

# **E-Commerce Trends and Learnings for E-Commerce System Development**

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## **Abstract**

The goal of this work was to undertake a systematic evaluation of recently published e-commerce research and amalgamate any lessons learned for e-commerce system headway from a quality standpoint. Using Google Scholar, a systematic review of 8 shortlisted papers was done. The following were discovered as a result of the review: The tremendous rise of the e-commerce industry in 2020 cannot be overlooked. As situational requirements evolved and differed throughout countries, demand for diverse types of items increased. Customers' lack of trust and confidence in online transactions, as well as poor rules and regulations to safeguard them, have prevented several countries from properly implementing e-commerce. As a few data suggest, several theories such as Maslow's stratified needs and Ajzen's planned reasoned action and planned etiquette may relate to customer aspirations for online purchase. On the second side, numerous digital equipment have been employed to expedite product presentation, safety information, e-ordering, and payment mechanisms, and new ways are being tested. In this regard, international organisations such as the World Health Organization, the World Bank, the European Union, and international consulting firms such as McKinsey have issued reports and guidance. One clear credence is that the pandemic's new normal in all strands of work and life will persist even after the threat has passed. From the standpoint of e-commerce system development quality, this research suggests that the system should have the coterie characteristics: acquire client faith and confidence by aligning the system with best practices in online transactions; employ appropriate automated technology to expedite product exhibit, safety guidance, ordering online, and payment; and make sure there is enough product supply.

**Keywords:** E-commerce; Systems Development; Quality; Trends.

## **1. Introduction**

In recent months, many elements of individual life and activity have tolerate quick and drastic transformations, which have been aggravated by the covid-19 widespread. These alterations could

continue to exist and evolve in the future life. Increased digitalisation and the direct execution of previously identified tendencies have driven these changes over many years. These potential technology advancements have been considered in the counsel management literature for many years. Our service, studies, medical, enjoyment and relaxation, and internet commerce have all been touched by the "new normal." This article aims to examine the final mentioned component, specifically identifying elec.-commerce developments in 2020, (Barnes, 2020). In addition, the assessment will summarise any lessons learned for elec.-commerce system formation from a quality standpoint. In addition, the assessment will summarise any lessons learned for elec.-commerce system formation from a quality standpoint. The word "online commerce" or "e-commerce" has been expound in a variety of ways, all of which convey the same meaning. Wilkins, Swatman, and Castleman (2000) provided the following precisions from various originators (as cited by the writers) and then examined the benefits and drawbacks of each precision below.

'Elec. commerce offers the probability of threshold shifts - interchanges that so drastically adjust customer reckonings that they readdress the industry or make totally new places for those organisations that fully harness its potential.' (EU) \s 'In its broadest sense, "electronic commerce" refers to any data exchange that takes place over the high speed line (i.e., by cable, over-the-air channeling, or a composition of the two) and circumscribes not only business proceedings but also all forms of social connections that can occur over the superhighway; in other words, "commerce" in its broadest sense. It would include all steps intricate in electronically negotiating, establishing, and implementing business proceedings. The conduct of business in products and services utilizing telecommunications and telecommunications-based technology is known as electronic commerce.' I utilize two basic electronic commerce models: 'deliberative purchasing' and 'spontaneous purchasing'. Thompson Environmental Consultants (Thompson EC Resources) Elec. commerce, sometimes known as e-commerce, is the process of using computers and communications technologies to automate business transactions. 'E-commerce refers to transactions that occur over networks that use interoperable protocols developed by an open standard-setting process, such as the Internet.' The use of computers and telecommunications networks to carry out normal business, government, or personal processes is referred to as electronic commerce.

Elec. Commerce describes how digitised data is processed and transmitted through the internet, Electronic Data Interchange (EDI) and national intranets like the French Minitel and Singapore One are examples of Internet-converged technology. To complete business-to-business and business-to-consumer transactions, this comprises text, music, and visual graphics. The author, on the other hand, does not offer their own definition. Elmer (1999) used charts to illustrate definitions of several sorts of e-commerce at an OECD workshop. Figure 1 depicts e-commerce segmentation.

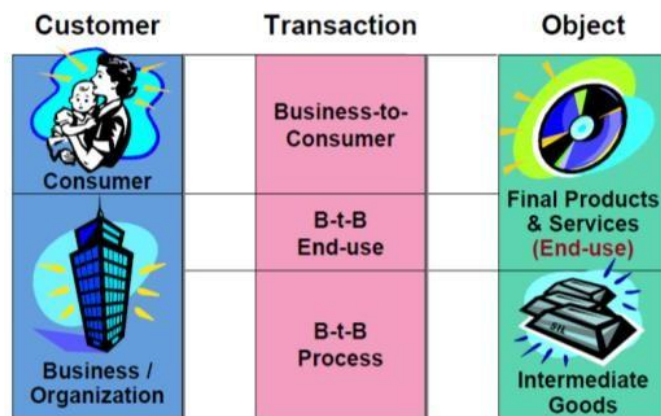


Figure 1

As a result, there are three major components to e-commerce. Individual consumers (B2C) or businesses (B2B) are examples of customers (B2B). It could be raw data for various operations or finished goods and facilities in B2B.

Figure 2 shows the concept of e-commerce in terms of end-use. This description explains how e-commerce is used by customers. The customer conducts an internet search, locates the product, and decides to purchase it. Ordering and paying for items can be done in a variety of ways online. If it's software, it'll be sent via the internet as well. Physical products are delivered to the customer's address or picked up at a store.

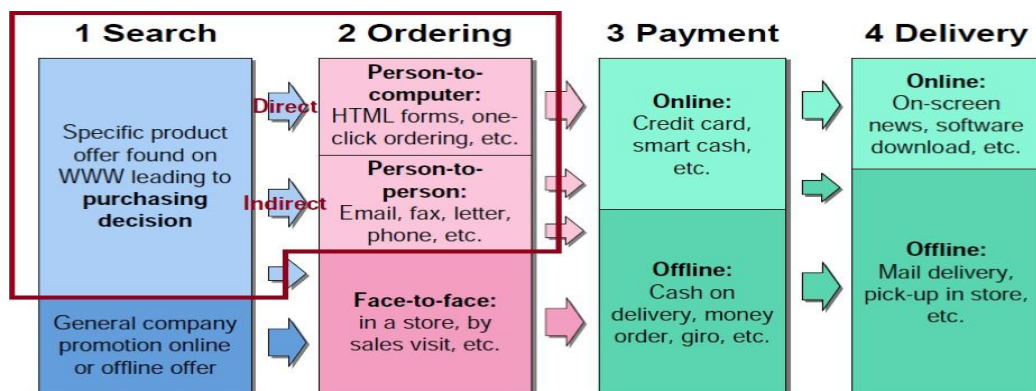
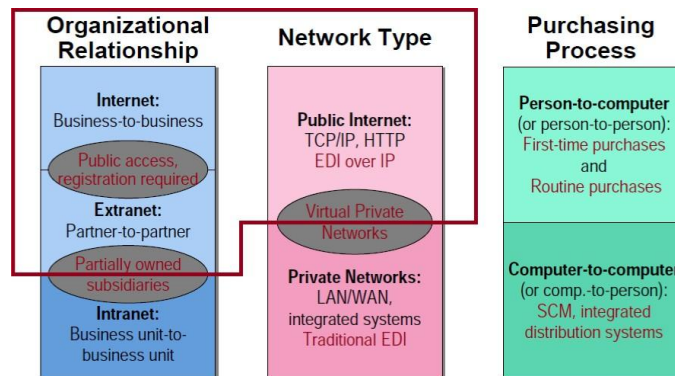


Figure 2

E-commerce may also be defined by processes, as seen in Fig 3. Organizational interactions between firms, partners, or within the organisation make up the processes. It is possible to use public or private networks.



**Figure 3**

## 2. Methodology

39 papers were found after a thorough literature search in the Google Scholar database using the topic as the search keyword, including the ones indicated above, that may be used. As long as the document offered useful e-commerce information, no choice was made. There were full papers as well as abstracts. Only abstracts that could be read independently of the whole paper and provided any helpful information as a stand-alone document were included. Only articles written in English or containing material that had been translated into English were contemplate.

In addition to using a variety of papers to grasp the essential ideas, only the most recent studies examining e-commerce trends were included. To completely grasp how the sector has progressed in accordance to shifting societal and economic conditions, this was done. In-depth critiques of the chosen papers are supplied in the following subsections.

## 3. Discussions & Results

One of the most surprising discoveries was that lockdown significantly and quickly improved online sales (ACI, 2020). Many companies have made online commerce their principal mode of operation. As more supply were accessible, their prices fell at a same rate. Online shopping is the only alternative when there's a fair amount of social exclusion and clients are almost never nearer to stores. Gao, Shi, Guo, and Liu (2020) observed enhanced online purchase intention when recorded cases grew, leveraging the distance from Wuhan as the intervening variable, employing an instrumental variable (IV) methodology to mitigate potential endogeneity bias.

This tendency was more prevalent in young adults who resided in big cities and had a lower risk tolerance. As a result, the current economic downturn has boosted online trade tremendously. Some tendencies in China suggest that it will continue even when Covid-19 is no longer a pandemic (Stewart, 2020). Customers who use virtual or augmented reality may seek more advanced technology means of product and service delivery. The arguments raised in these texts are expanded on in the following sections using additional literature.

### **3.1 Customer side**

The changes that are indispensable in many parts of life today and in the future are not without their own set of difficulties and problems. Issues including blockchains, gig businesses, cybersecurity, financial technology, encryption, and security in digital purchasing were reviewed by Pandey and Pal (2020). While noting that consumers and businesses do not need restrictions to practise social-distancing to avoid the risk of infection, and that they can do so on their own, Based on various aspects, Portugal, Molinuevo, and Rovo (2020) pointed out that the only remaining sources of possible new infections are essential activities such as grocery shopping and visits to health facilities. In this context, the concept and use of e-commerce are relevant.

Because of their special relevance to certain countries, various elements causing to electronic sales of particular product classes were investigated in those countries. Thus, even before the COVID 19 issue, in other businesses in Germany, internet shopping had a substantial turnover, but online food retail had remained a niche. The main obstacles to its rural expansion were low volume, accessibility, and payment challenges. The desire to stay at home and social isolation, contrasted with, facilitated the rapid growth of e-grocery sales. Changes in institutional organisation as well as a large increase demand was for important factors. But spatial diffusion was constrained since traders preferred to keep up with rising demand rather than try to expand spatially. The current uncertainty brought on lockdown was not shown to be a long-lasting stable situation. Expansion was further hampered by digitalisation. To accommodate increased demand during the crisis, the current online giants have added groceries to their list of businesses. The expansion was brief and demand-driven due to the short amount of time available for social isolation and staying in (which had a steadily diminishing effect) (Dannenberg, Fuchs, Riedler, & Wiedemann, 2020) [1].

Other concerns arise from the customer's perspective. Out-of-stock products and long lines have been noted as some concerns associated to online marketplaces during the current Covid infestation, influencing consumer decisions with a sense of wellness and affect toward the store (Pantano, Pizzi, Scarpi, & Dennis, 2020) [2]. According to Hashem (2020) in a Jordanian poll, there may be a gender effect in internet purchasing behaviour. Customers purchasing habits have shifted to online

buying and e-payment methods in recent months as a result of lockdowns and quarantines in several nations, he discovered. Females and individuals with better academic credentials were more affected by this change in behaviour. As a result of the surge in online shopping, there has been a trend to save money by restricting wasteful spending, crisis management, improved budgeting, and decrease of habits such as dining out and entertainment. Electronic device usage has also been limited to the bare minimum required for day-to-day activities. It remains to be seen whether these behavioural shifts will continue in the coming years [3]. The rapid expansion of e-commerce in Indonesia this year is due to social separation. Masks, sanitizers, and other protective gear were initially in high demand on the internet. Then, as more people worked and studied from home, the demand for stationary grew. In many cases, however, online business has resulted in consumer losses. During the Covid-19 period, legal protections for internet transactions were broken. However, due to a lack of clarity regarding the laws, online traders have been able to get away with their violations. Alkhaldi (2020) in Kuwait also revealed the inadequacies of legal systems. The pandemic and lockdown in Kuwait have exacerbated the already-existing ecommerce difficulties, which are escalating and need immediate responses. The reasons for making the switch to ecommerce are well-known. Many ecommerce challenges arise as a result of ineffective legislation technical concerns, sociocultural variables, trust and confidence in electronic transactions, and consumer protection and cybersecurity. It is necessary to enhance compassion of potential hazards linked with Covid19 and electronic transactions, as well as to improve legislation and their effectiveness. People in Tunisia, on the whole, are wary of internet purchases due to a lack of confidence. Only 2.1 percent of clients questioned said they use home delivery, particularly for meals and online payment methods. As a result, as compared to other MENA countries, e-commerce accounts for a small percentage of retail sales in Tunisia. Customers who shop online like to pay for their purchases in cash when they receive them (Jribi, Ismail, Doggui, & Debbabi, 2020) [4].

### **3.2 Seller side**

Many causes drove sellers to internet business, whether they were previously in it or not, and whether they enjoyed it or not, according to the sellers. Indonesian traders cited time flexibility, simplicity of starting and administering an online business, lower online business costs, a wider client reach, and the need for only a minimal investment as reasons for selling online. Furthermore, online business is regarded as a viable means of establishing and keeping consumer loyalty. During the present epidemic, the switch to internet business was simple due to the availability of digital technologies. Consumer purchasing habits may shift as a result of the epidemic. It's possible that it'll

last longer than the pandemic. Because of job and salary concessions made by their employers to survive the pandemic, a huge majority of consumers may spend less. High demand for certain categories such as food and grocery requirements, on the other hand, will drive online sales to more of these items. Electronics and autos may be purchased in smaller quantities. When the pandemic threat has passed, it's impossible to say how quickly business and consumer behaviour will return to pre-pandemic levels. The present online purchasing trend is agnostic to generational differences, as there is something for everyone in the internet marketplace. The pandemic's most major consequence is the shift to internet shopping by those who had never done so before or had no desire to do so. People are drawn to online shopping because of the convenience of time, location, and product selection.

Shariah marketing has been defined as "the procedure and plan (Hikmah) of meeting needs through Halal (Tayyibat) merchandise and services with collective agreement and benevolence (Falah) of either parties, i.e. consumers and suppliers, in in order to attain substance and mystical prosperity in this world and the next" by Alom and Haque (2011). It thus transforms into genuinely ethical marketing, which may be at odds with several globally acknowledged professional marketing techniques. Islamic marketing is controlled by religious principles. A face-to-face meeting between the buyer and the seller is strongly preferred because it results in legitimate transactions [5].

When internet sales become a forced need due to conditions such as pandemics, SMEs may be at a disadvantage due to a lack of expertise and resources. In Malaysia, SMEs from various industries reported varying levels of success with ecommerce. There has been a noticeable surge in the use of e-commerce. However, some SMEs made less money from their internet ventures. SMEs in the food and beverage sector, in particular, were unable to take advantage of the larger profit margins on beverage and dessert sales. SMEs in other industries, on the other hand, did better because they were able to earn more money due to the increased possibility that they could achieve in an interactive setting (Yi, 2020).

According to Seetharaman (2020), agile enterprises customised for the opportunities presented to increasingly digitalize by Corona Virus, resulting in increased information density of processes, value chain, and products/services, as well as the critical nature of specific products or services. Customers can now purchase items and services online as a result of these changes [6].

Owing to the lack of direct consumer access due to lockdowns, Kuwaiti home business owners use email and websites to connect with their customers. They use bank apps like Edfali for business-related payments. People are motivated to carry on with their businesses in spite of the pandemic's

limitations by their passion for them, their independence, the need for a second source of income, their success in family businesses, their hobbies, or their inability to find acceptable employment elsewhere. (Saleh, 2020) [7].

According to findings from Bretas (2020) in Brazil, franchisees in the retail and service sectors, such as restaurant management, youth development, general merchandise, and corporate, used e-commerce platform in furthermore to other marketing practices to overcome challenges with maintaining their functions properly in the midst of the Covid-19 pandemic. [8]. Nagasudha, Shruthi, and Raj all mentioned an increase in e-commerce, particularly for grocery and food items (2020). The content analysis of a few research publications was used to write the essay. Although the title implied that the research would address how the pandemic affected digital marketing in India, there was no mention of India throughout the report [9].

Mishra (2020) stated that similar techniques for corporate resilience and sustainability can be applied in the context of the Covid19 pandemic, leveraging institutional theory to grasp business enterprises reacted to previous pandemics and big natural disasters. This can be done primarily by service providers using their clients' social connections to establish legitimacy as soon as the pandemic is over. Long-term embedding, customer loyalty, and reputation are all built on social interactions with local communities. During the pandemic, these benefits can be used to benefit e-commerce [10].

The terms "modern economy" and "digital economy" are nearly interchangeable. Given e-rapid commerce's growth and success, the approach that 2020's economic realities will influence virtual items as a hallmark of the market world has already been affected. Delaney emphasised the importance of timing and quickness in achieving great results in this regard (2020) [11].

Nuru presented many e-commerce business concepts that are being used around the world and should be considered by small businesses (2020) [12]. Drop shipping, wholesaling and warehousing, private labelling and manufacturing, white labelling, and subscription are a few examples. The author presented an e-commerce framework for the small company sector based on these talks and findings.

Briedis, Kronschnabl, Rodriguez, and Ungerman of McKinsey investigated and discussed the efforts made, being made, or to be made by retailers to endure and prosper during this difficult economic time (2020) [13]. It is vital to respond quickly to new issues. Retailers who operate an omnichannel business must improve the unique online consumer experience. Customers have reduced the number of times they shop. There is also a considerable shift from the physical store to



the internet store. BOPIS (purchase online, pick up in store) and home delivery have also expanded significantly. The majority of consumers find the new means of purchasing to be extremely convenient, and hence will continue to do so long after the pandemic has passed. Setting the North Star toward digital acceleration, integrating innovation into omnichannel, significantly modifying retail operations.

### 3.3 Global dimensions

In a letter, de Paulo Farias and dos Santos Gomes emphasised the importance of all countries implementing the FAO suggestion to allow online marketplace for small-scale food producers to face of the unpredictable Corona Virus Pandemic (2020) [14]. According to Lin, Li, Luo, and Benitez (2020), business placing emphasis dexterity and implementation alteration dexterity, but not environmental dynamism, are positively correlated with an agribusiness' ability to survive through challenges like those presented by the altered social and economic reality of 2020 [15]. The European Union has taken some moves in this regard. Zhelyazkova discussed the matter, parties, and their liabilities and rights in the aspect of distance selling and e-commerce in the EU (2020) [16]. There are well-developed systems in place in the EU to ensure that the ecommerce component of the full business route runs well. Directive 2000/31 / EC regulates the unified legal framework for online transactions within the European Union, and it is likewise followed in Bulgaria. E-commerce sites, e-commerce entities, and e-business and technology are the four elements of e-commerce. B2B, B2C, C2C, C2B, and B2G (B-Business, C-Customer, G-Government) are all examples of e-commerce. Sales of both B2B and B2C platforms have increased as a result of Pandemic. The COVID-19 epidemic has had a significant impact on supply and demand, as well as how transactions and services are delivered. As a result of this new reality, it is evident that e-commerce may be a valuable tool for customers. E-commerce can help small firms flourish and be an economic driver for both local and international trade by making economies more competitive. Consumers said they'll stick to their new behaviours after the crisis is over. For foreign trade, this opens up new e-commerce options. The creation of an ecommerce website necessitates adherence to legal requirements, particularly in regards to the order procedure, consumer information, and customer data protection. Bakalis, et al. discussed the scope of several e-commerce scenarios in 2020, regardless of country. (2020) Apart from the apparent factors that promote e-commerce, the most significant changes that are occurring are online ordering and delivery. It's probable that some more advanced apps for supporting real-time e-commerce across platforms will be developed. These new apps may have elements that allow you to evaluate a list of components while also providing nutritional information and guidance. To prevent it from becoming a marketing tool for

businesses, the platform must be appealing while also being regulated. As a result, new laws on online food supplies may be enacted. When information and claims are given via these platforms, these requirements may require adherence to existing food regulations. New distribution networks may be needed to serve a rising number of clients who purchase their food online. Small distribution centres, for example, might be set up all over cities for home delivery.

#### **4. Conclusion**

Nearly every country's economy has experienced unprecedented changes by the year 2020. These innovations have sparked a surge in online trade. This is due to various countries social distance conventions, as well as migration and commerce limitations. Food and other vital livelihood items gradually replaced the early demand for masks and other protective devices. Requirement for software, mobile devices, and systems increased as more people worked and learned from home. These requirements, however, differed each country. Customers' lack of trust and confidence in online transactions, as well as poor rules and regulations to safeguard them, have prevented several countries from properly implementing e-commerce.

On the supplier's end, a variety of communications technology have been used to make it easier to display items and details as well as facts regarding safety, e-ordering, and payment options, and new approaches are being tested. The pandemic's impact on the global economy needs coordinated activities across countries to provide necessary supplies, particularly to the poorest portions of the population. In this regard, international organisations such as the World Health Organization, the World Bank, the European Union, and international consulting firms such as McKinsey have issued reports and guidance.

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