

# A Conceptual Overview Of The Impact Of Covid-19 On E-Commerce Among Small And Medium Enterprises In South Africa

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## Abstract

SMEs are fundamental participants in a global landscape, especially in emerging economies like South Africa. During the Covid-19 pandemic, SMEs had to move their business online, due to lockdown regulations and fear of contracting the deadly virus. The sudden need to utilize e-commerce amongst SMEs became a major challenge, since many SMEs grappled with one or more of the four elements to complete e-commerce transactions, namely, access to reliable broadband, e-shop of products and services, digital payment, and logistics to the consumer. Thus, this conceptual paper attempts to understand the impact of the above elements of an e-commerce transaction on e-commerce growth among SMEs in South Africa. Following an in-depth literature review, eight (8) research propositions were developed postulating relationships between the four elements of an e-commerce transaction and e-commerce growth.

**Keywords:** e-commerce; SMEs; e-commerce growth; Covid-19

## Introduction

The corona virus (Covid-19) pandemic resulted in a resurgence of e-commerce in South Africa (Brem, Viardot, & Nylund, 2021; Reardon, Belton, Liverpool-Tasie, Lu, Nuthalapati, Tasie, & Zilberman, 2021) and indicators reveal that e-commerce in South Africa had risen by 66% in 2020 (Business Insider South Africa, 2021). However, compared to global developments, the e-commerce industry in South Africa is still in its infancy, with only a small sector shopping through online channels (Pentz, Du Preez, & Swiegers, 2020). Even though there was a tremendous resurgence of e-commerce, due to the fear of contracting the virus and the lockdown regulations, the growth in e-commerce was evident mainly in large enterprises, since the support structure, budget and skills were available and accessible (Anakpo & Mishi, 2021; Paramannand, 2021). Although several SMEs realized the importance of e-commerce, they still struggled to adapt and adjust, since SMEs were not agile enough to alter their operating models quickly. Furthermore, SMEs also lacked infrastructure and had little or no resilience with online platforms (Hahn & Hossain, 2021; Uvarova & Pobol).

The novel Covid-19 pandemic forced South African businesses to change their operations from

face-to-face to on-line, in order to survive (Eynon, 2021), and many businesses that were not equipped to implement e-commerce in their trading model, shut down (Costa & Castro, 2021; Deshmukh & Thadakamalla; Johnston, 2021; Khan, Uddin, Shampod, & Sattar, 2021; Sumarliah, Usmanova, Mousa, & Indriya, 2021; Tokar, Jensen, & Williams, 2021). According to Redflank (2020), 26% of SMEs in South Africa had to close provisionally or permanently during the covid-19 lockdown. Furthermore, 54% of the respondents revealed that they were operating beneath their usual volume, whilst 33% disclosed that they required financial support to resume trading (Redflank 2020).

Although e-commerce platforms have become complex, they provide almost every type of solution for online trading (Dragomirov, 2020). Furthermore, even though it has become a part of the consumers daily lives, there are many challenges and uncertainties in the e-commerce industry (Wood, 2020). Businesses in South Africa are overwhelmed by the changing technology and the sluggish approach by SMEs towards adopting e-commerce. Investing in virtual platforms has also impacted the confidence of consumers negatively, which certainly had a ripple effect on the economy (Ibn-Mohammed, Mustapha,

Godsell, Adamu, Babatunde, Akintade, Acquaye, Fujii, Ndiaye, & Yamoah, 2020).

SMEs are fundamental participants in a global landscape, especially in emerging economies like South Africa (Robb, Kim, & Lee, 2020). According to the World Bank, SMEs make up 90 percent of businesses and more than 50 percent of all jobs. SMEs around the world focus on services that have low access costs and low resource requirements (Orzes, Poklemba, & Towner, 2020). During the Covid-19 pandemic, SMEs had to move their business online, due to lock down regulations and fear of contracting the deadly virus. SMEs had to buy, sell, and communicate to suppliers and consumers online. However, many traders could not fulfil that requirement and have had to close (Costa & Castro, 2021; Deshmukh & Thadakamalla; Johnston, 2021; Khan et al., 2021; Sumarliah et al., 2021; Tokar et al., 2021).

There are four major elements to complete an e-commerce transaction, namely, access to reliable broadband, e-shop of products and services, digital payment, and logistics to the consumer (Emmanuel, 2012; Kitukutha, Vasa, & Oláh, 2021; Raval & Bhatt, 2021; Sorsa, 2018). If any of these elements are omitted, an e-commerce transaction is incomplete, directly affecting the growth of e-commerce. The sub-elements that support the four major elements that impact the growth of e-commerce are, awareness, skills set, digital marketing strategies, cybercrime, and fulfilment management.

The literature reveals that the sudden need to utilize e-commerce amongst SMEs became a catastrophe (Kitukutha et al., 2021; Raval & Bhatt, 2021; Rudan, 2020), since many SMEs grappled with one or more of the four elements referred to above (Costa & Castro, 2021). For example, although access to broadband has been a challenge for many years, the coronavirus exacerbated the situation (Azevedo, Hasan, Goldemberg, Geven, & Iqbal, 2021; Fisher & Wilder-Smith, 2020; Uğur & Akbıyık, 2020; Venter, Aunan, Chowdhury, & Lelieveld, 2020; Vidya & Prabheesh, 2020). As different countries opted for a complete lockdown, the entire world became totally dependent on the internet for survival, communication and making ends meet (Nimrod, 2021; Sun, Li, Bao, Meng, Sun, Schumann, Kosten, Strang, Lu, & Shi, 2020). This total dependency on broadband, exposed several challenges and needed immediate attention to arrive at solutions (Nimrod, 2021; Pearson & Grandon, 2005; Wairimu, 2020; Zhang, Li, & Xiao, 2020).

Due to consumers also working from home, shopping online became a necessity (Netshirando,

Munyoka, & Kadyamatimba, 2021) and consumers expected a safe, secure, and easy to use platform with a wide variety of products and services being available on the online shop (Pentz et al., 2020). However, safety and security could not be assured by SMEs during the pandemic, as cybercrime was at its peak, and even with great effort, it was inevitable (Kurshan & Shen, 2020; Ma & McKinnon, 2021). Digital marketing strategies on the e-shop platform were not applied by SMEs due to lack of skills set and lack of awareness that these tools attract consumers (Kundu, 2021; Tronvoll, Sklyar, Sörhammar, & Kowalkowski, 2020). Customers also desired a personal experience, the similarity of going into the brick-and-mortar stores, and being able to touch and feel the product (Netshirando et al., 2021). Consumers preferred in-store shopping, as they were able to walk out with the goods. Conversely, throughout the pandemic, unfulfilled order deliveries became a norm, as the demand was too high for logistics to manage (Kushwaha, 2020; Montoya-Torres, Muñoz-Villamizar, & Mejia-Argueta, 2021; Orji & Okwu, 2021).

The South African economy declined when SMEs could not survive through the long, and painful pandemic (Mkansi, 2021; Mothobi & Grzybowski, 2017; Netshirando, Munyoka, & Kadyamatimba, 2020). There was also a lack of skills set and awareness of e-commerce technologies (Chigbu & Nekhwevha, 2021), and this together with cybercrime and unfulfilled deliveries, have motivate the researcher to undertake this study to develop strategies for SMEs to continue operating during disruptions, such as the Covid-19 pandemic.

From a review of the literature, it became apparent that very limited academic research has been published on the growth of e-commerce among SMEs in South Africa, especially during the coronavirus pandemic. It is against the above background that this study will attempt to develop a conceptual model to understand how the four major elements of the e-commerce process, may impact the growth of e-commerce among SMEs through the Covid-19 pandemic.

### **The impact of Covid-19 on e-commerce in South Africa**

The novel coronavirus created a unique situation that led all sectors of industry and society, globally and nationally, to digitize at lightning speed and for many South African citizens, online shopping became the new normal (Verachia, 2020). It is assumed that when an economic downturn arises, the consumers' desire for luxury products

decreases, as buyers concentrate on fulfilling their fundamental needs, such as health, wellness, and safety, which aligns with Maslow's hierarchy of needs (Rukuni & Maziriri, 2020). People who never interacted online, such as senior citizens, have had no choice during the lockdown, but to become techno literate in order to obtain essential goods daily (Sharma & Subramanyam, 2020). However, the accelerated pace of using e-commerce in South Africa, highlighted its advantages and as well as the associated hurdles. The lockdown restrictions by the South African government had an economic and behavioural impact on consumers, businesses, and platforms (Donthu & Gustafsson, 2020). Work, communication, education, and entertainment moved to online platforms (Barnes, 2020), which brought numerous businesses to a halt and even resulted in shutdowns.

Numerous South African SMEs were unsure how to adapt to the new way of doing business by digitizing their operations fast enough. The crisis also impacted the operations of supply chains and led to a reduction in production and delivery of services (Mukurumbira, 2020). Unemployment rates increased, the economy deteriorated, and future economic outlooks appeared negative (Ceylan, Ozkan, & Mulazimogullari, 2020).

Although globally the coronavirus caused devastation to the economies, developed countries found it easy to improve their economic status, as they had good infrastructure (Zahra, 2021). South Africa had struggled through this pandemic and is continuing to the adjust to this ever-changing, fast-moving technology (Dwivedi, Hughes, Coombs, Constantiou, Duan, Edwards, Gupta, Lal, Misra, & Prashant, 2020; Iyamu, 2020; Paramannand, 2021).

### **The E-commerce Process Broadband Access**

A person has to have reliable access to the internet to do business or shop online (Kim, Chung, & Lee, 2011). A direct impact on the penetration of internet usage and e-commerce sales, is the cost of data to go online (Gachenge, 2020; Karine, 2021; Li, 2020; Mofokeng, 2021). In a developing country like South Africa, the price of broadband is nearly double in comparison with other countries (Siebörger, Terzoli, & Hodgkinson-Williams, 2020).

To curb the spread of the coronavirus in 2020, government officials globally, completely locked down different countries, one by one (Mofijur, Fattah, Alam, Islam, Ong, Rahman, Najafi,

Ahmed, Uddin, & Mahlia, 2021). Business meetings, payments, promotions, and sales moved online, and internet connectivity and speed were of absolute importance to achieve efficiency and effectiveness (Mattera & Gava, 2021). When connectivity slowed down, inevitably it directly impacted the work-pace (Mattera & Gava, 2021). Time lost through poor broadband connection had an enormous influence on growth and efficiencies (Owusu-Agyei, Okafor, Chijoke-Mgbame, Ohalehi, & Hasan, 2020). SMEs assumed that it was not profitable to pay more for a fast fibre connection (Wairimu, 2020), since they believed that this was a temporary disruption. Since SMEs needed an excellent digital infrastructure to benefit from e-commerce, some switched to cloud solutions to expand innovation and provide efficient results (Fitriasari, 2020; Guo, Yang, Huang, & Guo, 2020; Klein & Todesco, 2021). Nonetheless, cloud computing consumes a large amount of data, and for SMEs to exploit the cloud at an adequate performance, internet speeds have to be strong for uploads and other online tools that businesses use (Mansouri, Ghafari, & Zade, 2020). Internal communication was essential for SMEs to operate smoothly and through the pandemic, many businesses suffered losses due to weak internet connection (Hu & Kee, 2021). Emails, intranet, e-newsletters, and webinars could not be used to maximum benefit and keeping staff updated with company and product information became a challenge (Toniolo-Barrios & Pitt, 2021).

External communication with customers and suppliers was also of ultimate importance (Klein & Todesco, 2021) and obtaining a strong online interaction platform, with suppliers and customers was highly essential for SMEs to achieve sustainability in e-commerce during the pandemic (Klein & Todesco, 2021). However, consumers didn't receive a quick response in this digital age and because businesses failed to meet consumer requirements through the pandemic, which resulted in markets being lost (Toniolo-Barrios & Pitt, 2021).

During lockdown, this latency and buffering became challenges as video conferencing and meetings were distorted, which left many employees frustrated and impacted workforce morale (Aburukba, AliKarrar, Landolsi, & El-Fakih, 2020). This also impacted consumers trying to download a video of products and services that they desired to purchase, which greatly obstructed e-commerce growth for SMEs (Zhang et al., 2020). South African businesses had taken a lackadaisical approach in e-commerce when prioritizing profits and being innovative (Singh, Gupta, Kumar,

Sikdar, & Sinha, 2021). Before the Covid-19 pandemic, South African SMEs did not invest much in gaining an online presence and considered e-commerce as a separate business, rather than embracing the omni-channel which is the future model of business (Scopelliti, 2018). In reality, over a year after Covid-19 began, South African SMEs began to adopt e-commerce in their operations, and the consequences of these delayed decisions left the country far behind the rest of the world (Schwab & Malleret, 2020).

Broadband accessibility requires awareness and skills (Eynon, 2021). Businesses with staff that have no skills set, find it difficult to use the internet (Eynon, 2021). Covid-19 forced SME owner-managers to learn how to manage their staff from a virtual environment without social capital (Bressan, Alonso, & Kok, 2021; Chapman, 2021). As many SMEs are slowly returning to the workplace, a new skills set requirement will also emerge to transition employees digitally (Agrawal, De Smet, Lacroix, & Reich, 2020).

Covid-19 also brought a new landscape of learning through live conferencing. This transformation has made it possible for SME owner-managers to train their staff in a more cost-effective way, reaching a larger scale of employees at the same time, however, only small portion of SMEs, which had funds and infrastructure, took advantage of this through the pandemic (Wendt, Adam, Benlian, & Kraus, 2021). Different SME sectors required different set of skills and training (Wendt et al., 2021). Even banks had to upskill their staff in empathy as they assisted distressed customers to use digital tools with new products and services, during Covid-19 (Agrawal et al., 2020; Anderson, Rainie, & Vogels, 2021). The Covid-19 pandemic changed the employment landscape totally and this requires large scale reskilling or upskilling of workers on digital platforms (Agrawal et al., 2020; Anderson et al., 2021; Choudhary & Chintaluri, 2021; Wendt et al., 2021).

### **E-shop platforms**

SMEs have not invested sufficiently on their online strategy (Pentz et al., 2020; Raval & Bhatt, 2021; Xu, Chen, Peng, & Anser, 2020). For instance, research reveals that e-shoppers are attracted to the graphic qualities of the online shop (Li, Chen, & Lin, 2021) and the superiority of the pictures of products and services offered could sometimes determine the success of an online shop (Pentz et al., 2020). Furthermore, through the pandemic and the enforced lockdown regulations, online consumers preferred to scrutinise the

product or service, as they would do at the mall. Thus, it was crucial for e-commerce businesses to have compelling pictures and videos to persuade consumers to purchase and increase sales (Wei & Zhang, 2021). Moreover, having an online shop that is mobile friendly is of utmost importance, predominantly during a pandemic (Kassim, Mohamad, & Talib, 2021). Although many South Africans do not have access to fibre lines, most have access to data on their phones and they access the internet everyday through their mobile (Akash, 2020). Creating mobile friendly channels for consumers to obtain information about promotions and new products could assist online businesses to increase sales (Akash, 2020). Through the Covid-19 lockdown, consumers expected 24 hour availability to respond to any concerns or questions they had about the product or service (Mofokeng, 2021; Pentz et al., 2020). However, many SMEs in South Africa did not invest sufficiently in this their online shops to make for a seamless shopping experience.

Simple and well-defined product description was difficult to obtain during the pandemic, since many SMEs had newly created their online presence, which hampered the search engine and consumers were left aggrieved (Kundu, 2021; Mofokeng, 2021). SMEs that created an online presence during the Covid-19 pandemic also struggled with the transparency of stock (Husain, Sani, Ardhiyansyah, & Wiliani, 2020). According to Accenture (2017), South African corporations lost R663 billion in sales, which consists of 33.3% shifting to other brands and 66% being due to deficiency of relevance. However, in 2020, consumers were forced to shop online (Mofokeng, 2021; Pentz et al., 2020), which exposed all the flaws businesses had with conducting business via e-commerce, which resulted in frustrated, unhappy, and dissatisfied consumers (Mofokeng, 2021; Pentz et al., 2020; Raval & Bhatt, 2021).

Globally, businesses are shifting towards digitization of operations, and owners-managers of SMEs are slowly realising the demand for digital marketing to positively adapt and vigorously compete in the new normal. However, digital marketing is an unfamiliar terrain for many SMEs, especially in South Africa (Bimha & Primrose, 2020). Digital marketing is consistently changing with technology and SMEs find it hard to stay abreast (Thaha, Maulina, Muftiadi, & Alexandri, 2021). Digital marketing strategies can be expedited using different channels, some of which include, search engine marketing (SEM), web analytics, social media marketing (SMM), digital advertising, email marketing, search engine

optimization (SEO), and content creation (Thaha et al., 2021).

## Digital Payment

Digital payment systems are primarily important to seal the deal in an online shopping journey (Ferguson, Soutter, & Neubert, 2019). Covid-19 created a desperate need for digital payments and amplified the demand for SMEs to invest in a smooth-running payment gateway (Kumar, 2020). However, bank fees were a major consideration and a barrier to e-commerce, because for SMEs, 5% of the sale was the bank fees (Tambe, 2020). Furthermore, businesses that concluded deals with global consumers encountered much higher banking fees (Klein, 2020). For example, if a business utilized PayPal, it would have suffered a loss due to the foreign exchange and additional charges levied (Mkansi, 2021). According to Mkansi (2021), the increased banking fees had adverse effects on the growth and development of minor online merchants. The transactional banking segment of e-commerce also encountered enhanced challenges during the pandemic with creativity of payment portals to cater for those consumers that cannot obtain credit cards, safety of data and cybercrime (Akanfe, Valecha, & Rao, 2020; Najib & Fahma, 2020).

With the increasing evolution in e-commerce globally, one of the main concerns is the cumulative number of online security violations (Akanfe et al., 2020). According to Vuyo Mpako, the Head of e-commerce at Standard Bank, lack of reliance on virtual portals and a belief that a credit card is needed to buy online, is holding back many consumers. Vuyo argues that the journey of purchasing online, is non-direct as numerous consumers browse online but prefer to conclude the deal offline. According to an Accenture (2020) survey, 69% of customers were unsatisfied with not being able to access enough info to purchase and inadequate number of options for payment was a source of frustration (Andrianto, Oktora, & Bon, 2021). Gora (2020), argues that SMEs showed no interest in trying to change this.

In the US, some consumers are in possession of up to six credit cards (Zhao, Gopalakrishnan, & Narasimhan, 2021). However, South Africans have less than two credit cards per household, as many South Africans don't qualify for credit cards (Pentz et al., 2020). Furthermore, in South Africa, many payment methods were created, but some did not last since they were deemed to be unreliable (Pentz et al., 2020; Priyono, Moin, & Putri, 2020).

Payment used to be just a transactional point, however, it now represents an opportunity to engage with customers and enhance the total shopping experience (Gora, 2020) and differentiate from competition (Zuyeva, Stengel, & Regier, 2020). The difficulty with 'delivering' that experience was intensified by the demand to adapt to diverse markets and payment preferences which are cost-effective (Gora, 2020).

Payment portal companies are continually developing tools for recognising fraud, however, through the Covid-19 pandemic and digital payments became the most common way to pay for goods, and cybercrime took to a whole new level, impacting businesses and consumers (Mofokeng, 2021; Pentz et al., 2020; Wewege, Lee, & Thomsett, 2020). Criminals upgraded their skills parallel to the innovative approaches designed to mitigate fraud (Kurshan & Shen, 2020). During Covid-19, this problem was exacerbated due to the large number of new consumers using e-commerce, and it therefore became more difficult to identify suspicious transactions (Ma & McKinnon, 2021).

## Logistics

Numerous logistics firms in South Africa have been astonishingly sluggish at adopting digital solutions (Smith, 2021). Digital tracking methods together with manual systems are inefficient (Smith, 2021; Sudan & Taggar, 2021) and although there are current trials to unify and refine data flow to streamline processes, it is still an issue that needs to be resolved (Attaran, 2020; Smith, 2021).

The erratic price of fuel during Covid-19 contributed to higher transportation costs, which impacted delivery costs for SMEs, and caused fluctuating prices of products and services, and directly obstructed the confidence of consumers to buy online (Majavu, 2021). Reverse logistics also created unforeseen losses through the pandemic, as e-commerce activity increased. Due to the lockdown regulations, consumers returned goods they were not happy with and some being damaged in transit (Kushwaha, 2020). Reverse logistics also hindered SMEs that had limited budgets and could not afford to return products (Mathu, 2021; Orji & Okwu, 2021).

The Covid-19 pandemic revealed that several SMEs were vulnerable as they adopted a 'single-source' strategy in logistics (Ali, Suleiman, Khalid, Tan, Tseng, & Kumar, 2021; Ferreira, Cardoso, Travassos, Paiva, Pestana, Lopes, & Oliveira, 2021; Mangano, Berlino, Corbari,

Milisenda, Lucchese, Terzo, Bosch-Belmar, Azaza, Babarro, & Bakiu, 2022; Montoya-Torres et al., 2021). This ‘single-source’ strategy worked perfectly during a normal period, but instantly raised problems when the chain was disrupted (Aldrighetti, Battini, Ivanov, & Zennaro, 2021; Ali et al., 2021; Ferreira et al., 2021; Mangano et al., 2022; Montoya-Torres et al., 2021). Logistic firms were unable to fulfil all orders timeously during the Covid-19 pandemic, as the demand was too high (Ali et al., 2021; Ferreira et al., 2021; Mangano et al., 2022; Montoya-Torres et al., 2021).

It is against the above literature overview as result of a desk research, that the following research propositions are crafted with respect to SMEs in South Africa during Covid-19:

P1: Broadband usage influences the growth of e-commerce among SMEs during a pandemic.

P2: Broadband influences the growth of e-commerce among SMEs through skills set and awareness.

P3: Features of the e-shop platform impacts e-commerce growth among SMEs during a pandemic.

P4: Digital marketing strategies influence e-commerce growth among SMEs.

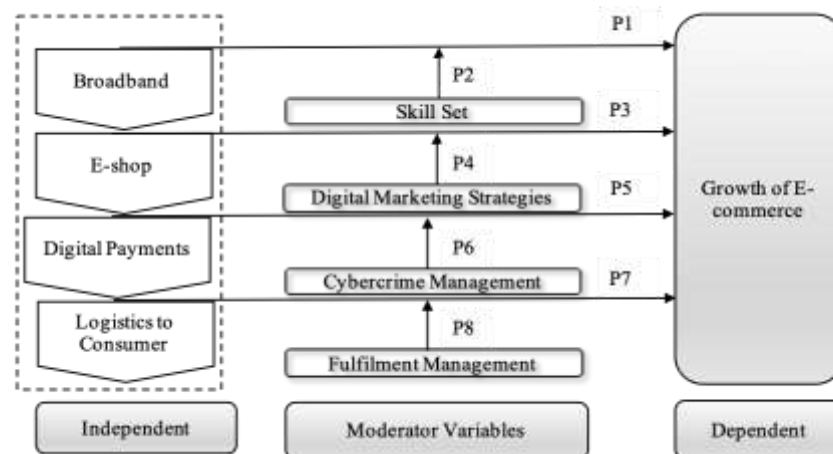
P5: Digital payment systems influence the growth of e-commerce growth among SMEs.

P6: Cybercrime management supports e-commerce growth among SMEs

P7: Efficient logistic services positively impact the growth of e-commerce among SMEs

P8: Fulfilment management supports logistic services and influences e-commerce growth among SMEs.

As depicted in Figure 1, there are four elements needed to successfully complete an e-commerce purchase and if any one of the above elements are missing, an e-commerce purchase is incomplete, and this will affect the growth of e-commerce among SMEs. There are sub-elements that support the independent variables and these are referred to as the moderator variables. Moderator variables are variables that influence the impact of the independent variable on the dependant variable (Memon, Cheah, Ramayah, Ting, Chuah, & Cham, 2019). Even though e-commerce is generally growing rapidly, the reason for its slow growth among SMEs is due to poor e-commerce platforms, and digital inefficient SME businesses (Oktora et al., 2020). Several researchers, inter-alia, Vidya and Prabheesh (2020), Paramannand (2021) have postulated that during Covid-19, SMEs struggled with each element in different ways. Therefore, the researcher will adopt a holistic approach to this study on the elements affecting e-commerce growth.



**Figure 1:** Conceptual Framework

The growth of e-commerce is directly proportional to its usage (Baršauskas, Šarapovas, & Cvilikas, 2008; Ho, Kauffman, & Liang, 2007; Park, Lee, & Ahn, 2004; Tian & Stewart, 2006). The strength of the use of e-commerce depends on human acceptance of all or most of its contributing factors (Awa, Ojiabo, & Emecheta, 2015). However, the Covid-19 pandemic, compelled the young and old to utilize e-commerce to survive, and gave no option for human acceptance.

Theories and models that were used in previous studies on e-commerce include the Theory of Reasoned Action (TRA) developed in 1967, Technology Acceptance Model (TAM) established in 1989, Theory of Planned Behaviour (TPB) founded in 1985, Unified Theory of Acceptance and Use (UTAUT), originated in 2003 and further developed in 2012, Roger’s (1995) Diffusion of Innovation Theory (DOI), Technology Organisation Environment (TOE),

Resource Based Theory (RBT), Perceived E-Readiness Model (PERM), Motivation Model (MM), Model of PC Utilization (MPTU) and Social Cognitive Theory (SCT).

However, it seems that with respect to the research propositions, the following theories seem more appropriate, namely, TRA, TPB, TAM and UTAUT. TRA affects variables such as behaviour, attitude, subjective norm, behaviour intention, and condition (Grandón, Nasco, & Mykytyn Jr, 2011). Furthermore, TPB is also relevant since it includes normative beliefs, control beliefs and perceived behavioural control, behavioural intention and behaviour, conceptual/operational comparison (Awa et al., 2015). TAM impacts perceived usefulness, perceived ease of use, attitude towards using, behavioural intentions, and action system (Awa et al., 2015). UTAUT uses performance expectancy, effort expectancy, social expectancy, facilitating expectancy, habit, hedonic motivation, and price value (Chiemeké & Ewwiekpaefe, 2011). From previous studies in European countries, it is apparent that mixed exogenous-endogenous growth theories impact internet penetration, telecommunication investment intensity, credit card availability, education level and venture capital (Ho et al., 2007). Additionally, the perceived e-readiness model measures the e-readiness of SMEs. Therefore, the above theories will be considered in this research since they are directly related to the four elements of e-commerce growth.

## Discussion and Conclusion

Pantelimon et al. (2020) investigated the growth of electronic commerce and mobile commerce, and reported that e-commerce had an optimistic effect on the growth of GDP in only certain sectors in the EU. Furthermore, through the Covid-19 pandemic, as e-commerce grew, it was not conclusive if the total GDP grew as well, since certain industries were negatively affected (Pantelimon et al., 2020). This study was conducted in one of the most developed economies in the world. However, the results in a developing country like South Africa may be different as infrastructure, trust in online shops and affordability are a challenge (Nyashanu, Simbanegavi, & Gibson, 2020).

According to Kurniawati and Siddiq (2020), many organisational factors contributed to the growth of e-commerce. Although this research was done during the pandemic in Indonesia, a developing country like South Africa, there was a significant limitation, since only 61 people were surveyed, out of a population of 23706 (Kurniawati & Siddiq,

2020). Therefore, in this study, the researcher will take a holistic approach by examining the four elements that directly impact the growth of e-commerce, namely, broadband, e-shop, digital payments, and logistics as well as the sub-elements related to the four elements that impact the growth of e-commerce amongst SMEs.

Covid-19 gave birth to an unanticipated evolution in e-commerce and the pandemic has reinforced the importance of addressing the existing and new challenges that negatively impact e-commerce growth among SMEs in South Africa. This research will provide strategies needed for survival or recovery among SMEs to leverage opportunities during a pandemic. This study will contribute knowledge towards assisting SMEs to adopt e-commerce in their daily business activities such that should a pandemic or disruption occur again, organizations will be better and well equipped to continue as normal, and not having to shut down or retrench employees. This research will also assist in improving decision making with respect to e-commerce and provide solutions for business owners to digitize fast enough and close the digital divide by growing business online and accelerate digital transformation in South Africa. The conclusions from this research should make an important contribution to the SME e-commerce industry in South Africa.

The inveterate fatal Novel coronavirus has compelled consumers to make purchases online, due to the lockdown regulations, more specifically, the need to have less contact with surfaces and people, and be less exposed to areas where there is high foot traffic, such as malls and supermarkets (Sheffi, 2020). In order to cater for the sudden surge in the need for online shopping, businesses had to adapt their operations, business model, product range, etc. and also invest in either creating or improving their online presence to remain in business (Rossouw, Greyling, & Tamanna, 2020). Although e-commerce platforms are continuously evolving, fuelled by the current pandemic which South Africa is facing, e-commerce is far from being exhausted as a research topic. The need began to accelerate rapidly when businesses and consumers shifted to online platforms and South African SMEs were not fully ready to meet the fast-tracked requirement for digitization. The increased consumer demand has also placed overwhelming pressure on businesses to deal with the associated challenges (Verma & Gustafsson, 2020).

The practical implication of this research relates to ascertaining how to assist SMEs to smartly digitize their business model and utilize e-commerce more effectively and efficiently in their operations. An in-depth investigation into, and understanding of the challenges experienced with the adoption of e-commerce by SMEs is necessary, so as to develop strategies to better manage them, since they (SMEs) are the bedrock of a country's economy (Abdelrhim & Elsayed, 2020; Amoako, 2019; Andriani, Aini, Anwar, & Adnandy, 2020; Urban & Naidoo, 2012).

Thus, following the development of this conceptual framework, conducting an empirical study may assist SMEs to make more informed decisions when using e-commerce platforms, and thus contribute to improving the effectiveness of the new way of trading. The findings may also contribute to preparing South African SMEs to adapt more easily, should a similar disruption occur in the future.

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