

Leveraging Technology to Improve Business during and after the Pandemic

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Abstract

The entire world came to a halt in 2020 because of Covid 19 pandemic. Businesses were closed and people from all over the world were quarantined. Some businesses, however, were able to continue operations through an existing pickup online program. Businesses that closed or were fearful of reopening may find that shifting to online marketing is the best solution. Understanding the significance of transitioning businesses from a physical location to an online one is an important goal to strive for. There are numerous short- and long-term benefits to moving businesses online through. Businesses can improve process efficiency, performance, and productivity by leveraging technological tools such as project management software (PMS), customer relationship management (CRM), task management tools (TMT), email marketing, Salesforce, and others. This article investigated how small businesses in the United States (US) benefited from technological tools and added value through their performance during the pandemic. It also aimed to educate business owners who still do not believe that technology can be used to automate their operations for effective performance and long-term customer relationships. The article seeks to encourage small-business owners to use their talents, competencies, and technology tools for the betterment of their organizations.

Keywords: *Technological Tools, Business Processes, COVID-19 pandemic, E-commerce*

1. Introduction

The past three years have shaken the world and battled with the challenge of the coronavirus infectious disease. The virus affected human activities because of its ability to spread from one individual to another. The coronavirus causes a rapidly circulating respiratory pandemic illness (Keskinocak, et al., 2020). It infects through close contact with a person who has coronavirus from approximately 6 feet away. By understanding the illness, people learn to value human health (Liritzis, 2020).

The United States (US) Occupational Safety and Health Administration (OSHA) of the Department of Labor is committed to protecting the health and safety of all workers and the workplace during these unprecedented periods. The agency has established a series of rules to keep the workplace and workers safe, maintaining a social distance of at least six feet between people, encouraging employers to offer workers to stay and work from home, and launching flexible working hours. Many businesses shut down after government restrictions to limit the spread of coronavirus infection. Thorbecke (2020) claimed most businesses have been affected negatively, the top six countries in the world that are heavily affected by the virus are shown below.

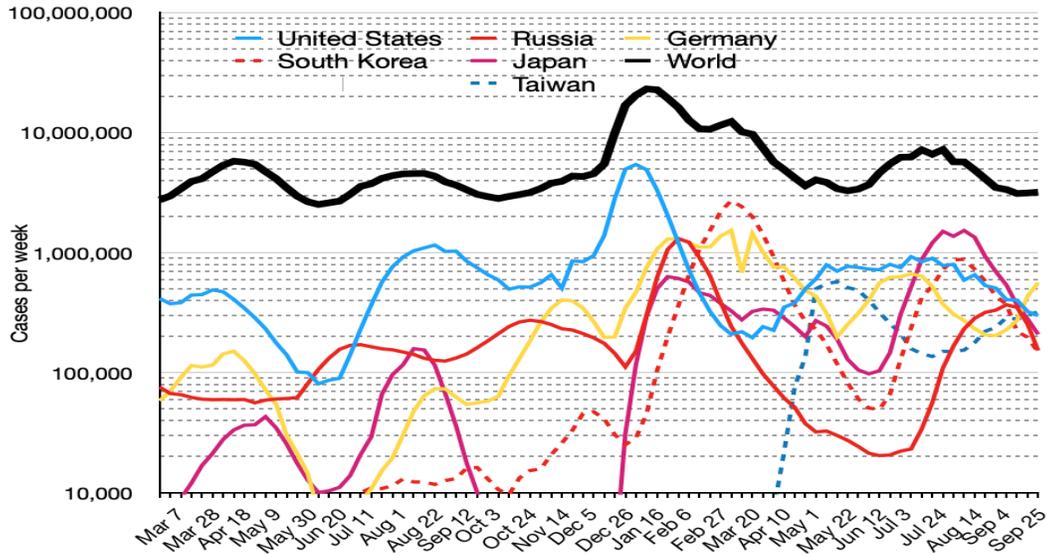


Figure 1. Semi-log plot of weekly new cases of COVID-19 in the world and the current top six countries (mean with deaths) (WHO. 2022)

Several business leaders assumed that the virus's impact on business would be temporary and that they would be able to resume normal business operations after a few months (Song & Zhou, 2020). On the contrary, businesses found themselves needing to restructure their operations by utilizing sophisticated technological tools such as project management software (PMS), customer relationship management (CRM), task management tools (TMT), email marketing, Salesforce, and others for automating and managing the business, sales, and service processes. Using technological tools helped to maintain timely interaction between businesses and customers, economic stability, and a safe environment for both employees and customers (Troisi, Fenza, Grimaldi, & Loia, 2022). With pandemic issues, businesses must upgrade their technological tools and business processes to save time and increase profitability (Salam & Bajaba 2021).

This paper focused on the benefits of using technology tools to run business processes during COVID-19 or any future pandemic, particularly in small businesses. It demonstrated that small businesses in the US could process their operations efficiently and promote customer demands to achieve their goals by utilizing modern technology tools. This paper discusses the advantages of using technology to address pandemic challenges in small businesses in the US. The economic crisis is unparalleled in its rank because it has created a financial trauma, a supply trauma, and a demand trauma all at once. The disease has the potential to reduce global mortality by 6.7% by 2020 (Ceylan, et al., 2020).

2. Literature Review

The COVID-19 recessions had a significant impact on the economy in terms of investments and trade in business (Gössling et al., 2020). Because of implementing social distancing procedures, people are wary of engaging in social activities outside of their homes. Governments have implemented policies of physical and social distance, as well as restrictions on consumption and travel. As a result, many businesses, including markets, shopping malls, and restaurants, have been negatively impacted (Chetty et al., 2020). This has affected a wide range of business sectors (Glaserapp, et al., 2022). COVID-19 has a significant impact on business processing and services (Gössling et al., 2020). Companies that rely on physical space, such as supermarkets, traditional

food markets, restaurants, fitness centers, cinemas, car dealers, and others, have all suffered losses (Chetty et al., 2020).

Several businesses, particularly medium-sized businesses, are concerned about a wide use of technology to market their business processes. When developing a business model, it is critical to consider the interaction between companies and customers (Conon & Semenescu, 2021). It entails the process of managing business activities and customer information (Jiang & Zhang, 2019). However, Guercini, et al. (2022) stated that nothing is more important in business than customer. To represent this area of business, technological tools are required to ensure business sustainability (Fletcher & Griffiths, 2020). It is implied that applying business and technology principles is entirely rational and practical for achieving business sustainability now and in the future (Dwivedi et al., 2020). Consumers were able to maintain their habits with technologies because technologies automate and centralize customer contact (Javaid et al., 2020). Consumers in various regions have changed their shopping habits and met their needs online (Brussevich, et al., 2022).

The COVID-19 lockdowns have proven to be the ideal time for businesses to become more adaptable and flexible in a variety of situations. It has led them to devise various strategies for providing goods and services in response to their business requirements (Chetty et al., 2020). Companies should not be discouraged from increasing their sales because they can use new technologies to promote their products and services via digital online channels (Doyle & Conboy, 2020). The technology tools offer a solution for an adoption strategy that entails converting physical stores into online ones for consumer convenience and safety. Companies had an opportunity to develop their profitability during the COVID-19 pandemic by using online tools for both sales and delivery (Chetty et al., 2020).

Bortoluzzi, et al, (2022) He emphasized that the use of technology provides a platform for customer self-service in which customers can log in to find out the status of their purchases, as well as view and update records of any specific news or information for them on a one-on-one basis. Doyle & Conboy, (2020) considered some characteristics of good customer service to include the promise of on-time delivery of goods. Every company should avoid delays and cancellations of products. Customers are satisfied with the quality of service delivered through online shopping, and the firm will benefit more from making their customers completely satisfied.

Javaid et al., (2020) stated that technology tools could radically redesign the firm's business processes today, resulting in a more dramatic development in the company's service delivery system. Some medium-sized businesses have discovered the value of utilizing technology tools for their businesses (Fletcher & Griffiths, 2020). However, many businesses have yet to recognize that a technology tool can be the primary sales tool in capturing the customer's sustainability and economic stability.

3. Method

The primary goal of this study is to conduct a general review of the literature on business content during the COVID-19 crisis. It also looked at research on the role of technology in business survival during the COVID-19 crisis. Neuman (2011) claimed that the purpose of a study's design is to articulate the data requirements, methods used, and process used to find the research result. The study used the method for discovering the relationship between the use of technology tools and the running of online business processes during COVID-19 to address the needs of customers. It designed to discover a linear relationship between the role of technology in running online business processes instead of using physical locations during the pandemic lockdown. The nature of this study required data collection from primary sources. In the study, this technique was found to be

appropriate for reviewing the literature conducted in the business context during the COVID-19 crisis. This meticulous process identified related articles that investigate the business context during COVID-19 in general and the role of technology in business survival, particularly during the COVID-19 crisis. Keyword search was deemed necessary to achieve the goal of this study, such as COVID-19, crises, lockdowns, pandemic, economics, business, medium-sized business, technology, online shopping, and physical location.

4. Discussion

4.1 COVID-19 Effects on Economic

The COVID-19 pandemic caused public health and economic crisis, that harmed public perception in the US. It had a significant economic impact with wide disparities between regions and sectors (Ruiz Estrada, et al., 2021). The voluntary lockdowns and social distancing that went into effect in March 2020 reduced infections initially, but they hastened a severe economic retraction. Lockdown and social distancing reduced economic capacity reduced production of goods and services and caused a shock to consumer services. The COVID-19 crisis has compressed certain businesses, especially small-sized companies, more than any previous economic downturn, particularly those that rely on people. In the US the fear of infection, stay-at-home orders, social distancing, business closures, and declines in demand for travel and other entertainment among industries led to enormous layoffs and unemployment, with predictions for further declines in aggregate domestic products (Johnston & Chen, 2020).

The COVID-19 pandemic is causing damage to small businesses (Troisi, et al., 2022). The employees were not able to work, and businesses were not essentially prepared to open. But some of these sectors slightly rebound and open again. However, they have seen their revenue decline. Stabilizing businesses' revenue is extremely decisive to prevent profit reduction, costly layoffs, and firm closures, which may result in diminished investment and increase the future income damages of a crisis.

COVID-19 has a direct economic impact due to premature deaths, decreased productivity, workplace absenteeism, and a negative supply shock. Domestic markets have suffered because of the pandemic (Johnston & Chen, 2020). Consumers typically reformed their spending habits, owing to reduced income, household finances, and the fear that accompanied the epidemic. COVID-19 restrictions had affected industrial services such as transportation, utilities, hospitality, banking, retail trade, tourism, and others. They encounter significant challenges in terms of business losses and worker retention. Mason, Marcum, & Mason (2020) affirmed that COVID-19 created economic chaos in the US reflecting systemic changes in the economy, including changes in consumer behavior. COVID-19 has unprecedented challenges, with far-reaching consequences for the global and the US economies. The financial sectors require technology for core operations and competitiveness (Mason, Marcum, & Mason, 2020). As COVID-19 continues to grow in the US, businesses face difficult decisions about how and when to transition to normal processing. COVID-19 is transforming the strategy of doing business, working, trading, producing goods, and others.

Stan (2020) stated that recovering an economy affected by the COVID-19 crisis would be difficult in the short term without significant changes to the economic expansion paradigm. Business owners must plan for new investments in e-commerce by automating their processes. Businesses from various industries require technology to simulate real-time operations, perform intelligent business and implement cost-cutting measures (Dymitrowski & Mielcarek, 2021). Business and technology based on autonomous systems can help to sustain the problem by providing solutions to improve the economic situation. The adoption of e-commerce technology

also aids survival during the pandemic lockdown (Kapucu, 2021). The use of e-commerce technological methods to transition to a new management paradigm is critical to resolving the economic issue.

4.2 E-Commerce solutions

E-commerce welcomes customers to cross geographical borders and makes them purchase products anytime and from wherever they may be. Online and traditional markets differ in their conducting business. Traditional sellers offer fewer inventories of products because of shelf space whereas online retailers often hold no inventory and send customer orders directly to the manufacturer. The pricing strategies are based on store traffic and the cost to keep inventory. The use of the Internet is fast growing and many countries in the world are racing to gain computer literacy. the Internet has tremendously impacted culture and commerce, including the rise of near-instant communication by email, telephony, video calls, and the World Wide Web with its forums, blogs, and online shopping. Increasing amounts of data are transmitted at higher and higher speeds over fiber optic networks.

Most customers during this pandemic have resorted to online shopping It is a method of e-commerce that allows consumers to directly buy from a seller over the Internet web browse or a mobile application. Consumers visit the site of the retailer directly or by searching among alternative vendors using a search engine that displays the same product's availability and pricing at different e-retailers. Customers can shop online by using different computers and devices, Online shopping increased Internet users all over the world a hundredfold.

Table 1. Internet Users all Over the World

<u>Worldwide Internet users</u>					
Users	2005	2010	2017	2019	2021
World population	6.5 billion	6.9 billion	7.4 billion	7.75 billion	7.9 billion
Worldwide	16%	30%	48%	53.6%	63%
In developing world	8%	21%	41.3%	47%	57%
In developed world	51%	67%	81%	86.6%	90%

4.3 The Role of Technology

Today's technology enables businesses to operate from any location at any time. Cost reduction, error reduction, increased productivity, and time savings are some of the competitive advantages of automating business processes (Dymitrowski &Mielcarek, 2021). A better understanding of the rule of technology in emerging economies is required for this. The technology tools deal with significant information and activities that influence companies to operate efficiently. Technology is influencing business processes in a variety of industries and businesses. Business leaders' primary responsibility is to adapt the processes for transmitting their business into e-commerce (Kapucu, 2021).

By transmitting business processes to virtual ones, business leaders can increase work flexibility, cut costs, and give employees the freedom to work remotely and complete their tasks without losing the benefits of collaboration. By addressing these online technological solutions to economic issues, small-size business leaders who invest in the right technology tools to successfully run virtual business processes from anywhere can save money and time. Technology provides a set of useful techniques for significantly improving business operations (Dymitrowski

& Mielcarek, 2021). Marketing automation, for example, can help salespeople create automated straight marketing to reach out to customers' needs, track inbound and outbound sales, streamline quotations and invoicing conduct marketplace, and much more. Consequently, the technology could offer a better solution to run business processes during the pandemic period, which may have a positive effect on the economic.

5. Result

5.1 Technology Has Impacted Business During the COVID-19 Period

The interaction between companies and customers is important in designing a business model (Afshar Jahanshahi & Brem, 2018). The nature and quality of business have implications for how business principles and technologies should be applied. Considering the value of technology in running business processes has never been easy. The use of technological tools has become critical for business processes (Ghina & Sinaryanti, 2021). Small-size companies can use technology that reduces time, and business costs, innovate productivity, and successfully achieve their goals. The advancement of technology has an impact on business processes (Salam & Bajaba 2021). It allows businesses to become more productive and provide better services at lower costs. It also increases its ability to assist businesses in doing more and delivering better results by changing and automating those businesses' processes (Troisi, et al., 2022).

During the COVID-19 period, automating business processes was the best solution for keeping operations running during the shutdown. COVID-19 has accelerated the adoption of modern technology as a business process implementation solution (Ghina & Sinaryanti, 2021). It has assisted businesses in delivering significant value, allowing them to discover a new way to improve their business operations and productivity by utilizing useful technological tools. Using modern technology to automate business processes has advanced significantly, and it has been widely implemented in a wide range of businesses of all sizes. Throughout the pandemic, many companies across the states are using modern technology tools to improve business processes and operations to gain a competitive advantage. (Troisi, et al., 2022).

The internet is the best means to reach people of all types during the pandemic. Producers, suppliers, and customers flock to the internet for their specific needs. E-commerce technology has been a prolific business process and it became a popular tool for many businesses. Many companies are quickly realizing that modern technology is the most important tool to run their business processes during the pandemic (Salam & Bajaba 2021). The use of e-commerce assists businesses in maintaining a sustainable competitive advantage in their business performance. Companies rely on modern technology to expand their business operations in online environments (Kirbac&Tektas 2021). Company leaders should have a clear vision of the role of technology's impact on all business processes to improve quality, productivity, and profit while reducing costs.

Throughout the COVID-19 pandemic, modern technology offers a wide range of tools that are rapidly becoming the preferred method for business processing and communication systems. It provides a low-cost method for running a business and sharing information internally and externally while saving time. Modern technology enables businesses to communicate with their customers more efficiently, and their marketing is constantly influenced (Troisi, et al., 2022). Companies that did not adopt modern technology to run their businesses during the shutdown period of COVID-19 were not able to survive. The benefit of technology centers on successful technology management, adapting processes, and an innovative strategy to cope with this special and dynamic period (Salam & Bajaba 2021).

5.2 The Need for E-Commerce

The term "e-commerce" (EC) refers to electronic commerce. It defines electronic communication as well as the business transaction process. It also requires businesses to connect

to the Internet and transmit data to buy and sell goods and services via Internet technology. EC assists in business processes by utilizing the internet and technology (Kitukuth, Vasa, & Olah, 2021). It includes online activities involving both businesses and customers, such as business-to-business (B2B) online selling between businesses and business-to-consumer (B2C) online selling to direct customers. EC provides information, goods, services, and online processes through a network that uses technology to automate business workflows and transactions (Ratnasari, Siregar, & Maulana, 2021). EC assists businesses in lowering costs, improving B2B and B2C relationships, and accelerating the delivery of goods and services. It disseminates data within technology and provides online shopping to meet market demand and gain a competitive advantage.

EC provides a unique approach to improving and growing the existing business model. It accelerates a new type of information display based on business processes for interacting with customers (Kitukuth, et al., 2021). EC allows customers to use online information to research goods and services within different websites, then decide where and when to shop and place the order (Bajdor, 2021). The availability of online information has altered the purchasing process. Any product that customers buy in stores can also be purchased online. The most significant advantage of using EC is that it grows rapidly and saves a significant amount of money and time while performing business efficiently and effectively (Ratnasari, et al., 2021). The EC offers great opportunities for emerging economies.

Table 2. Statistics on online retail sales

Statistics on online retail sales	
Country	% Retail Sales Online
United States	9.8%
Canada	2.8%
United Kingdom	20%

COVID-19 lockdown restrictions were designed to effectively implement social distancing and protect society's health. (Kitukuth, et al. 2021) stated that the restrictions harmed most economic activities, reducing production, distribution, and consumption. COVID-19 has slowed economic activity, for which the economy was largely unprepared. As a result, technology transformation must be accelerated. It has been necessary to invest in technological solutions to resurrect some social and economic activities remotely (Bajdor, 2021). EC plays an important role in offering businesses new opportunities to move online and to continue growing (Ratnasari, et al., 2021).

Because of the COVID-19 pandemic, there is currently an increase in demand for certain goods and a wide range of remotely provided services. Some companies in the United States have promoted online shopping as an alternative to physical shopping, while customers have changed their shopping paradigms and behaviors to reduce the risk of becoming infected with COVID-19. Customers' purchasing habits changed because of COVID-19, and they now shop primarily or entirely online (Bajdor, 2021). At the same time, some other businesses are being pushed to invest in technology and use EC to conduct business remotely. As a result of income fluctuations, they have found it difficult to stay in business. The EC revolution has had a hugely positive impact on leading and transmitting businesses remotely by opening new avenues for market survival (Mađarac, Filipović, & Eljuga, 2021)

5.3 Transitioning Business from a Physical to an Online Location

The trend toward online shopping has been increasing and is continuing to rise globally. The tools of modern technology stimulate connections around the world, which allow users to transmit some of their activities into the online electronic environment (Klepek & Bauerova, 2020). Customers in the US became more likely to shop online in 2018, demonstrating how technological advances influence and change customers' purchasing habits. Online shopping accounted for 9.8% of US retail sales in the fourth quarter of 2018, compared to less than 4% in 2008 (Ngwe, Ferreira, & Teixeira, 2019). The customers become more educated about the role of technology in shaping their new way of shopping. E-commerce has altered customers' shopping habits and influenced their spending habits by allowing them to make quick purchases. This is because technology provides solutions to meet and address customers' shopping demands. Online shopping activities offer consumers new opportunities to increase their choices and access to products with the development of new technology (Klepek&Bauerova, 2020). Online shopping can be appealing because it allows customers to save time and compare different options and prices before making a final decision to purchase.

During the COVID-19 pandemic's economic downturn, and as it continues to affect people in various ways People become more aware of how to protect themselves from this the virus Salam &Bajaba 2021). People tried to avoid large gatherings or crowded stores, which poses a health risk due to the social connection. Customers are expected to have 85% of their relationships with businesses without any human interaction by 2020 (Steinhoff, Arli, Weaven, &Kozlenkova, 2019). Transmitting shopping from physical to online locations presents a solution to avoid the social connection across physical areas, address the customer's need for shopping without putting their health at risk, and allow customers to enjoy the benefits of both sides. Online shopping has emerged as a primary mode of communication for both businesses and customers (Steinhoff, et al., 2019). Customers of online shopping simply await their goods to be delivered and no need to spend time piling in line. No social distancing would be violated and no transmission of COVID 19 will occur.

Businesses today strive to create better models of technological transformation processes that support the phenomenon of change (Kirbac &Tektas 2021). Consequently, companies modify their capacities for online retail, which is the right solution to offer customers an opportunity to shop anywhere at any time in a healthy environment. In fact, e-commerce has started before COVID-19 On this regard, incorporating business processes into online shopping will assist businesses in remaining competitive in the market.

6. Conclusion

In 2020, the entire world came to a halt as businesses closed and people from all over the world were quarantined. Some businesses were able to maintain their operations through an existing pickup program, while others temporarily shut their doors. For those who are closed or anxious about reopening, adjusting to online marketing may be the right solution. Understanding the significance of transitioning and processing businesses from a physical location to an online platform is an important goal to strive for. There are numerous short- and long-term advantages to automating business online. Businesses can use technology to improve process efficiency as well as performance and productivity. The pandemic has highlighted the critical importance of technology, as well as the urgent need to bridge the technological divide within and between countries.

The COVID-19 pandemic has increased the use of e-commerce in some areas, as well as e-commerce-enabling services and technologies, emphasizing the importance of electronic commerce in general. It has demonstrated that in times of crisis, e-commerce can be a valuable tool for consumers. E-commerce provides a variety of experiences. Customers may find online

shopping appealing because it allows them to save time and compare prices before making a purchase decision. E-commerce began to grow long before COVID-19 and will continue to grow after it is gone. Creating online marketing migration has assisted businesses all over the world in remaining viable. When a shopping strategy is combined with online marketing, the result is an omnichannel experience. With consistency across offline and online brand connections, the company can provide a unified experience across all retail channels. For long-time physical retailers, a successful transition to e-commerce represents an exciting new challenge. By automating business processes and providing various features that a new e-commerce business may require, technology can greatly accelerate tracking

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