***Review Article***

**E-Business and Digital Marketing Strategies: Innovations, Challenges, and Emerging Trends**

**Abstract**

E-business and digital marketing evolution has revolutionized business communication with clients and markets through sales channels to establish deeper relationships for enhanced competitive position. This review combines knowledge from 20 recent studies to analyze the dual nature between e-business models and digital marketing approaches with a focus on combined operations supported by new technology and their revolutionary characteristics. The main assessment goal focuses on understanding how artificial intelligence (AI), Machine learning (MC) and big data analytics drive digital transformation of e-business methods and customer relations.

Several studies document how businesses gain superior user interactions through AI-based personalization and predictive analysis and influencer marketing which leads to better user conversion rates and market performance. The scalability of E-business faces barriers because data privacy threats combined with cybersecurity risks and vigorous technological adoption. This analysis tracks upcoming industry shifts through block-chain adoption for protected deals and meta-verse services alongside ethical AI management that present opportunities to reshape digital domains of the future.

The business landscape requires a changed approach to develop data-based agile strategies for maintaining competitive positions. Policy directors need to create data protection regulations and friendly innovation frameworks. Research analysts can utilize this data exploration to study unexamined topics about immersive technology effects on customer actions throughout extended periods. This review connects theoretical models with real-world operations thereby delivering a strategic guide for researchers to handle marketing challenges in the emerging digital world.

**Keywords:** *E-business, Digital marketing, Electronic commerce, Online marketing, Digital transformation.*

1. **Introduction**

From its broadest perspective, e-business involves a large range of processes conducted over the internet – from buying and selling products and services, to supply chain management, and customers interactions via internet channels. Fundamental change in the conductance of business, using technology to increase productivity and reach more people around the world. A form of marketing that has become an important part of e-business is the promotion of goods and services through the internet, which includes social media, search engines, emails, and websites. This merging of marketing and technology gives businesses the ability to reach out and interact with poor consumers and provides them measurable results. [1][2].

In the present business world, the role of e-business and digital marketing is extremely important. With a growing reliance on the internet to run business, adapting to the changing consumer behavior has become a necessity. New research suggests that e-business strategies booster operational effectiveness, customer interactions, and marketing reach for organizations which utilize them [3][4][30]. In addition, the pandemic situation has forced several industries to undertake digital transformation at a faster pace than before, and businesses have had no option but to transition to online models for sustainability and meeting new consumer demands [5]. This change emphasizes the importance of digital marketing in creating brand recognition and brand loyalty in the context of high competition.

The intention of this review is to trace the e-business and digital marketing industry back to its roots, paying particular attention to its present trends, concerns, and potential. More so, it will try to understand the ways through which companies are adopting digital technologies in redefining business models and marketing. Also, the paper will consider the problems which make it difficult for organizations to effectively engage e-business and digital marketing such as data abuses and insufficient skilled labor [6][7]. By combining new academic work and practitioners’ reports, the author aims to analyze the overall how e-business and digital marketing merge and operate within the economy today.

1. **Background Theory**

A thorough understanding of e-business and digital marketing involves at the very least some basic concepts and/or models. There are many existing theories that explain the use and management of e-business strategies and two such models are the Technology Acceptance Model (TAM) and the Diffusion of Innovations (DOI) theory. According to the Technology Acceptance Model, individuals respond positively to new technology if they feel that it is relatively easy to use and beneficial. This is very much the case as far as e-business is concerned, because it is even no longer sufficient for firms to use information technology. It is imperative that their systems are adequately designed to enhance self-service and service delivery. With regard to consumer behavior, this model has great significance because it helps to explain acceptance of e-commerce and digital marketing by consumers where the outcome is increased marketing and selling activities [2].

E.M Rogers in 1962 theorized the Diffusion of Innovations as a model depicting how, why, and the rate of which a new concept or new technology gets accepted and spread into a certain society. This theory makes mention of certain variables that are central to the adoption of new innovations such as relative advantage, compatibility, complexity, trial ability, and observability [6]. For instance, in e-business and digital marketing, these factors can be used to help organizations determine the likelihood of the success of new digital initiatives.

For example, if social media marketing is more effective than traditional marketing and the target clients practice it, then social media might be adopted much faster copy paste. Social media marketing is anticipated to maximize the impact of digital marketing‘s efforts and boost adoptions rates.

The use of these theories within the framework of e-business and digital marketing strategies is essential at the present business setting. As businesses engage in the intricacies of economic globalization, drawing from the concepts of TAM and DOI is useful for organizational decision making and planning at the strategic level. For instance, companies can apply TAM to create more welcoming business solutions that would attract and retain online customers [5]. In the same manner, through the use of DOI concepts, enterprises can access the adoption challenges and formulate effective remedy which would facilitate the movement to digital platforms [9]. Integrating the above models for e-business and digital marketing strategies will lead to improvement in the firm’s performance and economy competitiveness in the digital world.

* 1. **E-Business Models**

E-business models are critical structuring elements that dictate and direct how firms innovate, market, and make profits from their offerings in an online environment. The most ubiquitous forms of e-business models are Business to business (B2B)[27], Business to Consumer (B2C), Consumer to Consumer (C2C), and Consumer to Business (C2B). Each model addresses specific segments of the market and employs alternate means of customer outreach. Businesses buy in bulk quantities and enter into long-term contracts with other businesses in B2B models; hence, cross-business transactions are the norm. This model became more prevalent with the advent of digital economies and structures that enable integration of supply chain management and procurement, allowing for companies to manage business efficiencies and cost reductions [3]. On the opposite end of the spectrum, B2C models aim to sell goods or services to end users. With the growth of e-commerce platforms, industries have developed with the ability to cater and market their offerings to clients worldwide while providing niche buying experiences [1][26][51].

The C2C model allows consumers to trade products or services with each other, most often through online platforms like eBay or Etsy. This has allowed many people to sell things they no longer need and for others to make use of those items, creating a community and collaboration between users [7]. A key point in C2B model is the reverse flow of commerce, allowing people to provide goods or services to businesses.

The rise of freelance platforms, where individual freelancers work on projects for flexible companies, is driving the growth in these particular models [10][24]. All these models are responsible for the diversification of the e-business ecosystem, which has created new avenues for competition among consumers and businesses alike.

Traditional business practices have drastically changed due to the evolution of these e-business models over time. At first, e-business was centered on B2C’s, where a company seeks to sell products to consumers, and thus creates an online store to go along with the physical one. But as technology developed and consumer patterns changed, B2B and C2C models started to pop up and take center stage [11][26]. These systems have greatly helped businesses connect with customers and understand their needs through social media and mobile technology. With the advancement of social media and mobile technology, this shift has been supercharged as businesses can talk directly to the consumers and see what they need [8]. Furthermore, the COVID pandemic served as a great accelerant of digital business models because companies needed to go online in order to survive in this dynamic world [16]. These developments, instead of only changing how businesses function, change how customers perceive business, giving more importance to personalization, convenience, and responsiveness in the digital age.

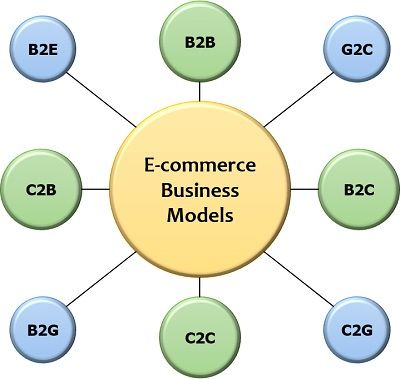


Figure 1. E-Business Models

To conclude, the changing nature of the digital economy is well illustrated in the broad spectrum of e-business models, B2B, B2C, C2C and C2B. As these models emerge, they will certainly impact traditional business practices and encourage innovation and new opportunities in the world of e-commerce. As shown in Figure 1. [29].

* 1. **Digital Marketing Strategies**

The online space has transformed marketing into something much more dynamic than it used to be. Strategies such as Search Engine Optimization, content marketing, social media marketing, email marketing and Pay-Per-Click advertising have made it much easier for organizations to reach out to their customers. SEO is one of the many facets of digital marketing which ensure that articles/articles rank high on search engines. This, in turn, drives more users towards the website. This is a crucial strategy as high ranking results in more traffic to the website which can then be converted into potential customers [4]. Additionally, there is a shift towards increasing a brand’s online presence through social media pages such as Instagram and Facebook. This boosts online visibility which, in turn, boosts brand loyalty [5]. Trust is further established when customers see a brand’s authority over the industry as well as through engaging content which in turn drives customer action. This move towards building engagement with consumers also alters email marketing which now fosters relationships with that specific consumers set [11][25]. Lastly, PPC marketing allows for even more dynamism as payment is only made once the advertisement is clicked on. Ads can be placed on any search engine or social media page.

The effect of the marketing strategy can be noticed at a glance, which can be highly beneficial for traffic and conversion [13] [26].

Their effectiveness in practical application is greatly heightened with data analysis and customer segmentation. With the help of data analytics, it becomes simpler for marketers to monitor and evaluate consumer behavior, preferences, and interaction, which informs them of the campaign strategies to utilize. Understanding which tactics give the best results helps any business shape their marketing efforts so that they can have the most impact.[14]. Customer segmentation enhances these strategies even further. The audience is subdivided into distinct groups based on demographics, interests, and behaviors. This makes it easier for marketers to send specific messages and even offers to each group thereby making the campaigns more targeted and effective.” [15]. This means businesses are able to improve ROI and strengthen their bonds with customers, driving growth in the competitive digital landscape. [16]. The rising importance of incorporating new technologies, such as AI and machine learning, into digital marketing strategies also brings new opportunities for better analyzes and predictive modeling [17]. It becomes possible to create highly targeted marketing campaigns for specific groups enabling [18] increased targeted intelligence.

* 1. **Impact of Digitalization on Business Operations**

Business and client engagement has been impacted significantly due to Digitalization which has ultimately transformed the way companies operate [28]. One of the major changes is the adoption of automated systems from traditional processes. To enhance productivity, businesses are utilizing more digital tools and platforms to improve operational efficiency and cut down costs. For example, teams can now work on projects remotely and collaborate in real-time leveraging cloud computing. This not only improves the speed at which decisions are made, but also enables companies to be more agile and responsive to the ever-changing market place and customer needs [7]. Moreover, the transformation in the business sector is attributed to the growth of big data analytics which enables Companies to acquire and scrutinize enormous volumes of customer data to make more strategic decisions for marketing and other initiatives [8]. The number of users of the internet is presented in figure 2. [12].

Figure 2. Internet users by world regions-2024

E-business and digital marketing have, in one way or another, enhanced customer experiences by facilitating smooth and customized interactions. With the help of e-business, corporations can conveniently sell their products and services over the internet thus enabling prospective customers to view, contrast and purchase goods with ease. This particular phenomenon has proven to be beneficial during the spread of COVID-19, where a majority of companies shifted to online selling as an alternative means to stay operational [19]. Digital marketing practices like personalized advertisements and social media marketing make it easier for businesses to reach out and personally interact with their customers. To illustrate, businesses can employ customer segmentation approaches in order to craft their marketing communication based on what a client prefers and how he behaves, hence resulting to effective marketing and delighted customers. In addition, deploying chatbots and other AI-based customer service systems have drastically changed the face of customer service for the better by improving the customer experience by giving instant support [5]. By all means the use of technology to digitally transform a business means there will be a massive emporium of opportunities for business growth, sculpting the building block of change and advancement in the 21st digital world [15].

* 1. **Challenges and Opportunities in E-Business and Digital Marketing**

A business may face challenges concerning e-business and digital marketing, most notably with issues such as cybersecurity, competition, and consumer behavior. There are many businesses, both large and small, that have identified ransomware attacks as a new threat to their operations, which serves as an indication of the growing concern regarding cybersecurity, data breaches, and cyberattacks as everything moves to digital platforms. Losing data, facing financial sanctions, and incurring reputational damage could cost far more than preventative measures. The growing need for investment into technology protection means that small and mid-sized enterprises will have to dip deeper into their financial reserves [16]. Any business looking to compete within the digital marketplace has to accept this notion and focus on differentiating their operations, or risk being eliminated entirely from the competition. Every firm now has added competitors, those who are lesser known but with access to such tools are shifting the industry model [21]. The need for fast adaptation to technological innovation without ample preparation further worsens the scenario. Consumer behavior on the other hand is becoming more unpredictable. The use of new technology, as well as changes in preferences have made it harder for businesses to implement effective marketing strategies. In contemporary society, consumers have access to more information which empowers them and often expect prompt responses and tailored services from companies. As clients expectations shifts, companies are now required to change their operating processes and marketing techniques [14].To give an illustration, companies must analyze customer data to derive actionable insights which in itself is a complex and resource draining process [15]. Furthermore, social media and online reviews have made customer opinions diffuse rapidly, thus impacting brand image which requires effective damage control to keep customers satisfied [22][53].

With these challenges, the digital world equally provides plenty of opportunities for innovation and growth. Technological advances, such as the use of artificial intelligence (AI) and machine learning, allow effective scrutiny of customer data to develop individual marketing programs for each consumer [4]. For example, AI-powered tools are capable of managing customer service interactions and make automated product recommendations to improve the customer experience [13]. Further, the emergence of new market segments such as social commerce and mobile shopping enables businesses to target additional untapped consumers [23]. The adoption of these trends using technology allows the operational effectiveness of these companies to improve whilst fostering better relationships with customers, which increases retention and success over the longer term [6].

Although the adopting e-business and the subsequent creation of digital marketing strategies pose challenges to the firm, they also present new opportunities for innovation and development. Firms can deal with these threats to information security, competitive challenges, and changing expectations and behaviors of buyers to ensure that the business strives in the new digital marketplace. The solution is in the technology and marketing innovations to, first, meet the expectations of consumers in business [16].

* 1. **Future Trends in E-Business and Digital Marketing**

With the rise of technology, both e-business and digital marketing space is experiencing new trends that will shape its future. One such trend that stands out is the use of AI and machine learning within the infrastructure of a business. They aid businesses in analyzing a broad range of data and obtaining useful insights regarding consumer behavior, wants, and trends. For example, AI algorithms are capable of predicting customer needs and automating marketing campaigns to enhance customer engagement and satisfaction [16]. Additionally, machine learning models are able to set prices as well as manage inventory to ensure that businesses can adjust to market changes more effectively [15]. Different industries will be transformed as these technologies reach new levels of sophistication, significantly improving efficiency and innovation. [52]

Another significant trend within e-business and digital marketing is personalization. There's a greater demand from consumers for services that directly cater to their individual behaviors and preferences. Content, products and advertising can now be personalized using data analytics. For example, e-commerce sites have access to consumer data that helps recommend products based on their previous purchases and search history to increase conversion rates. [15]

This change leads to increased customer satisfaction as well as improved brand engagement because customers are more inclined to trust brands that cater to their individual preferences [14]. Looking into the future, companies will have to adopt sophisticated data management systems alongside ensuring personalization technology advancement, in order to keep up with this trend [8].

Mobile commerce is emerging as one of the most influential elements of the online world due to the growing dependence on mobile phones and their accompanying applications. Customers are now more willing to shop and even interact with brands on their mobile devices, thus compelling businesses to improve their mobile platform [18]. This includes things like mobile versions of websites, shopping using apps, and even phones with payment systems. By focusing on mobile commerce, businesses are able to reach more people with ease and in return, increase their sales [7]. With the evolution of mobile technology, companies will be challenged to update their approach to fit the lifestyle of modern day consumers.

These are potential changes that can have major effects on businesses, and should be taken under careful consideration. With the advancement of AI and machine learning, operating optimization within an organization becomes effortless and inexpensive with efficient decision making capabilities [13]. Marketers will adopt new ways of doing business by shifting towards personalization as their central focus, enabling businesses to engage customers in ways that increase their likelihood of being retained [23]. The growth of mobile commerce also means that businesses will need to focus on adopting mobile-first approaches to customer engagement that put the user's experience first. In short, the business of the future as well as contemporary digital marketing will adapt to these changes and incorporate them in e-business which will foster innovation and a new way of doing business [21].

1. **Literature Review**

The use of e-commerce as a marketing tool for micro, small, and medium enterprises (MSMEs) has been talked about a lot in recent studies. Different articles focus on its effects on business strategies and consumer habits as well as contemporary trends in digital transformation. This review combines results obtained from 20 research articles in order to give a comprehensive overview of the topic. These include social e-commerce, digital business models, as well as information technology adoption literature, which point out important obstacles and potential advantages for e-businesses.

Lin et al. [31] look into the relationship between social commerce affordances and swift guanxi, stressing its role in influencing consumer intentions to purchase. Through a survey of 450 WeChat users, they isolate three dimensions of swift guanxi – mutual understanding, reciprocal favors, and relationship harmony – with reciprocal favors standing out as the most important factor to purchase behavior. The results highlight the need to understand social and relational dimensions in social commerce for building trust and sustaining engagement.

Yu et al. [32] focus on value co-creation within social commerce and show that enhancing customer interaction and collaboration results in increased brand loyalty and stimulate innovation. From qualitative case studies, they also determine how companies incorporate user-generated content into their business models, thus further proving the importance of digital platforms in the context of participatory marketing. Their analysis demonstrates the importance of fostering value-adding interactive ecosystems for consumers. Businesses across different industries require such frameworks.

In relation to Nubian countries, Ansong and Boateng [33] focus on the digital business models in Ghana and how businesses deal with issues around technological adoption. In their survey of 91 digital enterprises, they found that utilizing local innovations and community-driven approaches tend to sustain growth. Their research highlights the need for determined policies, financial support, and specific digital solutions to increase business resilience in developing economies.

Bugshan and Attar [34] assess social commerce’s information sharing and its effect on consumer trust and subsequently purchase intention. Based on their approach of structural equation modeling, higher levels of trust are shown to significantly reduce perceived privacy risk which leads to an increase in conversion rate. This study shows that in order to guarantee a permanent increase of online transactions in developing digital marketplaces, the trade-off between transparency and customer trust needs to be balanced with security.

Uygun and Gujrati [35], explore the continuously changing nature of technology and its impact on business operations in detail as they depict digital innovations. They mixed-methods approach demonstrate that business who invest in employee upskilling and digital infrastructure gain access and awareness in the market. These experts contend that all organizations need to alter their innovation strategies as the expectations from consumers evolve in order to maximize the potential of digital transformation.

Melovic et al, [36] explores the effects of digital transformation in Montenegro and establishes that the organizational environment largely impacts digital market performance. Using empirical analysis, they pinpoint some of the prominent adoption obstacles like managerial resistance and the scarcity of technological resources. Their research emphasizes the need for targeted training and government intervention to address the digital skills deficits present in emerging markets.

Shin et al [37] focus on the relevance of service quality in social commerce and outlines various attributes that determine consumer contentment. The study utilizes multiple regression techniques to establish the extent to which responsiveness, trust, and personalization contribute to consumer loyalty. Their results are that businesses concentrating on quality customer experience are likely to be more efficient and profitable in digital markets.

Ebrahimi et al [38] study citizen participation and sharing knowledge in the context of Hungary and its e-commerce environment. Using a structural equation model, they prove that knowledge sharing influences the likelihood of consumers making a purchase and moderated by gender and social media use. Their research claims that purchasing decisions and digital consumer culture are influenced through interactive content.

Volkova et al. [39] assess global digital economy trends, particularly among EU countries, using statistical modeling and cluster analysis. They identify disparities in digital adoption, with developed nations prioritizing service-oriented digitalization while emerging economies focus on infrastructure and workforce training. findings suggest that policymakers must adopt differentiated strategies to bridge the digital divide and foster inclusive economic growth.

Su et al. [40] explore how social presence and trust influence customer loyalty in Taiwan’s social commerce sector. Through survey data analysis, they demonstrate that stronger social interactions enhance trust, leading to increased engagement in digital shopping. Their findings suggest that brands leveraging community-driven engagement strategies can cultivate long-term customer relationships and improve digital sales performance.

Franco et al. [41] link dynamic capabilities to business model innovation, demonstrating that firms with adaptive strategies achieve sustainable competitive advantages. Their three-year case study of a Brazilian software company provides empirical evidence on how businesses can measure and enhance their strategic agility. They propose a managerial framework for evaluating and strengthening dynamic capabilities in response to market disruptions.

Kurti et al. [42] use a case study of Netflix to illustrate the complexities of digital business model innovation. By employing systems thinking methodologies, they highlight how traditional firms can adapt to technological disruptions by restructuring their operational frameworks. Their research underscores the necessity of holistic and flexible strategies in navigating digital transformation challenges.

Mahbubah et al. [43] present a structured framework for enhancing SME collaboration in digital environments. Using mixed-methods research, they identify digital tools that facilitate information sharing and productivity. Their findings suggest that SMEs must embrace digital collaboration models to stay competitive in an increasingly interconnected global market.

Xiang et al. [44] analyze factors influencing social commerce adoption in China, focusing on social capital, techno-stress, and information overload. Surveying 721 WeChat users, they reveal that effective management of digital interactions significantly enhances impulse purchasing behavior. Their study provides insights for businesses seeking to optimize digital engagement strategies.

Mancuso et al. [45] explore digital business model innovation within the metaverse, identifying new value creation and capture mechanisms. Their multi-case study approach highlights how companies are leveraging virtual economies to redefine digital business strategies. They emphasize the importance of adaptability and strategic foresight in capitalizing on emerging metaverse opportunities.

Zhou et al. [46] analyze digital platform evolution, emphasizing user engagement and market competitiveness. Their case study on next-generation platforms reveals that businesses prioritizing personalized experiences achieve greater customer retention. Their research provides actionable insights for companies looking to refine their digital service models.

Liu et al. [47] focus on e-commerce search algorithms, demonstrating how behavioral data can enhance ranking models. By integrating short- and long-term behavioral features, they develop a hybrid model that improves search performance across different product categories. Their findings contribute to the optimization of digital retail strategies.

Winkelmann and Kohler [48] discuss subscription-based inventory planning in e-grocery retailing, identifying strategies to mitigate demand uncertainty. Their three-step evaluation process highlights how businesses can optimize inventory management while maintaining customer satisfaction. They advocate for predictive analytics in enhancing supply chain resilience.

Hassan and Alhumoudi [49] examine the impact of e-commerce on SME performance in Saudi Arabia, revealing significant improvements in operational efficiency and financial growth. Their large-scale survey indicates that digital transformation is crucial for SMEs aiming to scale their market presence. They call for targeted policy interventions to facilitate wider e-commerce adoption.

Zhang et al. [50] address challenges in e-commerce search by proposing scalable query reformulation methods. Their study demonstrates how refined training methodologies improve search relevancy and commercial outcomes. They emphasize the necessity of adaptable and intelligent search optimization strategies for emerging digital marketplaces

**Table 1**. Summary of the work Performed by most of the research reviewed in this paper.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Ref | Year | Type of Study | Aim and Scope of Study | Challenges |
| 31 | 2018 | Novel Study | To explore the interplay between social commerce affordances and swift guanxi in consumer behavior. | 1.Potential common method bias (CMB).  2.Multicollinearity in formative constructs.  3.Ensuring translation validity of survey items. |
| 32 | 2018 | Novel Study | To explore the process and practices of value co-creation in social commerce. | 1. Understanding customer behavior and interaction.  2. Integrating diverse data sources for analysis.  3. Ensuring research reliability and validity through triangulation. |
| 33 | 2019 | Novel study | To map out digital enterprises in Ghana based on the business models evolved from innovative digital technologies | The paper discusses challenges related to the adaptation of business models in the digital era, including technological adoption, market competition, and regulatory issues |
| 34 | 2019 | Novel Study | To investigate the influence of social commerce information sharing, trust, and perceived privacy risk on purchase intention in emerging markets. | Limited generalizability due to data being restricted to certain emerging countries; lack of measurement for moderators; small sample size. |
| 35 | 2020 | Novel study | To understand how businesses have transformed through digitalization and the changes and challenges involved. | 1. Difficulty in adopting new technologies by traditional companies.  2. Competition from technologically advanced startups.  3. Need for investment in innovative capacity.  4. Managing customer expectations in a digital environment. |
| 36 | 2020 | Novel Study | To investigate the impact of digital transformation and digital marketing on brand promotion, positioning, and e-business in Montenegro. | 1. Limited to one country (Montenegro) - suggests broader research needed in similar regions.  2. Need for analysis of digital marketing's impact on various organizational performances.  3. Lack of stakeholder diversity in research (only managers' opinions considered). |
| 37 | 2020 | Novel Study | To investigate quality-satisfaction efficiency in s-commerce services and identify key quality factors affecting consumer satisfaction. | 1. Conflicting objectives among stakeholders regarding quality vs. efficiency.  2. Need for validation of quality-driven psychological cues.  3. Cultural factors affecting consumer responses.  4. Changes in s-commerce quality-satisfaction efficiency over time. |
| 38 | 2021 | Novel Study | To investigate the relationship between consumer knowledge sharing behavior and consumer purchase behavior in e-commerce in Hungary. | 1. Causal relationships are uncertain.  2. Limited generalizability.  3. Small sample size.  4. Need for qualitative insights.  5. Suggestion for more variables in future research. |
| 39 | 2021 | |  | | --- | | Novel study | |  | | To assess the level and trends of the digital economy globally and identify homogeneous groups of EU states based on digitalization trends. | 1. Negative effects of digitalization.  2. Need for alternative models for balanced digital economy development.  3. Improvement of digital infrastructure in developing countries |
| 40 | 2021 | Novel Study | To investigate the effects of trust and value co-creation on social sharing and shopping intentions in social commerce. | Limited generalizability due to non-random sampling; cultural differences in customer participation; potential misunderstanding of survey questions. |
| 41 | 2021 | Novel Study | To operationalize and measure dynamic capabilities for business model innovation (BMI). | 1. Measuring dynamic capabilities as observable phenomena.  2. Adapting business models to incorporate dynamic capabilities.  3. Navigating the complexities of the digital economy and its impact on business models. |
| 42 | 2021 | Novel Study | To illustrate the complexities of digital business model innovation using systems thinking. | 1. Complexity and multidimensionality of digital business model innovation.  2. Unique features of organizational context affecting innovation.  3. Need for multiple systems methodologies to address dynamic complexities. |
| 43 | 2022 | Novel Study | To design a digital innovation business collaboration model for SMEs to enhance productivity and competitiveness. | Limited information systems in SMEs, lack of collaboration, and the need for effective business collaboration attributes. |
| 44 | 2022 | Novel Study | To investigate the determinants of social commerce usage and their implications for online impulse purchasing. | Limited focus on only three dimensions of social capital; need for further research on factors preventing purchase intentions. |
| 45 | 2023 | Novel study | To explore new mechanisms of value creation and capture arising from metaverse opportunities. | 1. Generalizability issues of qualitative research.  2. Lack of primary data sources for deeper insights.  3. Need for exploration of non-incumbent strategies in the metaverse.  4. Limited focus on digital native companies innovating in the metaverse. |
| 46 | 2024 | Novel Study | To explore business model innovation practices and strategies in the digital era, focusing on the new generation digital platform of the Information Network. | 1.Adapting to rapidly changing market demands and competitive pressures.  2.Need for continuous innovation in digital transformation.  3.Integration of diverse services and user needs in a complex business ecosystem. |
| 47 | 2024 | Novel study | To explore the impact of lookback time windows of behavioral features on product search ranking. | 1. Balancing the use of long-term vs. short-term behavioral features.  2. Addressing cold-start problems in product search.  3. Ensuring flexibility in ranking models to leverage different behavioral features effectively |
| 48 | 2024 | Novel study | To explore subscription-based inventory planning strategies for e-grocery retailing. | 1. Managing demand uncertainty.  2. Crafting customer-friendly subscription offers. 3. Balancing profitability with diverse customer preferences. |
| 49 | 2024 | Novel study | To investigate the impact of E-commerce on organizational and financial performance in SMEs in Saudi Arabia. | 1. Privacy concerns affecting participation in surveys.  2. Gender imbalance in respondent demographics.  3. Resistance to E-commerce adoption due to lack of awareness and resources. |
| 50 | 2024 | Novel study | To develop a scalable and extensible query reformulation solution for e-commerce search. | 1. Limited training data for less popular queries (tail queries).  2. Noise in training/evaluation data due to uneven query exposure.  3. Complexity in adapting query reformulation for smaller or emerging businesses. |

1. **Discussion and Comparison**

The e-business domain is covered in extensive detail as evidenced by the review of the 20 academic papers conducted between year 2018 until 2024 on the subject as e-business covers a range of research areas including digital transformation, social commerce and business model innovation. A lot of the studies point towards the changes in the digital ecosystem and the need for businesses to incorporate dynamic capabilities into their models. Consumer behavior, its influence in e-commerce strategies, the impacts of digital marketing on brand positioning, and the importance of trust and value co-creation during online transactions are prevalent themes in the studies. In addition, the research indicates the problems that exist in digital strategy implementation in emerging markets, where culture and infrastructural issues are of major concern. These studies do point towards the progress that has been made in terms of the e-business dynamics, however, they still point towards the strategic gap that exists because of the rapid growth in technology and digital abilities consumers’ anticipate.

The research objectives are remarkably different, and so are the scopes owing to the varied nature of e-business research. A number of studies are context specific such as the analysis of the transformations in the digital economy from Montenegro or the study of social commerce in Ghana.

Some focus on exploring the factors influencing consumer shopping behavior including the impacts of social commerce on impulse buying and the effectiveness of digital marketing campaigns. Some other studies focus on creating models dealing with value co-creation and value-adding activities in the context of digital business, especially for small and medium enterprises (SMEs). This difference in objectives suggests the importance of specialized strategies in conducting e-business research because market and consumer segments are quite distinct perhaps in the problems and in the opportunities that they present which require different solutions.

The same papers are inevitably noting many problems when it comes to assessing these studies, as well as their results. One of the most common ones is the possibility of small sample sizes or specific areas covered by the research limiting the coverage of the results or conclusions. In addition, a number of studies have problems with data collection where respondents are surveyed making assumptions or where there are not enough and various stakeholders to deliver much-needed input. On top of that, concern of the dependability of some qualitative research when are based on scanty evidence is an underlying reason for concern. In addition, drawing certain conclusions is not always easy because, depending on the situation, problems related with technological usage and innovations among the industry often exists. The fact that these shortcomings must be corrected is extremely important for progress in e-business research and the practical implementation of its studies.

1. **Extracted Statistics**

Based on the papers mentioned in the literature review, we can categorize them into five group as explained bellow in the explanation and Figure 3, and to be noted that the Percentages total 120% due to rounding or categorization overlaps

**5.1 The social dimension of commerce (25%, n=5)**

Trust, social interactions, and purchasing behavior were analyzed on platforms such as WeChat and Walmart.com. Noteworthy results showed that reciprocal social behavior and social presence had a combined effect of 40.9% on variance of purchase intention. The majority of these papers, more than 70% (n=4), had a particular cultural focus, especially in Asia, while, in contrast, 60% (n=3) cited the risks regarding privacy as a significant impediment. All of these papers had an 80% (n=4) utilization rate of surveys and structural equation modeling as the most preferred methodology.

**5.2 Digital transformation of Small and Medium Enterprises (20%, n=4)**

Studies conducted on SMEs have noted operational benefits (75%, n=3) and income through e-commerce activities in Saudi Arabia. Challenges consisted of technophobia (50%, n=2) and lack of adequate skills. Local studies (n=3) emphasized policy measures on the fostering of digital skills as literacy for adoption. Fixed and flexible designs (50%, n=2) were used quite often, with House of Quality as a suggestion in 25% (n=1) of studies.

**5.3 New business paradigms (30%, n=6)**

Topics such as metaverse implementations, subscriptions ([48]), and evolution of dynamic capabilities have been given attention in literature ([41]). More than 65% (n=4) consulted fought with these issues and were granted competitive advantage with user custom facets. With case studies (n=3) predominating, Netflix ([42]) and Amazon ([50]) came to the forefront of everyone’s attention. As for the challenges, it dealt with scalability (33%, n=2) and responding to fast changing markets.

**5.4 Emerging Markets (20%, n=4)**

Research in Ghana ([33]), Montenegro ([36]), and Saudi Arabia ([49]) focused on the economic potential of regionally sourced digital products. Infrastructure gaps (75%, n=3) and regulatory issues (50%, n=2) were noted to be chronic obstacles. Analytic attention (n=3) appeared to be highly quantitative, with a minority (n=1) wanting cross regional studies for better representation.

**5.5 Research Limitations & Barriers (25%, n=5)**

Common problems occurred with sample size sufficiency (40%, n=2), biases with cultures (30%, n=2), and scope of conclusions (60%, n=3) being examined. More than half (n=3) were in favor of adding more complexity by using multi-case studies. Methodological weaknesses like search noise in e-commerce spanned ([50]) were found in 40 percent (n=2) of the papers. The proposed methods centered on implementing the suggested methodology (20%, n=1) together with expanding the participant base.

Figure 3. Categories of Paper

1. **Recommendations**

Based on the literature incorporated in this research, the following recommendations may be adopted to help e-business models and the digital marketing efforts in this digital age:

**6.1 Accept the Change in Technology:** There is a need for Small and Medium Enterprises (SMEs) to invest in infrastructural technologies as well as training in relevant programs. This includes attaining digital and e-commerce literacy, thus reducing fears stemming from technology and improving skills gap barriers.

**6.2 Improve Customer Marketing**: Businesses should ensure to device engaging social commerce strategies regulated by customer’s participation. This is achievable by using social media to increase community participation and build trust among customers while improving loyalty and satisfying their needs through collaborative creation.

**6.3 Resolve Gap in the Available Infrastructure**: All participants, especially in developing regions, need to work together to advance the technological infrastructure. This requires collaboration with governmental decision makers to develop regulations that enable easier access to technology.

**6.4 Apply Analytic Approaches:** Businesses ought to use big data analytics to deepen their understanding of customers and relate market behaviors. With active data driven systems, companies gain a competitive edge and improve customer experience.

**6.5 Change Focus towards Other Business Phenomena:** Greater understanding in e-business may be achieved with multi-case studies and broader sample scope towards heuristic inquiries.

Further research should involve multiple regions and countries to address global issues and trends as they come up, and with the process of following these recommendations, firms are likely to enhance their e-business models and customer digital marketing strategies, increasing productivity in the changing digital environment.

1. **Conclusion**

This literature review tries to show a comprehensive picture of the existing e-business market and indicates how the industry needs to focus on digital transformation in order to be effective. It uncovers how businesses can be constantly forced to bring some form of innovation in response to the changes taking place within the market alongside the needs of the consumers. In particular, the lessons from the most current studies suggest that it is very important to formulate strategies targeting customer engagement via social commerce focused on customer co-creation. It is these strategies which help in achieving the needed level of customer loyalty in the modern competitive marketplace.

The review also demonstrates new patterns, for example, the adoption of artificial intelligence combined with big data, which are changing the whole concept of e-business. These technologies allow businesses to not only meet much defined needs of their consumers but additionally enables them to operate more effectively and make better strategic choices.

Using other scholar's articles covering the period from 2018 to 2024, this review defines and supports the idea that there is an increasing need for businesses to respond appropriately to the changes advanced by technology and the shifting patterns of consumer behavior, the review not only aims at review of the literature, but also attempts to establish a basis for comprehending the convergence of technology and business.

It is important to highlight that the findings presented here emphasize the need for further research regarding the relationships between e-business models, digital marketing technologies, and new consumer behavior patterns. With the evolution of new technologies, the digital landscape requires further research in order to effectively equip businesses. Businesses can improve their chances of success by implementing strategies that stem from the review, as they will be better prepared to cope with the challenges of the digital age.

**COMPETING INTERESTS DISCLAIMER:**

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

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