external directions as well as the steps that need to be performed to advance the business. (George, 2019)

Due to recent technological developments, it may be challenging to investigate E-commerce platforms and identify pivotal elements that contribute to a triumphant business that sets itself apart from competitors in the market. Technology is developing quickly, which fosters competition among those looking to enter this field. The internet notion has an impact on every aspect of life, which is critical for long-term economic success. Today, everyone has access to an internet device, and the prevalence of Internet-of-Things technology shows how far humanity has progressed in building a connected society. This is hardly fresh news considering the abundance of technology devices in our culture nowadays. The former has emerged as the most
popular personal tool as more people transition from using computers to cell phones. It is the target of every competitor in the electronic business sector and includes the primary marketing plan since it is significantly more accessible, easier to use, more secure, and transportable. An exponential increase in the quality of mobile phone services has created the best opportunity for the development of electronic commerce and strategies necessary to maintain public interest.

The sector of E-commerce companies has seen a significant change as a result of the quick development of technology. Digital platforms are still expanding, and new technologies like chatbots, augmented reality, mobile commerce, online payment methods, and user reviews have all been incorporated. The goal of this study is to carefully examine the complex interactions between these technological advancements and the E-commerce industry, shedding light on both their solitary and combined consequences. Understanding these dynamics could be able to assist firms in adjusting their strategies and surroundings to better serve customers and sustain long-term success.

The landscape of the E-commerce industry has undergone a significant transformation due to the rapid growth of technology. New technologies like mobile shopping, chatbots, online payment methods, customer reviews, and augmented reality are progressively being incorporated into digital platforms. This study delves deeply into the dynamic interaction between these technology developments and the E-commerce sphere. The study also aims to give significant insights for organizations to adapt their strategy and handle shifting conditions by exposing the separate as well as interrelated repercussions of these breakthroughs. Finally, this attempt strives to improve consumer experiences and foster long-term success in the E-commerce sphere.

The influence of chatbots, augmented reality, mobile shopping, online payment methods, and customer evaluations on the E-commerce sector will be the main focus of this research. The scope includes:

- An analysis of the effects these technologies have on many elements of the E-commerce ecosystem, such as consumer involvement, buying patterns, and business operations.
- Study of customer perceptions and reactions to modern technologies, taking into account aspects including perceived value, usability, and trust.
Almost every area of modern civilization has been influenced by technology, which is simple to use but complex to grasp and comprehend. Because of the advent of E-commerce and associated platforms, face-to-face contact between the buyer and the supplier is no longer required. This study's contribution to academia and industry underscores its importance. From a scholarly perspective, it will offer a thorough examination of the technical changes reshaping the E-commerce sector, expanding knowledge of their effects on both firms and customers. The study's conclusions will help in the design of policies, resource allocation, and strategic decision-making for E-commerce companies, technology suppliers, and legislators by providing useful insights.

**Literature Review**

Developed countries promote online shopping and the use of IT. However, we think it is possible and might be a great help to impoverished nations if an appropriate commercial aim can be developed. Chang et al. (2003) argued that E-commerce enterprises are increasingly becoming an important aspect of company strategy and a powerful engine for economic growth, as also discussed by Ohidujja Man et al. (2013), who focused on how it marks a turning point and revolution in online business practices and how it can dramatically enhance the economy. There has been a lot of study done on E-commerce. Numerous research studies have been conducted that have shown and emphasized the advantages and needs of internet buying. On the contrary, drawbacks of E-commerce were uncovered, and simultaneously, they provided crucial ideas and came to a resolution about how to make online shopping more favorable for clients.

The E-commerce industry is increasingly becoming the preferred market for consumers to shop. E-commerce has gained popularity for many different reasons. Over the last 5 years, the E-commerce sector in the US has grown at an average pace of 9.3%, with sales to reach $704.1 billion by 2022 (Ibis World, 2022). The swift growth of internet has allowed businesses in the industry to reach millions of clients without opening a single brick-and-mortar location.

Because of the extensive use of mobile devices and the world’s increasingly fast internet rates, online shopping has grown in popularity. E-commerce businesses have prospered due to economies of scale. Larger companies can provide more reduced products and less expensive delivery. Declining wage expenses are essential in this industry too. However, not all of the success criteria for the E-commerce industry come from the firm itself, even if all of these aspects have helped to make the sector successful. Companies’ requirement for huge numbers of
personnel to meet expanding demand lowers as they become more familiar with essential technology and as that technology develops. The primary driver of this industry's development is consumer preferences.

At present, 78% of American adults with Internet access have made an online purchase, with 69% doing so at least once a month. Electronics (22%) and clothing (17%) are the most often purchased online commodities.

Scholars believe that the rate of digitalization is faster than the rate of research (Etemad, 2017; Luo, 2021; Tolstoy, et al., 2021). According to Luo (2021), growing digitalization has undermined the utility of older models. A stronger emphasis on E-commerce growth has opened up global possibilities, allowing for cost reductions as well as access to international clientele. The rise of online participation has boosted global competition (Etemad, 2017; Benmamoun, et al., 2019; Tolstoy, et al., 2021). Local enterprises entering the market may encounter challenges because multinational corporations can innovate and disrupt markets through advanced entrepreneurship (Hill, 2023).

According to Williams et al. (2007), even if they continue to shop at traditional brick-and-mortar stores, individuals consider online shopping to be incredibly handy. Furthermore, Brown et al.'s (2003) findings show that online shoppers are better prepared to make more educated decisions, which is not always associated with conventional purchasing. Monsuwé et al. (2004) looked at the concept of anonymous purchases, which might be advantageous for discreet transactions that consumers would avoid in face-to-face encounters.

In today's era of economic advancement defined by information and digital technologies, effective management of businesses and organizations is vital. Digitalization has a substantial impact on government and corporate organizations, as well as cultural and sociological contexts, and hence contributes to societal progress in general (Liang, et al., 2016). Digital technologies not only help established organizations and industries to compete globally and outperform rivals, but they also enable the creation of new value (James, 2020).

E-commerce is one of the fastest expanding sectors of the economy, thanks in part to the early embrace of information and digital technologies. This rapid growth of the industry has
influenced the state's economy, associated industries, and traditional business processes (Lai, 2010).

Using the necessary data, E-commerce companies, and organizations are actively investigating new markets and studying client wants. They quickly adjust to numerous changes in demand, mitigating time and financial costs and crucially increasing their level of competitiveness. The development of online channels for marketing, sales, and better customer service is a common practice nowadays across offline organizations and groups. The development of electronic commerce is being hampered by a variety of problems, such as scarcity of technology education, underdeveloped licit system, and paucity of experts, but it is crucial to acknowledge the market's growing potential along with its gravity and importance. (Boewe & Schulten, 2019)

As a result, E-commerce has become an important aspect of daily living. Online real-time orders are placed for products and services, and the network itself may be utilized for delivery and payment (Ogunmola, et al., 2020). The concept may be summed up as follows: an E-commerce market is a form of virtual space where communication is carried out to encourage mutually favorable collaboration among numerous economic actors using electronic technology. Along with the market's apparent benefits, such as time savings, it is important to emphasize the benefits of operating in the E-commerce sector for businesses. These benefits include a borderless world thanks to the global Internet and decreased marketing and transaction costs, which greatly increase competitiveness and support the expansion of small and medium-sized firms. Customer interactions, knowledge, information management, inventive & creative potential, etc. are examples of management objects that have increased in number over time. (Abdelrhim & Elsayed, 2020).

Impact on E-commerce serves as the sole dependent variable in this study, while online payment, customer reviews, chatbots, mobile purchasing, and augmented reality research components serve as the five independent variables.
Methodology

This study employed quantitative research methodology. Before outlining the results on how technological advancements have affected the study sector, it was planned to gather and analyze statistical data from the respondents. In quantitative research, numerical data is used, which is then analyzed using mathematical or statistical methods. The results are then presented as tables, graphs, or other visual representations.

The data required for this research was gathered through a survey. Online questionnaires were used to conduct the study because they reliably and precisely record respondents' replies. A suitable amount of customization, systematic data collecting, and in-the-moment data analysis were made possible by the online survey platform offered by Google Forms, which served as the host for the questionnaire.

Respondents provided feedback about each statement in the second section for each idea. Respondents were given the option of selecting a number between 1 and 5, with 1 a strong disagreement and number 5 representing a strong agreement. To make sure that our survey would be easy to comprehend for respondents in terms of language use, grammar, sentence structure, and vocabulary, a pilot test was conducted.

To offer a systematic description of the seen and recorded occurrence, information must be summarized and then presented again (Trisovic, et al., 2022). This process is known as data coding. To prepare data for SPSS processing, data coding is necessary as the initial step. Coding and database entry are done with the survey data. To interpret survey results and enter data,
coding entails giving participants' replies a number (Trisovic, et al., 2022). All replies to survey questions must be coded if they are presented in an unintelligible format.

Six persons participated in a preliminary test of the poll before it was made public to gain input on its correctness, conciseness, grammar, and linguistic use. Family members and coworkers from a variety of age groups who either do or do not utilize E-commerce platforms were among the participants in the pilot test.

Both inferential and descriptive-analytic approaches may have been applied in the processing and analysis of data, depending on the presentation. Data collection was subjected to descriptive analysis to get detailed and segmented information about each variable. To determine whether the study was dependable and credible enough for use by other researchers, the validity and reliability of measures were examined. Correlation analysis was used to ascertain the bonding and strength of the variable. Using a multiple linear regression model, it was possible to assess the model's fitness and the extent to which a dependent variable could be forecasted from an independent variable.

**Data Analysis**

The poll has 121 chosen participants. 49 of the 121 respondents were women, 2 respondents preferred not to declare their gender, and 70 of the 121 respondents were men. There was a decent range of responses for each variable item, no invalid codes, and no missing observations. Table 1 displays the respondents' demographics by gender, while Table 2 displays the respondents' demographics by age.

**Table 1**

Respondents' Demographic (Gender Distribution)

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>49</td>
<td>40.5</td>
<td>40.5</td>
<td>40.5</td>
</tr>
<tr>
<td>Male</td>
<td>70</td>
<td>57.9</td>
<td>57.9</td>
<td>98.3</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>2</td>
<td>1.7</td>
<td>1.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
The validity of the questionnaire was checked and the reliability test (Cronbach’s α) was done to find out the internal consistency among variables. Thereafter, the correlation analysis was applied to determine the relationship between variables and to what extent they are interrelated to each other.

**Correlation Analysis**

The strength of linear relationship among two variables which are neither independent nor dependent was evaluated using correlation analysis. The correlation analysis showed that there is a linear link among the variables. Although the degree of the correlation among each variable differs, all linear correlations are positive. The remaining values of the variables increase in direct proportion to the value of the first variable. It's crucial to remember that correlation does not indicate causation. It's not always the case that one variable drives the other just because two variables are connected. The apparent association between the variables might be caused by other causes. As a result, more investigation is required to demonstrate a causal link between the variables.

The correlation analysis of each dependent variable employed in this study including mobile shopping, augmented reality, chatbots, customer reviews, and online payments is shown in Table 3.
Table 3
Correlation Analysis of Dependent Variable

<table>
<thead>
<tr>
<th></th>
<th>Mobile Shopping</th>
<th>Augmented Reality</th>
<th>Chatbot</th>
<th>Customer Review</th>
<th>Online Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Shopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.550**</td>
<td>.556**</td>
<td>.511**</td>
<td>.527**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
<tr>
<td>Augmented Reality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.550**</td>
<td>1</td>
<td>.565**</td>
<td>.591**</td>
<td>.617**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
<tr>
<td>Chatbot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.556**</td>
<td>.565**</td>
<td>1</td>
<td>.702**</td>
<td>.726**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
<tr>
<td>Customer Review</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.511**</td>
<td>.591**</td>
<td>.702**</td>
<td>1</td>
<td>.725**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
<tr>
<td>Online Payment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.527**</td>
<td>.617**</td>
<td>.726**</td>
<td>.725**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
<td>121</td>
</tr>
</tbody>
</table>

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

Multiple Linear Regression Analysis

Four presumptions regarding the data were made to evaluate outcomes of multiple regression. It is first believed that traditional random sampling techniques were used to acquire the data. The data are assumed to be completely independent of one another under the second supposition. The data is assumed to be distributed regularly per the third supposition. The last presumption is that the variance is the same across all of the data sets. The results of regressions' visual residuals analysis show that data have a normal distribution and a constant variance.
Figure 2
Regressions’ Visual Residuals Analysis

According to Table 4, every independent variable has a strong and favorable association with the dependent variable.

Table 4
Coefficients \( ^{a} \) Association

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant) -7.772E-16</td>
<td>.000</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>Mobile Shopping .200</td>
<td>.000</td>
<td>.190</td>
<td>90499633.570</td>
</tr>
<tr>
<td></td>
<td>Augmented Reality .200</td>
<td>.000</td>
<td>.283</td>
<td>125831886.879</td>
</tr>
<tr>
<td></td>
<td>Chatbot .200</td>
<td>.000</td>
<td>.231</td>
<td>87957157.326</td>
</tr>
<tr>
<td></td>
<td>Customer Review .200</td>
<td>.000</td>
<td>.249</td>
<td>95290907.606</td>
</tr>
<tr>
<td></td>
<td>Online Payment .200</td>
<td>.000</td>
<td>.250</td>
<td>91105586.557</td>
</tr>
</tbody>
</table>

\( ^{a} \) Dependent Variable: Impact on E-commerce Business

Table 5 demonstrates that independent variables can account for all of the change or variance in dependent variables.

Table 5
Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00(^{a})</td>
<td>1.000</td>
<td>1.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

\( ^{a} \) Predictors: (Constant), Online Payment, Mobile Shopping, Augmented Reality, Customer Review, Chatbot

Findings and Discussion

The research thoroughly studied the consequences of several technology developments on the E-commerce company. According to the research, online payment, chatbots, augmented reality,
user feedback, and mobile purchases all have a substantial impact on one another. The findings are presented, which validate previous research in the field and give light on the significance of these technical advancements. The correlation study showed substantial and positive correlations between independent variables, underscoring the fact that additional technical breakthroughs frequently appear alongside emerging ones. This demonstrates how buyers utilize many technologies at the same time, which is compatible with the concept of an all-encompassing strategy for improving the online purchase experience.

According to the survey, the use of mobile shopping technologies has a substantial influence on the growing E-commerce business. This conclusion is consistent with earlier research (Madan & Yadav, 2018; Huong & Wu, 2022) illustrating how mobile commerce is becoming increasingly important in today's digital economy. This study adds to the increasing corpus of studies proving how individuals prefer mobile shopping for its convenience and accessibility. Mobile buying is important to the growth of E-commerce.

Figure 3
*Impact of Mobile Shopping on E-commerce Business*

A considerable and advantageous effect of augmented reality technology on the E-commerce sector was found. According to the study, employing augmented reality 1% of the time might have a 20% impact on E-commerce. As seen in Figure 4, there is a link between augmented reality and online buying. The partial regression plot in Figure 4 shows a strong linear association between augmented reality and its effects on E-commerce businesses. The advantages of augmented reality for E-commerce enterprises are in line with other research that demonstrates how augmented reality technology may enhance the online shopping experience.
Utilizing augmented reality allows customers to examine products in realistic environments before making a purchase, which decreases uncertainty and improves decision-making. This outcome is consistent with studies (Kannaiah & Shanthi, 2015) that suggest augmented reality can raise conversion rates by boosting trust and engagement.

Figure 4
*Impact of Augmented Reality on E-commerce Business*

According to the study, there is a big connection between chatbot technology and how it affects E-commerce. The E-commerce industry has demonstrated that chatbot technology has a major and broad impact. Chatbots may answer inquiries, expedite customer interactions, and guide consumers through their online buying journeys. A previous study (Heo & Lee, 2018) suggests that chatbots may boost consumer engagement and happiness, which will lead to increased sales and customer loyalty.

Figure 5
*Impact of Chatbot Technology on E-commerce Business*
The findings suggest that the customer review technology trend has a substantial and significant influence on the E-commerce business. Figure 6 illustrates this with an extra value graph. The partial regression plot in Figure 6 depicts a linear relationship between user evaluations, technical advancements, and their influence on E-commerce enterprises. It emphasizes how important product reviews from customers are in the E-commerce business. There is a substantial link between customer review technology and its impact on E-commerce enterprises, lending validity to previous research that emphasized the relevance of customer reviews on purchase decisions (Amblee, et al., 2017; Tran & Strutton, 2020). Customer testimonials provide critical social proof that helps future purchasers make educated decisions. Positive evaluations may promote a product's reputation, dependability, and overall attractiveness, which can increase sales and an organization's bottom line.

Figure 6
Impact of Customer Reviews on E-commerce Business

It is established in the study that the evolution of online payment systems has had a substantial and profound impact on E-commerce activity. The partial regression graph in Figure 7 clearly shows the linear relationship between advancements in online payment technology and their influence on E-commerce enterprises. It emphasizes how an online retailer's ability to function is heavily reliant on its customers' trust in its online payment method. According to the survey, online payment technology has a substantial influence on E-commerce enterprises. This conclusion is consistent with previous research (Pandey & Parmar, 2019), which emphasizes the
importance of safe and convenient payment alternatives in developing consumer confidence and trust. Conversion rates improve and clients are delighted as a result of the availability of secure online payment options that alleviate worries about data security and payment processing.

Figure 7
Impact of Online Payment Technology on E-commerce Business

Conclusion
The study offers useful information on how various technical improvements affect E-commerce enterprises. The findings demonstrate the relevance of augmented reality, chatbots, mobile shopping, customer feedback, and payment technologies in transforming consumer behavior and company consequences. These findings are consistent with previous research, emphasizing the essential role that these technology components have had in the growth of the E-commerce ecosystem.

Mobile purchases are increasingly driving E-commerce success. Consumer behavior has altered as a result of the ease with which mobile devices can be obtained, cutting off new avenues for firms to contact their target market. This is consistent with previous studies emphasizing the importance of mobile optimization and user-friendly interfaces in catering to the growing population of tech-savvy clients.
The findings demonstrate how chatbot technology, online payment, augmented reality, user feedback, and mobile purchasing have a substantial influence on E-commerce businesses. The study is expanding the data base establishing the link between technology and consumer behavior, as well as how this link influences the current business climate. Amazon and other E-commerce companies should take advantage of technical improvements on purpose to improve consumer experiences and preserve a competitive edge in the fast-expanding digital market.

Limitations of the Study

The study's findings are illuminating, but it is critical to recognize their limits. Self-reported survey data, which might be biased, were employed in the study, which was restricted to a certain environment.

1. The study was only able to utilize a sample size of 121 people due to time restrictions and data collection processes.
2. Because an online survey was the only method we used to collect data, our study will be constrained by its inherent limitations.
3. Drawbacks of conducting online surveys, such as survey fraud, when the respondents could give false or dishonest answers.
4. Because of unpredictable internet connectivity and the respondents who might not be interested in doing a survey, an online survey has the drawback of having a small sample size. It also has issues with respondent availability.
5. There might be a problem with cooperation when respondents give inaccurate answers or drop out of the survey in the middle if they get bored.

Future Research

Future studies may integrate face-to-face interviews with online surveys to get more reliable data and dispel the myth that only surveys can be effective. As an example, in-person interviews have a higher response rate than questions posted online for those who are unable to read or write down their responses, interviewers can assess the respondent's non-verbal behavior, and interviewers can choose the location for the interview in a quiet and private area, as opposed to those conducted through online surveys, which can have a completely different environment.
References


