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Full Length Research Paper

Artificial Intelligence (AI) applications in on-line shopping in India

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Retailing in India has attracted many global players and has reached nearly 350 Billion USD according to KPMG in 2010. While the retail environment is experiencing a significant growth, Indian consumer tastes and preferences are also changing rapidly forcing retailers to grow in numbers and formats. Technological advances and expansion of internet have also paved the way for electronic retail channels. India, as an emerging economy, offers substantial opportunities for e-retailers. In addition, Internet shopping offering more flexibility, interactivity, customization and low risk during the pandemic reached remarkable popularity in the country. Particularly since the outbreak of Covid-19, major on-line sellers have been attracting more and more customers. In the light of growing on line shopping, retailers have embraced a variety of technologies to engage their customers during their on-line shopping experience. Artificial intelligence is an area which clearly facilitates this for the retailers. In this study, the aim is to better understand how use of artificial intelligence tools during on-line shopping leads to customer satisfaction and loyalty. The intent is to provide recommendations on the most effective Artificial Intelligence tools to use for decision makers at companies and retailers. The scope of the study is artificial intelligence tools used in-on line retail in India.

Key words: Artificial Intelligence, on-line shopping, Indian on-line retail market.

INTRODUCTION

Artificial intelligence (AI), as described in the book “Artificial Intelligence: A Modern Approach (AIMA)” (Russell and Norvig, 2020), is often used to describe machines (or computers) that mimic “cognitive” functions that humans associate with the human mind, such as "learning" and "problem-solving". AI’s presence in India has been growing so that industries have started investing in AI research and development. According to a study by PwC India (Price water house Coopers Private Limited India, 2020), amidst the global pandemic, India has noted the highest increase in the use of AI at 45% usage increase compared to developed countries like the US, UK and Japan.

Technological advances and expansion of internet have also paved the way for electronic retail channels. India, as an emerging economy, offers substantial opportunities for e-retailers. In addition, Internet shopping offering more flexibility, interactivity, customization and low risk during the pandemic reached remarkable popularity in the country. Particularly since the outbreak...
of Covid-19, major on-line sellers have been attracting more and more customers.

One channel of retail marketing is the digital/online platform. The e-commerce industry is growing more significant due to enhancements in technology and the global COVID-19 pandemic. This has changed consumer behaviour and forced both the retailer and the shopper to use the available technologies in a short period. Deloitte; in their article “2021 Retail Industry Outlook and the New Rules of Retail” (Deloitte, 2020), foresees that this online shopping preference will remain with us even after all this is over.

In India, the retail industry is one of the largest and fastest-growing industries contributing to more than 13% of countries GDP and 10% of the total employment (Bhaskar and Harshitha, 2017). The large consumer demographics and high domestic consumption in India allow the online shopping industry to flourish. Digital retailing acts as a differentiator and a competitive edge on the growing Indian retail industry. The power of digitization has empowered customers and clients with global access to a wide variety of products and information. In fact, the Indian retail industry, similar to global retail trends, is seeing the expansion of e-commerce in urban areas and reaching rural areas, driven by economical internet options and rural population switching to smartphones (Akamai, 2018).

Further advancements in technology such as artificial intelligence will require the retail industry to adapt and evolve to survive against the growing competition constantly. PwC sees that India’s retail and consumer industry is taking initiatives for broader adoption of AI, with 86% of the firms investing in identifying more pilots for AI implementation (PricewaterhouseCoopers Private Limited India, 2020). Currently, the retail industry is leveraging AI to hyper-personalized customer experience, and PwC foresees that AI-augmented customer service chatbots will be the trend in the future.

The research aims to gauge customers’ awareness of AI tools and their application in their daily life regarding digital retail marketing. Furthermore, the study aims to analyze the interdependence between usage of AI tools in digital marketing and customer satisfaction/loyalty and measuring a sense of safety among customers.

The key research objective is to better understand how use of artificial intelligence tools during on-line shopping leads to customer satisfaction and loyalty in India. One of the expected outcomes for this study is to provide recommendations about the most effective Artificial Intelligence tools to use for decision makers in on-line retail industry in India.

LITERATURE REVIEW

Retail marketing

Retail marketing is the different methods or processes used by retailers to spread awareness about their products to entice people into buying them. Or in other words, they are the methods used to make the people interested in the products and buy them. Retailers promote their goods by using these processes to make the customers interested in trying them. These strategies and methods create the initial interest in a product in the minds of the customers.

The market competitiveness forces routine checking and implementation of new strategies, or else the products will face the risk of being rejected from the markets. Consumers will go looking for alternatives if they feel like they are not getting enough benefits for the money spent. Customers expect the retailers to be ready with products that exceed or at least match their expectations (Wong and Sohal, 2003).

The size of operations and marketing concentration in many industrialized economies has increased dramatically. Each organization has a different way of providing customers with its goods and services. It is refer to it as the 'Format' in the retail situation, which the retailer adopts to meet the final customer (Sinha and Kar, 2010). Companies today face emerging technology, shorter life cycles of goods, globalization, and stronger competition. There are several ways that various retailers do business. For what reasons, a customer today knows which shop to visit. A retailer is mindful of the fact that, through various formats, a consumer assigns different value and significance to a single attribute (Azeem and RRK, 2015).

The e-commerce industry, which was already getting big, has only become much larger with the pandemic that has affected the whole world. Most customers are concerned about the health and safety of their families and have turned to online stores to buy things. The retail industry was also affected by this change in consumer behavior. The pandemic has forced the people to adapt to the use of technology in a short period. The effects of this will remain with us even after all this is over (Deloitte, 2020).

On-line retail marketing

On-line retail marketing is the entire process of purchasing an item on the internet. This process usually begins when a person looks for a product that they would like to purchase and ends when they receive it, this includes browsing through various options, selecting and paying for the product.

According to Kristensen (2020), e-commerce sales were estimated to reach about 4.2 Trillion dollars in 2020. There are about 2.05 billion people using e-commerce websites to purchase items that they require. Digital retail marketing continues to grow rapidly and is being adopted by most industries. From fashion and cosmetics to the food industry, the presence and need for the adoption of
a digital alternative is becoming more important. In this paper, we will provide further research into digital retail marketing both worldwide and specific to India.

The retail industry is evolving and so are the various retailing options. This is partly due to changing consumer lifestyles and competition in the market. However, a major reason for the shift in technology and its advancements. Many opportunities can be exploited to improve the retail industry. An e-commerce site cannot provide the full integrated consumer experience alone, and neither can the traditional retail stores which are why they must integrate. There are many live examples of this like Amazon's physical stores, H and M online store, and so on (Sheth, 2020).

Further advancements in technology such as the introduction of artificial intelligence, blockchains, virtual reality, and more will require the retail industry to constantly adapt and evolve for them to survive against the growing competition. This movement has already begun as we can experience with the introduction of self-checkouts, artificial intelligence-driven chatbots, and so much more (Sheth, 2020).

Digital retailing has been changing the habit of the consumers and retailers alike and can expand business opportunities for them. There have been different studies conducted by people to explore the impact of digitization on the retailing business and how digital retailing revolves around consumer.

**The evolution of traditional retail stores**

Sheth (2020) believe that the retail industry is slowly shifting from being location and convenience-based to providing an integrated value-added service, a large part of this shift has been enabled by technology. He observed that brick-and-mortar stores are shutting down, in part since they can’t compete with online competitors. The online competitors have the luxury of being more flexible and adapting to changes in the market faster than the traditional retail stores. The online stores can customize various aspects of the customer experience. The e-commerce merchants can observe every individual customer’s behavior and tailor the offers and promotions accordingly.

This is further confirmed by (Saroj, 2018) in his paper, with the introduction of online retail stores, there was a decline in physical stores. The reality suggests that online retail marketing has become an essential mode of retail for Indians.

**Impact of technology and digital innovations**

Digital innovations have been gradually transforming the corporate landscape since the advent of the Internet in the early 1990s. Technology has been one of the governing factors in global growth, globalization, and sales expansion. Technology has made it practical to lower trade boundaries. In context, digital technology in retail is an indispensable tool for forming, supporting, and efficiently meet the requirements of customers with speed, ease, and utility (Gajjar, 2020).

Due to the increase in the use of digital payments and smartphones, online retail will continue to grow. At present, customers are becoming more familiar with online payment methods (Saroj, 2018).

The paper by (Evanschitzky et al., 2020) offers a review of digital transformation research with an emphasis on retailing and consumer-facing digital technology roles, such as customer journey management, on the one hand, evaluating the effect of sensory marketing and the use of service robots, on the other hand, and their strategic implications for business models such as sterilization.

The retailing effect of digitalization revolves around the offered product/service portfolio, as well as discovering new and better ways to manage relationships with clients, staff, suppliers, and other stakeholders in the network. The best-practice examples demonstrate how to give their customers a high shopping experience; certain retailers have continued to benefit from the specific qualities of physical and digital touchpoints. While these two studies offer some answers to the above research questions, further study is needed to better understand the diverse consumer journeys of today and to deal effectively with the emerging digital touchpoints that will emerge in the future (Evanschitzky et al., 2020).

**Retail industry in India**

In India, the retail industry is one of the largest and fastest-growing industries contributing to more than 13% of countries GDP and 10% of the total employment (Bhaskar and Harshitha, 2017). The large consumer demographics and high domestic consumption in India allow the online shopping industry to flourish. Digital retailing acts as a differentiator and a competitive edge on the growing Indian retail industry. The power of digitization has empowered customers and clients with global access to a wide variety of products and information. In fact, the Indian retail industry, similar to global retail trends, is seeing the expansion of e-commerce in urban areas and reaching rural areas, driven by economical internet options and rural population switching to smartphones (Akamai, 2018).

Further advancements in technology such as artificial intelligence will require the retail industry to adapt and evolve to survive against the growing competition constantly. PwC sees that India’s retail and consumer industry is taking initiatives for broader adoption of AI, with 86% of the firms investing in identifying more pilots for AI implementation (PricewaterhouseCoopers Private
Limited India, 2020). Currently, the retail industry is Leveraging AI to hyper-personalized customer experience, and PwC foresees that AI-augmented customer service chatbots will be the trend in the future.

India comprises of 120 million Internet users, compared to the worldwide 1 billion Internet users in 30 aspiring nations (www.mckinsey.com n.d.), and internet access is very high despite the geographic location. Shoppers in India’s urban areas have turned to online shopping, seeing as the domestic and cross border online retailers have increased (Akamai, 2018). However, a proportion of the population still doesn’t have enough insight into online retailing due to different problems like lack of internet facilities, and lack of trust on payment gateways (Sharma and Gupta, 2017) (Mani Cand G, 2019) inferred that a consumer’s trust in their payment methods highly impacts the customer’s attitude towards purchasing online, which is why the online retail marketer should ensure that they highlight their payment options and the safety of the consumer’s transactions. Despite the above stated, no study has been conducted to explore the “real-time” attitude of the population towards the AI tools in digital marketing and identify factors, that contribute to low levels of sense of safety and lack of trust considering payment methods among the population in rural and urban India.

Furthermore, India is forecasted to the youngest country globally (Saroj, 2018) and 42% of people between the ages of 26 to 30 prefer to shop online. This clearly indicates that young people are more aware of new buying genres and are interested in e-shopping. (Mathur and Sharma, 2014) the independence of gender/age and usage of AI tools has not been yet explored among India’s population.

In addition to the aforementioned (Mani et al., 2019) noted that a few of the factors that influence a customer’s choice of online store and product are referrals, family, income, age, and gender. However, they stated that the lack of physical contact in e-commerce forces online retailers to analyze their customers’ behavior more carefully to understand what influences their choices. It would be very interesting to determine factors that lead to decisions on whether to use AI tools like a virtual assistant, chatbot, online payment etc. among India’s general population.

Noteworthy, that in last decade, AI tools have been better integrated into digital retail marketing in India and companies have been using various tools like a virtual assistant, chatbot, and voice search to improve brand recognition among customers and influence their purchasing decision. However, whether the application of AI tools in marketing enhances customer satisfaction and loyalty has not yet been explored in the Indian market.

Therefore, there is a considerable need for surveys targeting the AI phenomena in the Indian market and measuring its application, specifically in digital retail marketing. Studies should be planned to further reconnoiter the level of awareness of the general public in India on AI tools and their attitude towards its usage. The factors determining the customers’ purchasing decisions regarding online shopping should be explored through gender, age, income, and geographic lenses.

On-line retail marketing environment in India

India is currently the fifth largest retail destination worldwide making it one of the most prominent markets. According to (Sharma and Gupta, 2017) e-retailing accounts for 10% of total e-commerce activities in India. India retail business is predicted to roughly double from US$ 600 billion in 2015 to US$ 1 trillion by 2020 followed by expansion in sales, urbanization. This is due to the large and growing population of India. (Gajjar, 2020) At present, the big online retailers in India are Amazon US, Rakuten Japan, Flipkart India, Alibaba (Saroj, 2018).

Favorable demographics provide opportunities for online retailers in India. India is forecasted to the youngest country in the world, which means this group prefers online shopping (Saroj, 2018). In the developed world, online shopping is quite common these days than it was about 5 years ago and it is gaining its market in India comprising 120 million Internet users compared to the worldwide 1 billion Internet users in 30 aspiring nations.

The survey has found that 42% of people between the ages of 26 to 30 prefer to shop online; this clearly indicates that young people are more aware of new options for buying genres and are interested in e-shopping (Mathur and Sharma, 2014).

Competitive edge and customer satisfaction

Gajjar (2020) discussed how digital retailing can act as a differentiator and a competitive edge on the growing Indian retail industry. It was noted that online retailing revolves around customer-centric initiatives which include delivery modes, returns policy, customer loyalty programs, and deployment of digital technology to customers in a unified manner.

This means that customer satisfaction is at most important to digital retailing.

Government policies

In India, the government is promoting the use of debit or credit cards for payments which is efficient. The increase in the use of smartphones and online payment applications serves as a convenient cash-free and card-free transaction medium (Saroj, 2018). The Indian government trade policies help in drawing foreign direct
investment (FDI) to the retail sector (Gajjar, 2020).

Use of the internet and mobile accessibility

Due to the increasing use of the internet by people and the accessibility of mobile internet connections at cheaper rates, online shopping habits are gaining rapid market and growing every year. Awareness about digital retail marketing is also increasing (Mathur and Sharma, A Study of Online Shopping Habits of Consumers in India, 2014).

The gap between online and offline modes of marketing is reducing day by day owing to the rapid growth of e-commerce and in particular, mobile e-commerce was the main reason for that (Sharma and Gupta, 2017).

Challenges of on-line retail marketing in India

Perceived risks

Mani et al. (2019) researched the perception that the Indian public had towards online shopping. They wanted to verify if the risks and benefits perceived by the consumer had an impact on their attitude towards online shopping and if it affected their shopping behavior while buying products online. They further outlined that the perceived risks that they considered for the sake of this research was: financial risk, product risk, and return risk. Whereas, the benefits were listed as website quality, convenience, trust, and price. They surveyed 680 people in India. From their study, they were able to find that perceived risk has a negative influence on the attitude and behavior of consumers that shop online whereas, the perceived benefits had a positive impact on the same. They confirm that online shopping has great potential if the online retail marketers can ensure the safety of financial transactions, the quality of their products, prompt delivery, efficient customer care services, etc.

Competitive markets

As observed by Fornari et al. (2018), the online channel has initiated a new cycle in competitiveness among the retailers characterized by shoppers increasing nomadism around physical and digital touchpoints. In India alone, there are many foreign online retailers like Amazon, Alibaba which are already competing with local retailers like Flipkart and Snapdeal (Saroj, 2018).

Lack of knowledge and awareness

According to (A.T Kearney and PwC report) India still stands in 5th place which means there is much room for improvement. A proportion of the population still doesn’t have enough insight about online retailing owing to different problems like lack of internet facilities, lack of trust on payment gateways (Sharma and Gupta, 2017).

There is a strong lack of understanding of how modern multisensory technologies could help to simulate service interactions through multisensory representation, with a focus on digital sensory marketing (Evanschitzky et al., 2020).

Mani et al. (2019) and Saroj (2018), also place importance on raising awareness amongst the target consumers about e-commerce. There are various digital platforms available that is, websites, e-commerce, Search engine marketing (SEO and SEA), affiliate marketing, social media websites (YouTube, Instagram and Facebook), Mobile apps, Big data and RFID, AI, and VR that can help the company combat the issue of lack of awareness and can be used to promote a company (Schoni, 2017).

Trust in payment gateways

Mani et al. (2019) inferred that a consumer’s trust in their payment methods highly impacts the customer’s attitude towards purchasing online which is why the online retail marketer should ensure that they highlight their payment options and the safety of the consumer’s transactions. This is also reinforced in the above point by Sharma and Gupta (2017).

Technology

Saroj (2018) observed in his paper, that there is a slow development in different technologies (like online infrastructure, digital payments). It is known that customers mostly respect recommendations made by service employees, however it is uncertain if advice offered by digital technologies such as robots can impact a consumer’s decisions (Evanschitzky et al., 2020).

Covid-19 and its effects on retail marketing

As an effect of Covid-19 pandemic, health and safety are the primary purchase drivers for consumers, influencing -what, where, and how of purchases. Adoption of digital and technological tools which would have traditionally taken years has occurred in a matter of months (Sides and Skelly, 2021). The study conducted by interviewing 15 retail executives, 15 retail subject-matter specialists augmented by consumer survey studies revealed how retailers should focus to maximize their investments in 2021. Similar studies conducted by McKinsey and Company also echoed the findings on digital space (Greg and Sajal, 2020).
Digital differentiation

Digital differentiation is the key as all retailers have jumped the digital bandwagon, the key lies in how a retailer can differentiate its digital offerings. The competition does not only lie between the mass merchandisers and other retailers. But the shopper journey begins at the search engines, social media channels and online-only retailers as number of digital native consumer grows. Hence retail marketing is now about forging new alliances and exploring newer business models like subscriptions or memberships to create an omni-channel experience (Sides and Skelly, 2020).

Omni-channel customization

Omni-channel experience where the shopper journey is an amalgamation of channel journeys bases on convenience has led to customization expectations and awareness across the channels. Newer ways of engaging through influencer marketing by livestreams and events is creating ways to increase engagement where person-to-person connection moves online (Sides and Skelly, 2020).

McKinsey and Company (2020) states that the digital and omnichannel penetration has grown by 10% across multiple categories. Countries with moderate conversion rates for online shopping has increased whereas countries with high penetration of online shopping have seen an increase in the share of wallet. Methodology followed in gauging the consumer behaviour is by employing consumer pulse surveys in 45 countries, between June 15th, 2020 and June 21st, 2020 (Greg and Sajal, 2020).

Artificial intelligence use in retail in India

Simulation of the activities of the brain has always been a subject of interest to scientists, philosophers and artists. Theories and mathematics behind artificial intelligence (AI) have existed for quite some time. However, recent advances in computing power have made this subject very real for us (Sudipta, 2018). Things which were only possible in theory now with AI are actual happening, we can now predict things; derive outcomes using powerful AI models.

AI is generally, the computer can do anything as same as the human: it never replaces the human brain. AI’s applications seem to rise faster because of multiple factors; the first reason is the Concepts of machine learning, neural networks, big data and artificial intelligence (AI) are shaping new digital consumer worldwide. Through the Internet of Things (IoT), low-cost sensors, mobile devices, one can generate, store, transmit and process the high volume, high speed and high variety data. It is the third factor (Srivastava, 2018).

The importance of AI in India is increasing from the year 2018 and there is an expectation of an increase in CAGR by 39% from US$1176 million in 2019 to US$11789 million by 2025 (Market, January 09, 2020). There are various startup companies, which have emerged in India by 2018. According to a report by Zinnov global management consulting, around 170 startups have received an investment of approximately US$36 million (Srivastava, 2018).

The opportunity for AI is in over 18 industries in India which includes Bank and finance, Supply Chain, Healthcare, e-commerce and more. (Market, January 09, 2020). Indian IT companies like TCS and Infosys are involved in developing various AI-based solutions for their problems. Government of India is investing in R and D of AI to support the development; that program is called as “National Program on Perception Engineering” (Srivastava, 2018).

Applications and opportunities

Literature reveals that experts are looking for a new set of jobs that will emerge during the process. The newly created jobs required highly skilled workers, so the existing workers would have to be retrained or must go through a transition phase. Artificial Intelligence and computer science differ from each other as AI lays importance on observation and action. Its importance is seen in machine learning. Machine learning in simple terms refers to setting algorithms and coding to the work done as programmed. Biggest examples of machine learning are robots, self-driving car, virtual assistant (Haenlein and Kaplan, 2019).

There is a huge opportunity in the Indian market for AI as they can use talent within the country and can build a successful Information Technology industry. AI can help in important programs of the government of India like Digital India, Make in India, and Skill India. To become powerful in AI, India Development needs to implement it in Applications and Infrastructure, Policy and Regulations, Research and Development and Human Resource Development (Srivastava, 2018). The existing development in the Indian economy is due to integral AI policies in India. The ongoing development of AI is due to innovation encouragement for different technologies (Marda, 2018).

There are several applications for AI in the present scenario, some of them are Healthcare, Education, Cyber Security, Law, Finance, Information browsing, Transport, Virtual assistants, E-commerce, Customer care and Business strategy.

According to Haenlein and Kaplan (2019), in the future, use of Artificial Intelligence will increase fundamentally and will impact firms as well as daily lives. When it comes
to organization, use of AI is seen in the human resource management system. It enables decision making among employees and employers (Haenlein and Kaplan, 2019).

With the increase in accessibility of the Internet in India, there is an increase of 33.5 percent in the Advertising Industry in India as of 2020 with a value of approximately INR 225 Billion. India is also one of the newest and largest growing markets for Digital Marketing (Umesh and IJARSCT, September 2020).

**METHODOLOGY**

This study has been carried out with an empirical, quantitative and descriptive nature. 270 surveys have been completed in line during the month of February to March 2021 in Urban India. The on-line survey was created using the Google Survey platform. Convenience sampling supported with snow ball technique was deployed and the respondents had to be between the ages of 18-40 and regular users of on-line shopping tools and platforms. Data collected was manually coded and ran through SPSS program for Statistical analysis.

In order to answer the research questions, descriptive statistics and correlation analyses were used to conclude with Central Limit Theorem indicators and verify the significance of correlation between variables identified in the conceptual model.

Research questions were transformed into hypotheses to test relationships between different variables and verify below presented conceptual model.

**Research questions**

1) What are the advantages and disadvantages of online shopping?

2) What are the leading AI applications that customers are aware of in India?

3) What are the reasons online users in India prefer using AI tools?

4) To what extent does gender/education/income/geographic area/age affect the usage of AI tools in retail marketing by customers?

5) To what extent do customers feel safe using AI tools?

6) To what extent does the usage of AI tools in digital retail marketing lead to customer satisfaction?

7) To what extent does the usage of AI tools in digital retail marketing lead to customer loyalty?

**Conceptual model**

The study consists on quantitative primary data collection among on line retail shoppers in India and is of descriptive and causal designed to verify below self-developed conceptual model (Figure 1).

**RESULTS AND DISCUSSION**

**Frequencies**

90 % of respondents indicated that they are aware of AI tools for on line retail. 64.7% of participants revealed that they have previously use AI tools while shopping on line. A little over 90% of respondents expressed that they moderately use AI tools for on line shopping. Nearly 61% of respondents are aware of chatbots while a significant ratio of 87% is accustomed with on line payment. Google assistant is the most used virtual assistant with over 60%
while electronics and clothing are the most shopped items with 60% + ratings. Respondents also indicated that they prefer paying with debit/credit cards on line with a response rate of 71.4%. In terms of intention to recommend AI enabled on line shopping, the answer was an overwhelmingly in favor (very likely) of it with 92.3%. Respondents did not express a high intention to continue using AI enabled on line shopping in the future with 15% which was very interesting despite their positive experiences. One of the major reasons seems that respondents have privacy and security issues related to on line shopping as the response rate to this matter was 24% with nearly 50% being neutral. On matters of customer satisfaction, respondents indicated that they prefer on line customer satisfaction with 71% but do not perceive it to be an enhanced experienced with only 24% agreeing with the proposed statement. Also participants responded neutral to being a more satisfied customer when using AI enabled on line shopping platform with 49%.

Some other key findings are as follows:
1) Gender and usage of AI tools among customers in India are interdependent.
2) Age group and usage of AI applications during online shopping in India are interdependent.
3) Education and usage of AI tools among customers in India are interdependent.
4) Geography and usage of AI tools among customers in India are interdependent.
5) AI applications in online shopping platforms increase customer satisfaction.

Conceptual model verification
R can be considered as one of the qualities of prediction of the dependent variables which in case is customer satisfaction. As R value (0.615) is inclined towards 1 one can say that the model is efficient and reliable.

Customer satisfaction equation
The overall customer satisfaction can be calculated by forming the equation using this coefficient. The equation can be formulated as follows:

Overall Customer Satisfaction = 1.869 + 0.049*Age + 0.019* Annual Income -0.112 * Gender – 0.0868* Level of Education + 0.006* Area of Living + 0.086* Awareness of AI – 0.176*Ever Used AI + 0.037* Hesitant to Use of AI due to Data Leakage – 0.025* Hesitant to Use of AI due Increase in Financial Risk + 0.566* Feeling Safe while using AI for Shopping Transactions.

This model is used to predict the loyalty of a customer towards an online shopping experience that uses various AI applications such as chatbots, voice assistants, etc. Multiple linear regressions have been used to analyze the data since it have a single dependent variable and multiple independent variables. Dependent variables are those whose values we want to predict, and the independent variables are those variables used to predict the value of the dependent variable.

Loyalty of the customers towards AI application while shopping based upon demographics, AI applications, Awareness, Lack of trust of AI technology-based decisions.

Variables used
Table 1 shows the variables which have been used as dependent and independent variables. These variables were fed into SPSS for analysis and model formation.

Dependent variables: After using AI, I intend to continue shopping online with AI.

Independent variables:
1) I feel completely safe while using AI applications for online shopping transactions.
2) Annual household income.
3) Gender.
4) Hesitance in using AI applications in online shopping due to increased risk of financial security.
5) Last level of education completed.
6) Awareness of AI (Artificial Intelligence) tools for on-line retail.
7) Where do you live?
8) Have you ever used AI applications (Chatbots, Voice Assistant (Google Assistant, Siri, and Alexa), etc. during online shopping?
9) Age group.
10) Hesitance in using AI applications in online shopping due to the perceived risk of private data leakage.

Model summary

Observations
Table 2 shows the Model summary. The “R” column is called the multiple correlation coefficients. R is one measure of the quality of the prediction of the dependent variable. A value of 0.668, in this case, indicates a good level of prediction. The R-value can range from 0 to 1 (~ Value near 1 – Good level of prediction, a value near 0 - Not a Good level of prediction) The “R square” represents the R2 value and is known as the coefficient of determination which is the proportion of variance in the
dependent variable that can be explained by the independent.

**Statistical significance ANOVA**

**Observation**

The F-ratio in the ANOVA table (see above) tests whether the overall regression model is a good fit for the data. Table 3 shows that the independent variables statistically significantly predict the dependent variable. Also, the significance level (p value) as highlighted in yellow is less than 0.05 concludes that regression model is a good fit of the data.

**DISCUSSION**

Some additional results of the research should be mentioned and can be summarised as the following:

1) AI applications enhance the customer experience in their online shopping, thus leading to loyalty.
2) AI Application use in India enhances the customer experience in their online shopping, thus leading to loyalty and further suggesting that consumers will continue shopping online after using AI applications.
3) Consumers do feel safe while using AI tools in their online purchase. And overall, Neutral and Disagreeing reactions accounts for 72.6% which conveys that most people do not perceive AI applications as a risk to their privacy.

4) AI applications do not increase or pose security risks according to the survey respondents.
5) Online consumers aged between 18-45 years in India do not perceive AI applications as a security risk.
6) People do not prefer live customer interaction over use of online customer service.
7) Online consumers aged between 19 to 45 years in India, prefer support provided online through AI, Chatbots, etc. rather than having a live customer interaction.
8) AI applications usage incidence with online retail AI awareness.
9) Online AI awareness helps to increase the usage of AI applications.

Although much of the initial questions have been answered, following are key areas that need to be considered as limitations of the study and inspiration for further research.

1) The study has been conducted in urban India and may need to be repeated in suburban and rural India to be more representative of the Country socio-economic profile. In addition, random sampling was used to collect 270 where snow ball technique was also applied creating bias in respondents' profile being recent college graduate or current students. The sample size also could be boosted in future studies.
2) The study has been conducted during the Pandemic and respondents are limited to the 18-40 years old. Older generations may have been over looked given their level of education and awareness with internet and on-line shopping.
3) No analyses have been carried out to understand the impact of individual artificial intelligence tools on customer satisfaction and customer loyalty which needs to be investigated in future studies.

4) Based on the literature review, India comprises 120 million Internet users, compared to the worldwide 1 billion Internet users in 30 aspiring nations (www.mckinsey.com n.d.), and internet access is very high despite the geographic location. Shoppers in India’s urban areas have turned to online shopping, seeing as the domestic and cross border online retailers have increased (Akamai, 2018). However, a proportion of the population still doesn’t have enough insight into online retailing due to different problems like lack of internet facilities, and lack of trust on payment gateways (Sharma and Gupta, 2017) and (Mani et al., 2019).

Conclusion

The loyalty model has been verified. Since the R-value is inclined to 1, and can be said that the model is an appropriate fit. A multiple regression model was used to analyze loyalty based on demographics, AI applications, Awareness, Lack of trust of AI technology-based decisions. These variables statistically significantly predicted loyalty towards usage of AI applications while shopping online. A general form of equation for finding loyalty can be formulated as below:

\[
\text{Loyalty} = 1.444 - 0.005\text{Age} + 0.019\text{ Annual Income} - 0.121 \times \text{Gender} + 0.027\text{ Last Level of Education} + 0.038\text{ Area of Living} + 0.107\text{ Awareness of AI} - 0.228\text{Usage of AI} + 0.074\text{Hesitant to Use of AI due to private data leakage} + 0.063\text{ Hesitant to Use of AI due to increase Financial Risk} + 0.578\text{ Feels Safe while using AI for Shopping Transactions.}
\]

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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Sales promotion tools, customer emotions and consumer buying responses in Ghana

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Sales promotion is used by various organizations to encourage buying response among their customers. Although it is an effective tool in marketing, few studies have been conducted on sales promotion on buying response using customer emotions as a mediating factor. To fill these gap, the study pursued the formation of a model that explains how sales promotion links to customers’ emotions and buying responses in Ghana. The model was validated by conducting a survey with a convenience sampling technique on 664 customers. The data collected were processed using a structural equation modeling approach. The result shows that a bonus pack, coupons, sample, price discount, and rebate have a relation with customer buying response. All the tools have an indirect relationship with the customer buying response except for the bonus pack. Besides, there is a relationship between sales promotion tools and customer emotion, and customer emotions have a strong relationship with customer buying response. The study suggested that managers must create new value for their product to build an emotional connection with the product.

Key words: consumer buying response; coupons; sample; brand loyalty.

INTRODUCTION

Marketing has gone beyond, the process of introducing a new product into the market, giving the product the right price, making them accessible or reachable to the target market. Attracting customers is so essential; to marketers, the cost of keeping old customers is far cheaper than gaining a new customer (Huynh, 2016). Mittal and Sethi (2011) explained that the cost and benefit analysis is critically done, it revealed that searching for a new customer is very expensive than keeping an existing customer. The study is focused on marketing practitioners and understandings of customer behaviour. Many marketing managers are relying on sales promotion as a tool to keep and attract customers. Huynh (2016) explained that 30% of TV adverts are all sales promotion advertising. Besides sales promotion contribute to about 75% of the promotional budget of many organizations.

Ubeja and Kusuma (2014) explained that the frequent use of sales promotion by many managers is as a result that sales promotion creates high sales response.
Customers make three different buying decisions: (1) what to buy; (2) how much to buy, and (3) what brand to buy? Sales promotion affects all three buying decisions. Sales promotion afford companies a lot of good in the area of sales boost, keeping customers, maintaining sales of seasonal products, introducing new products, encouraging brand switching, and conquering competitive products.

Conversely, many researchers have the view that sales promotion creates sales in the short term and losses all the sales again in the long term. Therefore it only shifts sales from one period to another (Kotler et al., 2017).

There is a conflicting result on the possible long-term effect on sales promotion on customer buying response according to Kotler et al. (2017) monetary sales promotion tools are less effective in building brand interest since the emphasis is on price and not the brand. The buyer’s response is no commitment but rather promotion driven by the incentives given by the company. Empirical research shows that sales promotion tools affect customer buying response indirectly there is a need to investigate the intervening factor (customer mood). It is rather a customer’s mood that has a direct association with customer buying response (Ubeja and Kusuma, 2014).

Some researcher claims that sales promotion has a negative effect on the customer such as brand switching, and less brand loyalty.

The inconsistency and limitation in the previous study show that there is a gap needs to be filled with new empirical research using customer mood as a moderating variable. The study looks at the theoretical framework and reviewing of literature on selected sales promotion tools and customer emotion and research model and the main hypotheses. The study is to find answers to the following research questions: which sales promotional tool leads to customer buying response, which sales promotion tool triggers customer emotions, and how customer emotion affects customer buying response?

**Consumer buying response**

Customer behaviour is how customers act in a particular way under certain circumstances (Proctor et al., 2002). It explains why customers act in a particular way. It is important for marketers to recognize why and how an individual makes their purchase decisions. Exposing customers to various sales promotion tools affect what and how they buy (Krishna, 2012). The customer’s exposure to sale promotion changes their perception about a product (Nasermoadeli et al., 2013).

The study adopted the model by Mehrabian and Russell Model (1974) to explain the influence of sales promotion on customer buying response. The model is based on the Stimulus-Organism-Response (S-O-R) paradigm. The S-O-R paradigm explains the sales promotion tools (S) impact on approach – customer buying response (R), mediated by the customer emotions (O) as in Figure 1. According to Sullivan and Adcock (2002) moods of customers affect sales promotion, and customer’s buying response affects the mood of customers. The figure shows that a customer’s mood can be grouped into two variables: pleasure and arousal while the response is categorized into approach behaviours and avoidance behaviours (Sullivan and Adcock, 2002).

Rizwan et al. (2018) explains that customers’ buying behaviour is complex and needs enough time to understand. The study identified four categories of buying behaviour namely brand switching, purchase acceleration, product trial, and brand loyal.

Customers behave differently in different situations; a sales promotion tool creates a different response. Customers switch from one brand to another. There are instances; customers switch brands because they want to save money.

Therefore retailers are encouraged to introduce low price mechanisms to induce switching of brands (Alimpic, 2014).

Purchase acceleration is the rate at which customers are induced to buy a product earlier than planned or needed. This is done by encouraging customers to buy on regular bases or buy more at a time (Sethi, 2018).

Brand loyal consumers purchase regular brands resulting in long-term sustainability, whereas consumers who are not brand loyal are prepared to test various brands and switch between them (Alimpic, 2014).

Product trail consumers buy new trial product on the market. Sales promotion tool accelerates product trial by encouraging customers to buy many or more of a new product at short intervals, customer repeat purchases product that they are satisfied after a trial (Sethi, 2018).

**Sales promotion tools and buying behavior responses**

The study is, therefore, to examine the various sales promotion techniques in inducing the desired sales response. Powers et al. (2017) identified five types of sales promotions which include the following: Bonus pack (BN), Coupons (CP), Samples, Rebates (RB), and price discount (PD). Each of the sales promotion tools was measures with the various customer buying behaviour components namely: brand switching, purchase acceleration, product trial, and brand loyal.

**Bonus packs and buying behavior responses.**

Bonus packs are ways of promoting sales of new and or existing products. The biggest deal in that field is the BOGO (Buy One, Get Other for free) (Mohsen, 2016). A mineral water company may offer a 12 cans pack for the
price of 10 cans making the customer benefit from 2 cans for free. Even though bonus increases sale in the very short term, decreasing prices affect the products image as customer perception of the product is altered. A bonus pack most often is appealing to customers who already purchase the product it does not encourage product trial (Truong et al., 2017).

A bonus pack is mainly used in Ghana as it convinced customers to buy new products due to no extra cost. It is suitable for stockpiling, purchase acceleration, product trial, brand loyalty, and switching of brands. A bonus pack is suitable for attracting competitor’s customers and non-regular users of products. However, stockpiling can be a problem for the customer who does not have extra space to store the product even though there is an incentive to buy (Mishra et al., 2014); this led to the following hypothesis H1a: Bonus pack has a relationship with buying behavior responses.

### Coupons and buying behavior responses

Coupons are certificates given to the customer after purchasing a product which entitles the customer to save when they buy a product. The coupon is found in magazines, newspapers, and on packaging (Akaka and Alden, 2015). Coupons are papers are given to customers after purchasing a product as an exchange of financial discount or rebate for future purchasing (Akaka and Alden, 2015). Coupons are distributed through mediums such as magazines, newspaper, and social media directly to the customer from the manufactures or through middlemen such as wholesalers, retailers etc.

There are various forms of coupons such as discounts, free shipping, and buy-one-get-one, trade-in for redemption, first-time customer coupons, free trial offer, launch offers, festival offers, and free giveaways (Harms et al., 2017).

Kotler et al. (2017) explained that coupons stimulate the trial of new products by new customers since it reduces the cost of attaining such products. It has been argued that discounted products lose their value in the eyes of the customer. Besides the majority of the customers who will be given the coupons are already loyal customers and would have bought the product without the coupon. This makes coupon a waste of resources (Akaka and Alden, 2015).

It does not directly affect customer buying behaviour since the savings of price is not immediate; coupons are generally only effective in stimulating consumers on stockpiling and purchase acceleration. However, the coupon does not affect buying response since the most inefficient method of sales promotion (Maulani, 2017).

This led to the following hypothesis H1b: Coupons have a relationship with buying behavior responses.

### Price discounts (PD) and buying behavior responses

This is an offer to give a product to a customer at a reduced price. Price discount induces short term sales (Mohsenzadeh and Ahmadian, 2016). According to only price discounts have a significant effect on customer buying behaviour through encouraging purchase acceleration and product trial, especially on a new product. Price discount indirectly attracts new customers who in a way has never tried that product before. This is through changing the mood of the customer in favour of the company’s product amid many other alternatives. According to Obeid (2014), price discount encourages the customer to spend more, stockpile, and attract competitor’s customers. However, competitors can easily respond to and even go lower than expected and can also
lower the brand value of the product (Loda, 2014). This resulted in the following hypothesis: \[ H1c: \text{Price discounts have a relationship with buying behavior responses.} \]

Free product samples (SM) and buying behavior responses

Free Samples are also amongst the most important tools of sales promotion. This is the number of new products given out to customers in many forms such as adding it up to different products, by mail, or displayed at accessible areas during the introductory stage. Maulani (2017) it stimulates the trial of new products.

Free samples are used by companies to encourage product trial to keep the customer in the long term. Samples are given to a customer for free at their doorsteps, by mail, or face to face in a shop. In other words, samples are useful as it motivates purchase acceleration (Obeid, 2014).

Free samples assist to attract competitors, customers. However, in a way it do not keeps customers as they will go back to their favorite product when the sales promotion ends and it is the most expensive sales promotion tool (Loda, 2014). This resulted in the following hypothesis: \[ H1b: \text{Free product samples have a direct association with buying behavior responses.} \]

Rebates (RB) and buying behavior responses

Akaka and Alden (2015) stated that customers are given a refund of the price at which they bought the product after sending proof of purchase. The proof of purchase in most cases is the receipt for the company to send back a discount to the customer. Rebate is similar to coupons but the difference is that discounts are redeemed after purchase. Akaka and Alden (2015) continued to explain that there is always a misconception of whether redeeming the discount is certain.

Rebate may not encourage product trials but rather brand switching. It will in a way accelerate purchasing but not brand loyalty (Obeid, 2014). Rebate has an indirect link with customer buying behaviour. A lot of things going on in the minds of the customer before buying a product (Akaka and Alden, 2015). This resulted in the following hypothesis \[ H1e: \text{Rebates has a positive association with buying behavior responses.} \]

Sales promotion tools and customer emotions

Sales promotions that are appealing to the sense of the customer, make them curious, and buy the product attached to the promotion. Besides some sales promotion messages has a sense of humor and end up attracting the customer to the response. Sales promotion tools appeal to people’s primal emotions to increase conversions and sales (Yang and He, 2011). Customer emotions then trigger the customer to either buy the product or postpone buying. It means that there is a situation where customer emotions determine sales and not an only sales promotion.

According to Damasio (1999), at any time customers are exposed to price discounts, bonus packs, coupons, free sales, and rebates it makes the potential customer think twice and make a logical choice. Customers are rational and want to make good use of their available resources.

However, According to Kotler and Armstrong (2017) monetary sales promotion tools are less effective in building brand interest since the emphasis is on price and not the brand. In the submission of Damasio (1999) customers will not necessarily buy brands because of price discount especially when they are not aware of the brand. But a brand that has built its image over a long period will record higher sales during a sale promotion. The likeability of the brand predicts the increase in sales during sales promotion time. It resonates emotionally with a consumer; this led to the formation of the hypothesis. \[ H2 \text{ there is a significant relationship between Sales promotion tools and customer emotions.} \]

Customer emotions and customer buying response

At any time where a customer must respond to stimuli to make a decision, the emotions from previous related experience affect the final decision. Customer’s emotions at the time of purchase create brand preference which then translates into customer response. Customer process information in their minds to choose a brand to buy but in most cases is not able to decide due to lack of sense of what they feel about the alternative (Damasio, 1999).

When customers are evaluating among available brands, they examine the other brands based on their emotions (personal feelings and experiences), rather than information (brand attributes, features, and facts) (Kim, 2002). The result from various studies indicates that positive customer emotion towards a brand affects the customers buying response than judgments, which are based on a brand’s attributes (Damasio, 1999; Bosse et al., 2006).

Customer preference is determined by the emotions of customers. There are various alternatives to brands on the market at different prices. What the customer settles on is emotionally motivated. In other words the higher the emotions of a customer on a particular brand, the higher the possibility of brand loyalty (Damasio, 1999). These demonstrate that the Customer’s buying response is influenced by customers’ emotions. There is a link directly between the customer’s emotions and customer buying response. This led to the formation of the hypothesis. \[ H3 \text{ there is a significant relationship between Sales} \]
promotion tools and customer emotions.

Conceptual framework review

Powers et al. (2017) explained the influence of sales promotion tools: coupons, price discounts, and sample and rebate customers buying response: behaviors like brand switching, purchase acceleration, product trial, and brand loyalty.

There are instances where the link between sales promotion tools and customer consumer buying responses is moderated by customer emotion. Therefore, there is no direct link between sales promotion and buying response (Rizwan et al., 2018).

METHODOLOGY

The study adopted a descriptive research design. The population of the study was customers who are between the ages of 18 to 60 years and a residence of Tema in the Greater Accra region of Ghana. The convenience sampling technique was used to collect the data for its easiness of contact. The final sample size was 664. The data were collected using a questionnaire. The 5-point Likert Scale was used to collect the responses (1-Strongly agree to 5-Strongly Disagree).

Convenient sampling was employed to select the sample. Pilot research was conducted on 40 respondents to check the understanding and measure the reliability of the questionnaire items that were used for the study. Five items were used to measure sales promotion tools and one item was used to measure consumer buying behaviour.

Questionnaires were issued on weekdays and weekends with the time of day kept consistent between 10 a.m. and 2 p.m. The researcher explained the questionnaires to respondents and built rapport and encouraged the final response rate. The respondents used an average of 10 min to complete the questionnaire. There was a response rate of 82%.

The study adopted a Structural equation model to measure the conceptual model and hypotheses. The result answers the research questions.

RESULTS

Regarding gender, 302 (45.48%) respondents were male and 362 (54.52%) were Females. Regarding occupation, 276 (41.56%) respondents described themselves as housewives, 345 (51.96%) as professionals, 43 (6.48%) as business.

Regarding the educational qualification, graduates were the largest in number, 390 (58.74%); the postgraduates were 45 (6.77%), and 107 (16.11%) respondents were diploma holders, and 122 (18.38%) were certificate holders (Table 1).

Reliability, convergent validity and discriminant validity

The items for the study were assessed in terms of reliability, convergent validity, and discriminant validity. All the loading satisfied the statistically significant level of 1%. All the loading was qualified for the study since it higher loading than the minimum acceptable value of 0.7 (Götz et al., 2010). The average variance extracted (AVE), the composite reliability (CR), and the correlations of the variables of the study in Table 2. The AVE of each of the elements of the study is greater than the minimum accepted value 0.5 (Götz et al., 2010) which makes convergent validity. The discriminant validity of each of the variable which is a square root of AVE is greater than the absolute value of all the correlation with other variables.

The structural model in Figure 3 as explained by (Götz et al., 2010) was examined with the statistical significance parameter of structural relationship, the variance (R2) of the endogenous latent variable, and the size effect (F2) on each endogenous latent variable. From Figure 2, all the structural relationship is positive with the assumption of the research model, which falls within 0.62 to 0.82. This means that all the relationships were significant at a 0.1% level which confirms the entire stated hypothesis.

The study examined the change in R2 through the effect size (I2) to ascertain the impact of an independent latent variable on the dependent variable (Götz et al., 2010). There are three categories of values, small, medium, and large which are 0.02, 0.15, and 0.35 respectively of the predictor latent variables on endogenous latent variables (Chin, 2010; Götz et al., 2010). The results presented in Table 3 indicate that there is a strong effect of sales promotion tools on customer buying response whereas customer emotions have a medium effect on customer buying response.

Table 4 indicates the direct, indirect and the total effect analyses. All three categories are statistically significant at the 0.01% level. The strength of sales promotion construct is displayed in their direct effects on customer buying behaviour.

The total effect of a sample on customer buying response is (b=0.034* regarding on total effect, bonus on customer buying response recorded the highest (b= 0.441*) whereas the total effect is the contribution of sales promotion on customer emotion (b=0.421*). Figure 4 shows the summary of the path coefficient.

DISCUSSION

With the rise in the importance assigned to sales promotion on customer behaviour, is still not well researched. This study provides support for the conclusion that sales promotion induces a customer’s mood as well as customer buying response. The study result confirms most of the hypotheses deduced from the conceptual model.

The study shows a relationship Bonus and customer buying response (b=0.411* p-value < 0.001). The study
Table 1. Demographic profile of the respondents.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>302</td>
<td>45.48</td>
</tr>
<tr>
<td>Female</td>
<td>362</td>
<td>54.52</td>
</tr>
<tr>
<td>Total</td>
<td>664</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Housewife</td>
<td>276</td>
<td>41.56</td>
</tr>
<tr>
<td>professional</td>
<td>345</td>
<td>51.96</td>
</tr>
<tr>
<td>Business</td>
<td>43</td>
<td>6.48</td>
</tr>
<tr>
<td>Total</td>
<td>664</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>122</td>
<td>18.38</td>
</tr>
<tr>
<td>Diploma</td>
<td>107</td>
<td>16.11</td>
</tr>
<tr>
<td>Degree</td>
<td>390</td>
<td>58.74</td>
</tr>
<tr>
<td>Post degree</td>
<td>45</td>
<td>6.77</td>
</tr>
<tr>
<td>Total</td>
<td>664</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Author

Table 2. Average variance extracted, composite reliability and correlations among latent variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>AVE</th>
<th>CR</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BN</td>
<td>0.762</td>
<td>0.847</td>
<td>0.64</td>
</tr>
<tr>
<td>CP</td>
<td>0.710</td>
<td>0.974</td>
<td>0.74 0.67</td>
</tr>
<tr>
<td>PD</td>
<td>0.740</td>
<td>0.845</td>
<td>0.58 0.62</td>
</tr>
<tr>
<td>SM</td>
<td>0.749</td>
<td>0.875</td>
<td>0.59 0.75 0.82</td>
</tr>
<tr>
<td>RB</td>
<td>0.777</td>
<td>0.747</td>
<td>0.87 0.69 0.79 0.88 0.82</td>
</tr>
<tr>
<td>CE</td>
<td>0.765</td>
<td>0.854</td>
<td>0.78 0.79 0.69 0.73 0.89 0.65</td>
</tr>
<tr>
<td>CBR</td>
<td>0.816</td>
<td>0.864</td>
<td>0.85 0.64 0.77 0.69 0.78 0.88 0.82</td>
</tr>
</tbody>
</table>

Values of the diagonal are the square root of AVE.
Source: Author

Table 3. Effect size (f²).

<table>
<thead>
<tr>
<th>Path</th>
<th>f²</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus - customer buying response</td>
<td>0.31</td>
<td>0.00</td>
</tr>
<tr>
<td>Coupons - customer buying response</td>
<td>0.33</td>
<td>0.00</td>
</tr>
<tr>
<td>Price Discount - customer buying response</td>
<td>0.24</td>
<td>0.00</td>
</tr>
<tr>
<td>Sample - customer buying response</td>
<td>0.21</td>
<td>0.00</td>
</tr>
<tr>
<td>Rebate - customer buying response</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Sales promotion - customer emotion</td>
<td>0.32</td>
<td>0.00</td>
</tr>
<tr>
<td>Customer emotions - customer buying response</td>
<td>0.03</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Source: Author

demonstrates that a bonus has a direct effect on customer buying response. As argued by Alimpic (2014) that customers move from one brand to another because they want to save money. This implies that customers are rational and may settle on other alternatives to save their limited resources. Sethi (2018) that there are many
Figure 2. The proposed research model is presented.
Source: Author

Figure 3. Structural model of the study.
Source: Author
customers who will buy what they do not need immediately to take advantage of the bonus offer by a company. As competition stiffens, one of the best ways to persuade customers to buy from you is Bonus pack. The finding is supported by Chang (2017) assertion that customer wishes to trail new products but are not ready to pay. Therefore a bonus on such a product stimulates customers to trail the new product.

If new or existing product wants to be accepted in a new market, the vehicle to facilitate the acceptance of such a product is a bonus. Kotler et al. (2017) that monetary sales promotion tools are less effective in building brand interest since the emphasis are on price and not the brand. The buyer’s response is no commitment but rather promotion driven by the incentives given by the company. Therefore H1a is accepted.

The results confirm that there is an indirect relationship between Coupons and customer buying response. Significant $(b = 0.097 \text{ }^*\text{p-value} < 0.001)$, which means that, coupons to customers attracts customers to a product. These findings are consistent with studies by Bakator et al., (2017) who argued that coupons stimulate customer’s interest to switch to a new brand. Customers’ emotion is activated by coupons which intent stimulates to switch to a new brand. This is also confirmed by Alimpic (2014) that coupon encourages nonusers of product to buy for the first because they want to enter into a draw. According to Chang (2017) explained that coupons do not create loyal customers. This means that customers commit to a product is temporary as the will stop buying a particular product when the promotion ends. Therefore H1b is accepted.

The results confirm that there is an indirect relationship between Price Discount and customer buying response $(b = 0.016^*\text{-value} < 0.001)$. The finding is consistent with Sethi (2018) that customers will always favour a brand that has a discount package. This is supported by Ubeja and Kusuma (2014) who explained that customers make

### Table 4. Direct, indirect and total effects.

<table>
<thead>
<tr>
<th></th>
<th>Direct effect</th>
<th>Indirect effect loadings</th>
<th>Total effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus - customer buying response</td>
<td>0.411 *</td>
<td></td>
<td>0.411 *</td>
</tr>
<tr>
<td>Coupons - customer buying response</td>
<td>0.223</td>
<td>0.439 *</td>
<td>0.097 *</td>
</tr>
<tr>
<td>Price Discount - customer buying response</td>
<td>0.323</td>
<td>0.521 *</td>
<td>0.016 *</td>
</tr>
<tr>
<td>Sample - customer buying response</td>
<td>0.413</td>
<td>0.083</td>
<td>0.034 *</td>
</tr>
<tr>
<td>Rebate - customer buying response</td>
<td>0.522</td>
<td>0.401 *</td>
<td>0.209 *</td>
</tr>
<tr>
<td>Sales promotion - customer emotion</td>
<td>0.473</td>
<td></td>
<td>0.473</td>
</tr>
<tr>
<td>Customer emotions - customer buying response</td>
<td>0.421 *</td>
<td></td>
<td>0.421 *</td>
</tr>
</tbody>
</table>

*p-value < 0.001; n.s. – non significant.

Source: Author

### Figure 4. Summary of the path coefficient.

Source: Author
three different buying decisions: 1) what to buy; 2) how much to buy, and 3) what brand to buy? Sales promotion affects all these three buying decisions. Kotler et al. (2017) explained that price discount induces customers to buy a product that they have known plans to buy. Therefore H1c is accepted.

The association between sample and customer buying response \((b = 0.034 \ast p\text{-value} < 0.001)\) is indirect. This is confirmed by Kotler et al. (2017) that customers trail product when the product is free. Therefore H1d is accepted. The link between Rebate and customer buying response \((b=0.209 \ast p\text{-value} < 0.001)\). According to Harms et al. (2017) rebate encourages a free trial of a new product but does not lead to brand switching. Rebate appeals to the old customer and does not encourage new customers to buy (Truong et al., 2017). According to Harms et al. (2017), rebate encourages free trial of a new product but does not in a way leads to brand loyalty. Therefore H1e is accepted H2 there is a significant relationship between sales promotion tools and customer emotions.

Data collected and analyzed show a direct link between sales promotion tools and customer emotions \((b=0.473.209 \ast p\text{-value} < 0.001)\). This means that the various sales promotion tool (bonuses, coupons, samples, price discounts, and rebates arouse the emotions of customers. The finding is congruent with Yang and He (2011) who said that sales promotion is a stimulus and makes customers curious to buy. Customer's emotions can either be positive or negative. Positive emotions lead to buying of products whereas negative emotions lead to brand switching or postponement of purchase. According to Damasio (1999) when customers are exposed to price discounts, bonus packs, coupons, free sales, and rebate it makes the potential customer think twice and make a logical choice. This in way means that customer emotions are triggered by sales promotion too and then the customer will decide whether to buy or not. Customer emotion and customer buying response recorded \((b = 0.621 \ast \text{-value} < 0.001)\). There is a direct connection between the two variables. This is supported by Yang and He (2011) explained that customer emotion affects customer buying response. Customer's process information in their minds to choose a brand to buy but in most cases is not able to decide due to a lack of sense of what they feel about the alternative. According to Damasio (1999) Customer process information of sales promotion tools in minds to choose a brand to buy but in most cases is not able to decide due to a lack of sense of what they feel about the alternative. The emotion of customers triggers buying decisions. A customer may decide to switch from one brand to another, accelerate purchase, or trail a product due to their emotion at a given point. Favourable emotion leads to a favourable buying response. According to Damasio (1999) and Bosse et al. (2006), positive customer emotion towards a brand affects the customers buying response than judgments, which are based on a brand’s attributes. Therefore H3 is accepted.

**Conclusion**

The findings of the study are important to the academic and corporate world. Academically, the study contributed to knowledge by bridging the existing gap of almost no studies of sales promotion and customer response using the Mehrabian-Russell Model. The model demonstrated the link between sales promotion and customer emotion and customer buying response.

In business terms, the study proved that there is a link between sales promotion and customer emotions and customer buying response.

The study concluded that among the sales promotional tools (bonus, coupon, sample, price discount, and rebate only bonus pack that have a direct link with customer buying response. This means that customers are moved by a bonus pack than any other tool. A customer can make instant buying decisions upon the discovery of a bonus pack. Some may even buy without pressing need for the product just that they want to take advantage of the bonus pack as it exists.

The other four sales promotional tools only affects customer buying response indirectly, this means then, in its own way, they cannot affect customer buying response unless it triggers the customer’s emotions. Meaning it is moderate by customer’s emotions to result in buying.

The study again shows that sales promotion tools affect customer emotions. It was clear that the customer’s emotions are manipulated by what they see and hear about the various sales promotion packages. The sales promotional tools must hit on the sense, humor, and curiosity of the customer to make an impact on customer emotions. Customers are moved by such offers.

Finally, the study concluded that customer emotions affect customer buying response. This is an indirect link because customer emotions do not come on its own. There must be a sales promotion tool first before customer emotions then customer buying response. This means that customer’s emotions cannot stand on their own unless a company puts together sales promotion and the fact that is sales promotion too does not mean customers will respond to it.

The study concludes a thorough integration among the three components: sales promotion, customer emotions, and customer buying response are welcomed since one component leads to the other. Sales promotion works on the emotions of customers and reinforces customer to buy products.

**Recommendation**

A manager must understand how customers feel about
their experience with their brands. The emotions of customers stimulate customer’s decisions and indicate customer purchases. Customers may not remember the price of a product but rather the experience from it.

Using sales promotion to influence customer buying response is good but companies must create new value for their product to build an emotional connection with the product. Investing in emotional motivators such as feel a sense of belonging, enjoy a sense of well-being, and protecting the environment is the best way to go.

The major limitation of the study has to do with convenience sample used to select the target population of the study in this case the results cannot be generalized to the entire population of consumers.

Finally, future lines of research could use qualitative data to probe a deeper understanding of the sales promotion on purchase behaviours.

CONFLICT OF INTERESTS

The authors have not declared any conflicts of interests.

REFERENCES


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Full Length Research Paper

Criticality of change leadership to business survival in a VUCA environment: A case study of Zimbabwe Stock Exchange-listed companies in the COVID-19-affected trading period of March - December 2020

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Received 30 June, 2021; Accepted 9 August, 2021

This study evaluated the criticality of change leadership to business survival in a volatile, uncertain, complex, and ambiguous (VUCA) environment, focusing on Zimbabwe Stock Exchange (ZSE)-listed companies in the COVID-19-affected trading period of March to December 2020. As 21st-century VUCA environments are putting business survival under growing pressure, the study sought to verify how much change leadership could mitigate VUCA's adverse impacts on viability. SPSS v.20 bivariate analysis was used to test the study's alternative hypothesis and establish a correlation between the change leadership aspects of vision, understanding, clarity, and agility and business survival in a VUCA environment. Theoretical and empirical literature noted broad consensus on leadership's importance for organizational change initiative success, especially in turbulent environments. A mixed-methods approach was used as the study was qualitative and quantitative. The study found that change leadership practice was common in ZSE companies during the studied COVID-19 period and most change and change leadership interventions were very feasible. It also found that the interventions were largely inevitable and significantly effective and that change leadership is crucial to business survival in a VUCA environment. Further, other factors besides change leadership were found significant for ZSE firms' survival in the era. It was suggested that corporate sector resilience initiatives be established in order to empower local businesses to survive growing VUCA pressures, which could help to boost potential local and foreign corporate investor confidence. Further, creating inclusive business change leadership educational awareness forums and/or institutions can help to capacitate local businesses to survive inevitable future VUCA episodes.

Key words: Change leadership, change, business survival, viability, VUCA, COVID-19.

INTRODUCTION

Globalization's dynamism and complexity are increasingly pressing organizations to adapt for survival and sustained relevance (Issah, 2018). 21st-century leaders thus bear the onus to successfully lead change in their entities (ibid), despite reports of 50-70% planned change failure rates (Dinwoodie et al., 2015; McKinsey and Company,
2019). These reports suggest the ineffectiveness of change implementation approaches and have been repeatedly contested for lack of valid and reliable empirical evidence (Hughes, 2011; Wilkinson, 2020). There is a broad consensus that leadership is indispensable to business survival in times of upheaval (Cabeza-Erikson et al., 2008; Hao and Rashad, 2015; Heathfield, 2020) such as the present COVID-19 era. Despite this, it has been argued that most firms still undervalue and misunderstand change leadership (Kotter, 2011; Dinwoodie et al., 2015).

Zimbabwean companies, including those listed on the Zimbabwe Stock Exchange (ZSE), were not spared by the novel COVID-19 environment’s negative impacts and were invariably forced to adapt for survival. This study thus sought to understand the change and change leadership approaches adopted by ZSE firms to counter the pandemic’s volatility, uncertainty, complexity, and ambiguity (VUCA) and to establish their effectiveness and criticality for survival in the choppy era. Study outcomes were intended to avail more empirical evidence and help further clarify change leadership’s role in and value to business survival in VUCA environments. This would ultimately aid a stronger, evidence-based case for the wider adoption of change leadership towards a more resilient corporate sector locally and, possibly, beyond.

THEORETICAL REVIEW

Change is an inevitable feature of organizational life (Cummings and Worley, 2009) and is synonymous with standard practice as organizations are deemed living entities that must constantly change to remain viable (Makumbe, 2016). It has also been argued that organizational leadership and change are closely linked and neither can successfully occur without the other (Burnes et al., 2016). However, most organizations largely manage change and exhibit little change leadership (Kotter, 2011; Dinwoodie et al., 2015; El-Dirani et al., 2020). Further, despite change management being over 50 years old, it has been widely reported that 50 – 70% of change efforts fail (Dinwoodie et al., 2015, McKinsey and Company, 2019), suggesting flaws in many change management efforts. These high change failure claims have, however, been repeatedly challenged for lack of valid and reliable empirical evidence (Hughes, 2011; Wilkinson, 2020).

It has been argued that successful change needs both change management and change leadership (Dinwoodie et al., 2015). Change leadership means being able to influence and inspire others into action and respond with vision and agility when there is growth, disruption or uncertainty to cause necessary change (Akpoveta, 2020). Organizations seem divided on change leadership’s value, despite leadership being deemed as key to successful change (American Management Association, 1994). This particularly applies to change needed to survive in VUCA operating environments such as that of the current COVID-19 era. However, the narrative that successful change hinges on effective leadership has been challenged as a mere assumption with little empirical proof (Ford and Ford, 2012; Burke, 2008).

Against this mixed background, today’s business environments reflect escalating VUCA that demands firms to be more agile or adaptive to sustain viability (Phillips, 2019; Raghuramapatruni and Kosuri, 2017). This implies that change is inevitable to survive the current era’s relentless upheavals. Survival in VUCA climates needs leaders to apply a strategic tool called VUCA PRIME (Johansen, 2007) which transforms VUCA into the positive outcomes of vision, understanding, clarity, and agility. It partly leverages the LIVED® (A & DC, 2014) VUCA change leadership model wherein leaders aptly apply learning, intellect, values, emotions, and drive. Transformational leadership (Burns, 1978) and Kotter (2011)’s change leadership models are also essential for ensuring survival in VUCA climates.

The present COVID-19 era’s VUCA impacts affected and continue to affect local businesses, including ZSE-listed companies. A survey across 210 multi-sectoral private sector businesses noted significant revenue losses, supply chain and labor supply disruptions, and decision-making uncertainty (ZNCC, 2020). Local businesses were thus invariably driven to implement change in varied formats to survive. Against this setting, this study thus sought to investigate how significant change leadership efforts in ZSE-listed companies were and/or have been towards ensuring business survival in the difficult pandemic era.

Business survival in VUCA environments

Business survival is the operation of a business entity on a going-concern basis (Akindele et al., 2012). Alternatively, it is simply managing to remain active in business. Within this study’s context, business survival can be defined as the ability of a business entity to remain operational and maintain viability within a VUCA operating environment. The Australian Taxation Office (ATO, 2020) defines business viability as its ability to...
survive linked to its financial performance and position. The ATO further notes that a viable business earns enough profit to give a return to its owner and meet its obligations to creditors as well as retaining enough cash to sustain itself through a period/s of non-profitability. As noted above, a VUCA operating environment typically challenges any business entity by affecting its internal and external environments which then usually impacts its viability. Internal environment factors include resistance to change (El-Dirani et al., 2020), internal control lapses, poor financial management, and high staff turnover. The external ones include government regulation, economic recession, political turmoil, intense price competition, customer behavioral changes, health issues, technological changes, natural disasters, and supply chain disruptions (Obasan, 2014). These challenges usually necessitate constant change to ensure the entity’s ability to survive or remain viable. Consequently, businesses must prioritize keeping track of various environmental changes to assure survival in the long run. Thomas (2003) notes that in the modern uncertain economic climate, the small entrepreneur’s priority is to ensure survival. It can, however, be argued that even big organizations may be drawn to prioritize survival by peculiar VUCA circumstances - the current COVID-19 global pandemic being a case in point.

Sarkar (2016) argues that critical factors for a business’ survival and success in a VAUC world include well-crafted operational basics, innovativeness, quick responsiveness, adaptability, and effective broad change and diversity management. She further cites the need for efficient market intelligence and extensive multi-stakeholder collaboration as also crucial for the same purposes. Raghuramapatruni and Kosuri (2017) assert that for a business to win in a VAUC environment it must first address hardware aspects - basically implying having systems, processes, structures, and other mechanistic control frameworks. Part of this hardware is strategic foresight and agility, which entails a keen ability to efficiently manage both the immediate and future business goals. Volatile and turbulent times require a business to be firmly anchored on its vision whilst concurrently managing short-range targets (ibid).

Business survival in VAUC times also demands a consumer-centric operational philosophy (ibid). This is important because consumers’ tastes and preferences tend to change rapidly in volatile environments, as previously highlighted. Further, the 2 authors state that enduring survival in VAUC times requires a business to “think local and act global.” This means remaining relevant to and meeting the local market needs through exploiting globally-influenced resources such as knowledge and technology to deliver suitable solutions. Also, long-term business survival and success banks primarily on the ability to attract, groom, and retain great intellectual talent (ibid). Through being groomed and developed to believe in the business’ vision and mission such talent can be effectively harnessed to consistently turn in superb performances for the firm.

Finally, the ever-evolving and volatile external environment in which most business firms exercise rivalry invariably means that the operating environment has a significant influence on business survival prospects (Alexander and Britton, 2000). Consequently, business entities should diligently assess the impacts and potential impacts of their operating environments through regular, deliberate, and thorough environmental scanning. A commonly used tool in this process is PESTLE analysis which examines the political, economic, social, technological, legal, and (physical) environmental/ ecosystem aspects of the operating environment. In a VAUC environment, however, the practical utility of such rigorous analysis may be lost due to high volatility which may rapidly invalidate valuable analyses before they can be put to any good use.

**Business leadership in VAUC environments**

Twenty first century organizations operate in ever-more VAUC environments (Mack et al., 2015) which often pose challenges that can threaten the very survival of business firms. By definition, VAUC implies change in the operating environment and change that is more often than not trying and demanding shrewd responses. VAUC is also often a paradoxical phenomenon in that whilst it can trigger or promote innovation, development, and progress it can also equally hinder or stall the same in its stride. The dynamic and difficult nature of all 4 aspects of VAUC thus typically presents tough leadership tests for the global business community at large. Raghuramapatruni and Kosuri (2017) state that, starting from the highest executive level, leaders have a central role in ensuring their firms’ responsiveness to a VAUC business environment’s demands.

To effectively address VAUC challenges, Raghuramapatruni and Kosuri (2017) argue that business leaders must create an open environment promoting discovery, diverse views, and experimentation. They further assert that the leaders must capably identify opportunities invoked by emergent technologies and excel in translating new information into capability differentiation. The two authors also note that leaders must identify their firms’ knowledge and skill gaps inherent in their business practices, processes, and systems. Above all, leaders must promote broad decision-making based on critical thinking by focusing on the *thought process* rather than *thought content*. Critical thinking demands conscious and skillful conceptualization, analysis, forming, and/or evaluation of information from communication, observation, experience, reflection, or reasoning to guide decisions and action. It is thus arguably a hallmark of
effective change leadership, especially in VUCA times.

It is pertinent to note that VUCA existed even long before the term was coined in the 1990s. Two epic examples are the global Great Depression episode of 1929 -1939 and the Spanish influenza pandemic of 1918–19. However, today’s cocktail of rapid geopolitical, economic, socio-cultural, and technological changes have escalated its frequency and intensity (Raghuramapatruni and Kosuri, 2017). Makumbe (2016) cites typical VUCA business challenges in the constantly changing global consumer tastes and preferences, adaptation to rapid and broad technological change, workforce diversity management, and tackling ruthless global competition.

Brutal (Red Ocean) competition suggests that some businesses may not survive in the battle for markets and sustained relevance unless their leaders stand up to the task. Joy (2017) cites the former Finnish cellular phone giant, Nokia Corporation, who led the global cell phone market in the first decade of the 21st century but then succumbed to more agile and shrewd competition from Apple Inc. and Samsung Corporation. Market volatility accounted for Nokia’s demise as the electric pace of change in customer preferences meant the firm should not have rested on its laurels of market leadership as astute rivals were busy in the shadows. Consequently, having foreseen smart phones as the future of mobile telephony and convenience, Apple and Samsung leaders swiftly leveraged the market’s fluidity in brand loyalty to launch their game-changing mobile devices. Thus began the demise of the once-mighty Nokia Corporation.

As cited by Sarkar (2016) in the previous section, 3 of the factors critical for success in VUCA environments are rapid response (agility), innovation, and flexibility (adaptability). From the foregoing example, Nokia failed in these respects, thus ceding its competitive edge to shrewder rivals. Notably, all 3 factors are leadership hallmarks, thereby implying that business leaders have a central role to play in facilitating the viability of their organizations when operating in such environments. Business survival in VUCA climates requires a firm’s leadership to develop the capacity for translating “undesirable VUCA” into “useful VUCA” strategic responses. These essentially antidotal responses derive from a strategic leadership tool called VUCA PRIME which entails leaders turning volatility into vision, uncertainty into understanding, complexity into clarity, and ambiguity into agility (Johansen, 2007).

VUCA PRIME posits that volatility should be countered by a clear sense of vision. During rapid change, people need direction, though with possible adjustment in route (Raghuramapatruni and Kosuri, 2017). Clear vision aids focus on vital actions and prioritizing in the face of emergent tasks, demands, and opportunities. Further, uncertainty can be cleared through seeking understanding. In this regard, detailed communication (People Management Insight, 2017) is key for everyone to have the same understanding of issues and also for leaders to connect with their peoples’ thoughts and emotions (Raghuramapatruni and Kosuri, 2017). Complexity can be overcome through being clear about what can be known and what cannot and consciously acting more to simplify and control the former whilst monitoring the latter (Johansen, 2007) to a reasonable extent. Finally, the antidote to ambiguity is agility, meaning where there is potential for misinterpreting environmental signals people must be flexible enough to react to whatever outcome.

The process of leveraging VUCA PRIME is neither simple nor confined to straight rules. Consequently, Sarkar (2016) points out that another critical leadership enabler for navigating VUCA settings is an extensive multi-stakeholder collaboration with workers, customers, shareholders, and society amongst others. This resonates with Raghuramapatruni and Kosuri (2017) who state that in VUCA greater focus must be on collective rather than individual leadership. This inclusive leadership approach demands both humility and responsibility. Business leaders thus have a key role in exercising responsible leadership in the quest to ensure that their organizations can survive and thrive in VUCA environments (Sarkar, 2016). In principle, responsible leadership blends the core qualities of the transformational, servant, and authentic leadership styles to focus on broad, multi-stakeholder interactive relationships – making for a more holistic approach to solutions for a firm’s challenges (Sarkar, 2016).

In line with Sarkar (2016)’s thinking, Kok and Van den Heuvel (2019) assert that modern leaders need strong discernment to enable them to control their thinking when acquiring and applying knowledge towards making right, equitable, and just decisions. They further state that for leaders to excel in discernment in VUCA times, they must consistently collaborate with heterogeneous teams in making decisions. As Phillips (2019) argues unless leaders become more adaptable in addressing unrelenting VUCA environment changes through humbly tapping into the ready-resource of change stakeholders, their future certainly looks doomed and they and their firms may not survive. Indeed, leaders alone may not always have the answers to their businesses’ VUCA challenges that threaten survival and sustained relevance.

**Conceptual framework**

A conceptual framework derives from the theoretical framework and thus uses past study outcomes to propose a “base” theory for the current research (Maigher, 2018). It identifies the study’s independent and dependent variables and shows the possible relationships between them.
Using Akpoveta’s change leadership definition, Johansen’s VUCA PRIME tool, Kotter’s 8-step change leadership model, Burns’ transformational leadership model, and the LIVED VUCA model, the researcher came up with a conceptual framework shown in Figure 1.

From the theoretical literature review, it was learnt that leaders of firms operating in the turbulent and dynamic environments of VUCA can effectively deal with its 4 undesirable elements through the adoption of Robert Johansen’s VUCA PRIME philosophy. This means that by applying their defining personal attributes of visionary mindset, intellectual prowess, inspiration, drive, influence, and so on, they will effectively establish the vision, understanding, clarity, and agility required for the change that is necessary for their organizations to survive and thrive.

Change vision is a clear picture of an organization’s future position after going through change (Kotter, 2012). Ideally, it must appeal to employees as being feasible and desirable if the change is to be embraced. Change understanding is the mutually-shared thinking and feelings about the purpose of change created through effective communication of the change vision (Raghuramapatruni and Kosuri, 2017). Change clarity is the distinction between what can and cannot be known and efficiently using the knowable to simplify operations whilst consciously striving to limit the potential undesirable impacts of the unknowable (Raghuramapatruni and Kosuri, 2017). Holsapple and Li (2008) define change agility as the compound effect of alertness to change and subsequent timely response to use or direct resources accordingly in a flexible and cost-conscious manner. These 4 change leadership ideals intricately interlink to facilitate a holistic and more effective approach to change leadership in VUCA times.

The establishment of the four change aspect targets, namely vision, understanding, clarity, and agility by a firm’s leaders provides a sound foundation for effective and efficient strategy formulation and implementation and operations through facilitating, amongst others, the following outcomes (Hejase, 2017):

1. shared purpose and philosophy throughout the organization,
2. individual creativity and team collaboration alignment of internal stakeholder goals towards firm goals,
3. efficient resource planning and allocation,
4. establishment of trust between leaders and followers,
5. information availability for risk control and decision making.
6. a sense of urgency and responsiveness throughout the organization,
7. people empowerment and effective networking, and
8. institutionalization of the required change in the organizational culture.

It is arguable that the extent to which the above (and other associated aspects) are realized through VUCA PRIME’s outcomes directly influences the prospects of a firm surviving and thriving in a VUCA environment. Hence, the more an organization excels in establishing the above-noted outcomes in its operations, the higher its prospects of survival and success in VUCA. In such a climate, organizational survival depends more on inclusive, multi-stakeholder collaborative approaches than individual brilliance or unitary imposition (Sarkar, 2016).

From the proposed conceptual framework (Figure 1), the following independent (predictor) and dependent (response) variables in Table 1 are determined for the study.

### MATERIALS AND METHODS

#### Research philosophy

The study adopted the pragmatic philosophy. Research philosophy is a system of beliefs and assumptions on how knowledge is developed in a certain field (Saunders et al., 2019). It defines the basic nature of the knowledge involved in a study and the process of how it is developed. Saunders et al. (2019) further state that in pragmatism both positivism and interpretivism can be simultaneously adopted for data collection, analysis, and interpretation. In this study, knowledge was thus developed using positivist and interpretivist processes. Further, pragmatic research is instigated by a problem and seeks to proffer feasible solutions to inform future practice (Saunders et al., 2019). This research was stirred by the pressure that the 21st century VUCA environments are increasingly putting on businesses to survive and sought to verify the extent to which change leadership practice could provide a panacea to VUCA’s concomitant challenges.

The positivist dimension of pragmatic research focuses on exploring an observable reality towards drawing some conclusion of a generalized law-like nature (Saunders et al., 2019). Further, Hejase and Hejase (2013) contend that “positivism is when the researcher assumes the role of an objective analyst, is independent, and neither affects nor is affected by the subject of the research” (p.77). This research sought to evaluate the criticality of change leadership to the observable reality of business survival in a VUCA environment by testing a hypothesis to deduce some general theoretical link between the 2 variables. The hypothesis testing aspect gave the study a positivist dimension and was applicable since the literature review showed no existing specific theoretical relationship between the study variables. However, evidence from the same literature repeatedly suggested a possible connection between these same variables.

Pragmatism also stresses that knowledge is both constructed and based on personal experiences and subsequent individual interpretation (Robson and McCartan, 2016). Thus, it recognizes the reality of human experience and its inescapable influence on study outcomes. Therefore, the results of any research that studies people depend on individual interpretation of the study variables and are thus qualitative and subjective. This study’s variable of change leadership criticality bore this nature as it relied on the individual opinions of various company participants on the issue. Hence, this nature of the knowledge involved in the study necessitated a pragmatic process to appropriately develop the required knowledge.

#### Research approach

This study adopted the fixed mixed-methods approach since it had both qualitative and quantitative aspects as noted above. Creswell and Plano-Clark (2018) state that the fixed mixed-method approach involves a predetermined and pre-planned use of quantitative and qualitative methods from the beginning and the implementation of procedures as planned. Abductive reasoning was applied since a pragmatic philosophy was used. Abduction blends induction and deduction and this study was biased towards induction since there was no pre-existing theory to develop by rigorous testing (Saunders et al., 2019). Instead, the study involved developing a theoretical link between change leadership and business survival in a VUCA environment using previous knowledge and new findings. Since theory formulation would follow study data generation, which defines induction (Saunders et al., 2019), this approach was thus applicable.

Deduction fitted in this study since two aspects of it - the search for an explanation for causal relationships between the study variables and the necessity of selecting a large enough sample to generalize conclusions (Saunders et al., 2019) - applied to the study. There was a need to explain a cause-and-effect link between change leadership practice and business continuity in a VUCA environment. Since the research also sought to derive a generalized conclusion around the cited cause-and-effect link, it was vital to draw a sample that represented the population as closely as possible. This sampling occurred within a limited study time and a stratified sampling frame.
Research design

The study adopted descriptive, explanatory, and exploratory research designs with a major inclination towards exploratory and explanatory designs. Saunders et al. (2019) state that descriptive research enables one to identify and explain variability in different phenomena. In this study, descriptive design enabled the researcher to identify and describe the differences in business viability status between various ZSE-listed companies based on the change leadership practice dynamics between them.

Exploratory studies seek to better understand the nature of a problem or phenomenon where a little or no study or empirical evidence might exist on it (Hejase and Hejase, 2013; Sekaran and Bougie, 2016). In this study, the literature review noted scant research on the impact of change leadership on the effectiveness of change efforts. In particular, no specific past study on the possible link between change leadership and business survival in VUCA had been done. Thus, it was critical to explore the various impacts of different change leadership practices on the survival prospects of a business operating in a VUCA environment towards establishing the relationship between the 2 variables.

Explanatory or analytical research involves the examination of variables to explain existent or possible inter-relationships between them, especially cause-and-effect relationships (Saunders et al., 2019). This study sought to examine and explain the nature of the relationship between change leadership practice and the survival of businesses operating in VUCA environments.

Research strategy

A case study was chosen as a suitable research strategy. Yin (2018) defines a case study as a fact-based research strategy involving the in-depth investigation of a specific contemporary phenomenon or issue within its real-life context. This strategy suited this study which intended to build an evidence-based case for the criticality of change leadership to the survival of business in a VUCA environment. Evidence was collected from ZSE-listed companies in the form of their change leadership practices within the COVID-19 VUCA environment, the data analyzed and a determination made on the contribution of the practices to the firms’ survival. Further, a case study fitted well in this research as the study sought to investigate the contemporary issue of business survival in a VUCA environment - which issue has been and is still topical and is increasingly affecting the global business community, including ZSE-listed companies.

Saunders et al. (2019) further state that case studies are most often used for explanatory and exploratory research. This study’s topic had no known precedent and the literature review had shown scant empirical research on the impact of change leadership on organizations. Desirably, the case study of ZSE-listed firms in a COVID-19 era enabled an in-depth exploration of real change leadership practices and dynamics in businesses in a VUCA setting – thus helping to assess change leadership’s practical significance for business survival in fluid and challenging climates. A case study can generate insights from an intensive, real-life contextual examination of a phenomenon or complex subject giving a base for rich, empirical descriptions (Saunders et al., 2019). This study gave factual insights on the agile creativity and innovation exhibited by ZSE firms around COVID-19 complexities – which strategies may help to inform future responses in the event of further such pandemic-induced VUCA episodes.

Though applicable and beneficial for the reasons noted above, the case study strategy however limited the extent to which the research outcomes can be generalized to the Zimbabwean and, worse still, global business contexts. Sekaran and Bougie (2016) define generalizability as the applicability scope of the research findings from one organizational or study context to other settings. In this study, research findings from the case of ZSE-listed firms were thus of a limited applicability scope, especially given the limited sample size. Further, a case study of several ZSE-listed firms was a challenge with getting the desired cooperation from some of the targeted respondents. This led to compromised choices of respondents to get a sufficient critical mass of participants, which inadvertently affected the targeted balance of managerial opinions.

Data collection procedures and techniques

Study population

The study population was the 55 companies actively listed on Zimbabwe’s main industrial equity trading market, the Zimbabwe Stock Exchange. This population consists of 10 industrial sectors - namely agriculture and agro-processing; banking, finance, and insurance; consumer and specialty retail; diversified manufacturing and services; food and beverage processing; hospitality and tourism; ICT and media services; mining, engineering, and fabricated goods; real estate; transport and logistics (ZSE, 2020). It is arguable that it fairly represents most of the major formal business sectors and industrial players in the country. This assertion is supported by the fact that more than 50% of the listed firms consists of groups, corporations, and holding companies with at least two divisions under each of them. By this, it was logically assumed that study outcomes can be fairly generalized to apply to the mainstream local business community.

Sampling techniques

Stratified random sampling was used for this study. This entails splitting the population into at least two mutually exclusive groups, each being uniform, relevant, and suitable in the study’s context, and then randomly choosing sample units from these (Sekaran and Bougie, 2016; Saunders et al., 2019; Easterby-Smith et al., 2015). Simple random sampling was then used to pick sample units from each stratum. In this study, the fifty-five companies in the population were divided into ten strata based on their industrial sectors as defined under the Study Population section.

The unrestricted nature of simple random sampling suits it most for assuring the highest possible population representativeness whilst its nature of having the least bias offers the highest level of accommodation for generalization of study outcomes (Sekaran and Bougie, 2016). This made it suitable for this study which sought to draw a generalized conclusion on the relationship between change leadership and business survival in VUCA environments. Disproportionate stratified random sampling was used to reduce the chance of rare groups in the population being poorly represented in the final sample (Easterby-Smith et al., 2015). This meant drawing a bigger proportion of sample units from the smaller strata and vice-versa. It must also be noted that though the different individual companies and sectors were not affected to the same extent by COVID-19, they were all considered equally for this study to minimize outcome bias. A summary of the ZSE-listed companies categorized by their industrial sectors is given in Table 2. Proportionally fewer sample units were drawn from the larger strata such as banking, finance and insurance and mining, engineering and fabricated goods than from the smaller strata such as diversified manufacturing and services, hospitality and tourism, ICT and printing services, and real estate. This was in line with the chosen principle of disproportionate stratified random sampling to
<table>
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<th>Industrial sector</th>
<th>Stratum No.</th>
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<td>Econet Wireless Zimbabwe</td>
<td>ICT and printing services</td>
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<td>0.445402</td>
<td>Lafarge Cement Zimbabwe</td>
<td>Mining, engineering, and fabricated goods</td>
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</table>
enhance the sample representativeness of the target population.

Sample size determination

Sekaran and Bougie (2016) note that the sample size is crucial to sample representativeness for the generalizability of a study’s outcomes. They further note that sample size relies on the desired precision (confidence interval), the risk tolerable in predicting that precision (confidence level), population variability, and the limits of cost and time. This study had limited time yet the sampling design had to target results as highly generalizable as possible (low bias) and a minimal margin of error in any claims (high precision). Easterby-Smith et al. (2015) state that trade-offs are inevitable in decisions concerning the tolerable levels of precision and bias - with the most logical choice being imprecisely right outcomes. The study sample was thus chosen for accurate population representation but with a lower than ideal precision due to its deliberately small size.

From the ten industrial sector strata noted in the sampling technique section above, the researcher studied a simple random sample of ten companies with one drawn from each stratum without replacement. The companies highlighted in each stratum on Table 2 represent the 10 sample units selected probabilistically using the random number generation and custom sort functions in MS Excel (UWEC, 2020). This selection entailed separately prompting MS Excel to generate and assign random numbers between 0 and 1 to each company for each stratum. The companies in each stratum were then sorted in ascending rank order by their assigned random numbers. The first company in each custom-sorted stratum was then selected as the random sample unit in that stratum to give an overall sample of ten units across all the strata. This sampling method thus gave each company an equal chance of selection within its stratum and across all other strata.

Data collection technique

A structured self-administered mail/online questionnaire was used for the collection of primary data from the study sample for the trading period of March to December 2020. A self-administered questionnaire involves the respondents’ direct engagement through reading and completing the questionnaire themselves (Bryman, 2012). The questionnaire was sent to the respondents by electronic mail (e-mail) and consisted of 7 questions with 3 being closed-end/open-end, 2 being open-end, and 2 being closed-end types. The respondents were requested to type in their responses and return their completed questionnaires by e-mail. The e-mail questionnaire was ideally chosen over the printed, physical type mainly due to the prevailing COVID-19 safety restrictions on physical visits to many company premises as well as the time and financial cost limitations for the study.

Forty (40) questionnaires were sent to the ten companies, together with a BUSE research support letter with a target of four respondents per company. For each sample unit (company), one respondent each was sought at the four managerial levels of top management (directorate), senior management (administrative/executive management), middle management (supervisory), and junior management (operational). The coverage of all managerial levels was deliberately set to mitigate the potential bias from an exclusive focus on the strategic organizational level (top and senior managers) that is chiefly accountable and responsible for change leadership. For more reliable study outcomes, a balance between the responses of change leadership architects at the highest level and those of the change implementers and change subjects at lower levels was deemed necessary to minimize bias of opinions.

Research questionnaire validity and reliability

The internal consistency and reliability of each of the study questionnaire’s 3 Likert questions’ 16 items were checked by calculating Cronbach’s Alpha reliability indices for each question’s items using SPSS v.20. A minimum index of 0.70 is acceptable for the inter-item internal consistency to be deemed good enough for a sound question (Sekaran and Bougie, 2016). Question B2 on the negative impacts of COVID-19 on the viability of ZSE companies had 6 items with Cronbach’s Alpha of 0.933. Question B6 that determined the effectiveness of change leadership interventions made by ZSE companies for ensuring successful change had 4 items and Cronbach’s Alpha of 0.926. Question B7 checked respondents’ opinions on change leadership’s importance to

Table 2. Contd.

<table>
<thead>
<tr>
<th>No</th>
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</tr>
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<tbody>
<tr>
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<td>Zeco Holdings Ltd.</td>
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<tr>
<td>2</td>
<td>Unifreight Africa Ltd.</td>
<td>Transport and logistics</td>
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<tr>
<td>3</td>
<td>Proplastics Ltd.</td>
<td>Mining, engineering, and fabricated goods</td>
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<tr>
<td>4</td>
<td>First Mutual Properties Ltd.</td>
<td>Real estate</td>
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<td>5</td>
<td>Dawn Properties Ltd.</td>
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<td>6</td>
<td>Zimre Property Investments</td>
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<td>7</td>
<td>Mashonaland Holdings Ltd.</td>
<td>Real estate</td>
</tr>
<tr>
<td>8</td>
<td>ZSE companies for ensuring successful change had 4 items and Cronbach’s Alpha of 0.926. Question B7 checked respondents’ opinions on change leadership’s importance to enhance the sample representativeness of the target population.</td>
<td></td>
</tr>
</tbody>
</table>
business survival in a VUCA environment based on their COVID-19 experiences. Its 6 items had Cronbach’s Alpha of 0.815.

From the above outcomes, each question thus had very high internal consistency amongst its items, indicating significant overall soundness of structural content that provided for a credible survey. Further, with such results Orehimi et al. (2019) assert that ‘this indicates a very good strength of association and proves that the selection of the questions is suitable for the questionnaire purpose” (p. 1915).

Validity was checked via SPSS v.20 bivariate correlation analysis. A question item was deemed valid if its Pearson correlation coefficient was significant at either $\alpha=0.05$ or $\alpha=0.01$ and the 2-tailed test’s significance value [Sig. (2-tailed)] was below 0.05. The analysis found 75% of the 16 question items to be valid, giving the questionnaire notable study instrument validity.

Data analysis

A structured mail/online questionnaire was used for primary data collection from the study sample. It allowed exploratory and descriptive study through open-ended, close-end, and mixed-type questions. Archival research was used for secondary data collection from 2020 company trading updates and other strategic publications. Thematic content analysis was used for qualitative data whilst SPSS v.20 was used for quantitative data analysis. The two hypotheses were tested using linear regression in SPSS v.20's univariate analysis function. The test rejected the null hypothesis as the p-value of 0.583 was greater than 0.05, implying that it was non-statistically significant. A high positive Pearson’s correlation coefficient (R) of 0.939 implied a significant positive linear relationship (Statology, 2019) between the response variable of business survival in VUCA and the 4 predictor variables of change vision, change understanding, change clarity, and change agility. This meant that 93.9% of the business survival in VUCA is explained by or directly influenced by the quartet of predictors.

RESULTS AND DISCUSSION

Research question 1: What were the impacts of the COVID-19 environment on the viability of ZSE-listed companies?

The study found that COVID-19 had balanced impacts on the viability of ZSE firms. This was seen in 48.9 - 55.6% of respondents indicating significant to very significant negative COVID impacts on 5 of the 6 assessed viability aspects – revenue, profitability, liquidity/solvency, logistics, and value/supply chains, and staff welfare. The 55.6% of responses were noted for revenue decline and resonates with ZNCC’s (2020) June survey on the impact of the first 21-day national lockdown. The survey noted that 52% of the 210 multi-sector private sector firms interviewed had revenue losses between ZWLS1m – 5m in that period. The mixed nature of businesses and models in the ZSE companies accounted for COVID-19’s mixed impacts on their viability as some firms thrived and yet others were hard-hit.

The study concluded that COVID-19 impacted the viability of ZSE companies in a balanced manner with some being negatively impacted and others positively disrupted. This resonates with the conclusions of UNIDO’s (2020) global survey on 49 nations which indicated mixed socio-economic impacts across 5 of the 6 parameters assessed in this current study. Further, it was concluded that ZSE businesses whose operations ride mainly on innovative and cutting-edge digital models are generally more resilient and can better adapt in the face of the deleterious effects of a VUCA environment, such as that of COVID-19.

Research question 2: How feasible were change and change leadership interventions deemed by ZSE-listed companies as necessary for survival in the COVID-19 era?

The research found that most of the change and change leadership interventions deemed by ZSE firms as necessary to survive in the COVID-19 era were highly feasible. This was reflected by 72.2% of the respondents citing this position, as shown in Table 3. The generally high feasibility was attributed to the responsible leadership capability of company boards and management teams which led to very practical resolutions on required change actions. This was supported by the fact that 100% of the respondents stated moderate to high feasibility for the interventions implemented in their companies.

The study concluded that practical and responsible leaders will cause necessary change and change leadership interventions to be feasible regardless of any prevailing adversities. This conclusion aligns with Isaiah (2018)’s assertion that effective leaders are central to successful organizational change. Since responsible leaders partly practice transformational leadership (Sarkar, 2016), this conclusion also supports that by Herold et al. (2008) that exercising transformational leadership behavior increases employee acceptance and success chances of change initiatives.

Research question 3: What change and change leadership interventions were made by ZSE-listed companies for survival in the COVID-19 era?

100% of respondents reported that various key change and change leadership interventions were made in their 8 companies for survival since the March 2020 advent of COVID-19 locally. For example, Rainbow Tourism Group Ltd. leveraged digital technologies to launch a new online service, Gateway Stream. This innovation not only sustained and enhanced customers’ experience, but also boosted revenue in the absence of normal hotel stay-in and restaurant sit-in services. Further, most companies, including Bindura Nickel Corporation and FBC Holdings
invoked emergency business continuity plans and established special COVID-19 protocol teams to prioritize and enforce strict staff compliance to necessary and recommended health and safety measures. Hard-hit businesses in hospitality and tourism, such as African Sun Ltd. and Rainbow Tourism Group Ltd., even resorted to remuneration cuts to sustain operations in the wake of significant revenue reductions due to global lockdown impacts.

It was also found that most interventions across all companies reflected the change leadership aspects of agility and vision. This was linked to COVID-19's novel nature which created a huge knowledge gap and many dynamics of viral spread and effects, making volatility and ambiguity its foremost features. That change vision was a key driver of many interventions made corroborates Wren and Dulewicz (2005)'s finding that the creation of a clear vision of the future after the change significantly influences change success.

The study concluded that change and change leadership interventions are inevitable for business survival in a VUCA environment such as that of COVID-19. This is due to VUCA's consequent impacts on the internal and external environments in which businesses operate. The conclusion resonates with the assertion by Raghuramapatrani and Kosuri (2017) that thriving in such an environment demands constant adaptation to new business contexts as they emerge. It also agrees with Belias and Koustelios (2014) who concluded that change is an unavoidable part of organizational existence when dealing with an ever-changing business environment.

**Research Question 4:** How effective were the change and change leadership interventions made by ZSE-listed companies for their survival in the COVID-19 era?

The study found that most ZSE companies’ leaders exhibited a high level of the change vision aspect of change leadership. This was seen in 88.9% of the respondents (Figure 2) at least agreeing that their leaders...
created shared purposes and established clear common goals and staff collaboration on required changes. It also found that the leaders showed significant to very significant levels of change understanding, change clarity, and change agility as seen in 83.4, 72.2 and 83.3% of respondents respectively, at least agreeing with the survey statements that asserted those positions.

The study concluded that the change leadership interventions made by ZSE companies to make survival in the COVID-19 era a success were significantly effective and necessary if change for business survival will be effective in VUCA. This conclusion supports Higgs and Rowland (2000)’s finding that leaders’ activities during change implementation are vital to the change’s success. It also agrees with Doz and Kosonen (2008)’s assertion that organizational capacity for successful change demands effective leadership. It also supports Wren and Dulewicz (2005)’s conclusion that leaders’ behaviors and activities are strongly linked to the achievement of change success, especially resource management (change agility and understanding), engaging communication (change clarity), and empowerment (change agility).

Main research question: How critical is change leadership to business survival in a VUCA environment?

The study found that change vision is a very significant change leadership aspect needed for business survival in turbulent environments such as that of COVID-19. In fact, 94.5% of the respondents at least agreed with the survey statement that asserted this. It also found that change understanding is a very significant enabler of business survival in a VUCA climate as 77.8% of respondents at least agreed with the survey statement that implied this. Change clarity and change agility were also found to be very significant for VUCA business survival. This was noted in 88.9 and 83.3% of respondents, respectively at least agreeing with the respective survey statements that asserted those positions. 88.9% of respondents stated that other factors besides change leadership were key to survival in the COVID-19 era.

CONCLUSIONS AND RECOMMENDATIONS

Knowledge of the contributory significance of change leadership to survival in dynamic and complex environments relative to the contributions of other factors enables a balanced appreciation of, and optimal approaches to, issues affecting overall business viability. Change leadership practice during the COVID-19 era was key to the survival of ZSE companies and is crucial to business survival in such turbulent environments. However, it is also concluded that change leadership alone is not a panacea to business viability challenges in such environments and must be completed by other interventions.

The aforementioned other interventions could include government mobilization and implementation of distressed business emergency rescue funding packages - such as the ZWL18billion stimulus package launched by the Zimbabwean government in response to COVID-19’s drastic impacts on business at large. Similarly, government policy mediations such as tax break grants, debt settlement moratoria, and cuts on business borrowing interest rates would also complement business’ internal change leadership efforts in exceptional VUCA episodes such as those brought on by COVID-19.

This study’s outcomes imply that business leaders must apply balanced strategies and approaches in addressing the varied impacts of VUCA phenomena that threaten viability. From the research, it is recommended that the Zimbabwean business sector lead the crafting, development, and implementation of multi-dimensional holistic initiatives for building and/or improving resilience in the broad corporate sector. These initiatives must consider force majeure and disaster preparedness, response, and recovery planning towards protecting and preserving financial and other socio-economic business investments. For instance, national industrial and commercial digitalization policy could be pursued seeing as it sustained firms like FBC Holdings Ltd. and Cassava SmarTech Ltd. during the studied COVID-19 period and beyond. Further, the creation of inclusive business change leadership education and awareness forums is prudent for capacitating business survival in dynamic and complex environments, particularly for small, medium and micro enterprises that often lack the requisite knowledge and expertise.

Limitations

The study entirely used virtual interaction and information searching due to COVID-19-driven restrictions and corporate control protocols on physical interaction and mobility. Further, the case study of several ZSE-listed firms gave challenges with getting the desired cooperation from some targeted respondents. So, this affects generalization of findings or necessitates taking them cautiously.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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