Role of e-commerce and resource utilization for sustainable business development: goal of economic recovery after Covid-19

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Abstract
This study seeks to granularly document the fundamental aspects of the pandemic and its effect on the global scale and environmental steadiness. Structural equation modeling (SEM) is therefore utilized to analyze these constructs. The study results show that the pathway coefficient for the parameters, such as health awareness, naturalism, mediation, personal development, sustainability, sociability, empathy, and cooperation, illustrates that the parameters directly impact pandemic control and management. At the same time, the lockdown and social distance rules attain dire consequences on the “conventional” retail property sector. It might speed up the evolution procedure of different conduits retail plus the channel coupling performance of physical stores and, hence, cause changes in urban areas—retail sector. The pandemic isn’t necessarily leading to the shutdown of retail stores. Nonetheless, it might have a meaningful effect on the retail estate enterprise business. The results show a requirement for the rapid physical shop repositioning performance of different channels firms. The study presents a meaningful understanding and demonstrates many consequences for the retailers, Landlords, and equally policy crafting components tackling urban regeneration plus local economic advancement within the post-covid phase.

Keywords E-Commerce · COVID-19 · Retail shopping · Psychological effects · Sustainability · Pandemic · Economic recovery
1 Introduction

The COVID-19 pandemic increased e-commerce acceptance tendencies, hence boosting its global penetration. Undoubtedly, the dual simultaneous megatrends with ground-shifting socioeconomic consequences trending globally are digitalization and urbanization powered by rapid population explosion. Retail real estate is right within these two significant trends (Yıldız, 2022). The key economic requirements of big populations are consistently powering the emergence of technological innovation to meet those requirements. Given this, the conventional way of retailing has been transformed drastically in recent years to address the issue of creative destruction (Liu et al. 2021). The ongoing pandemic has caused dire and fast-paced interruptions (Swanepoel et al. 2019) and (Mteki et al. 2019). The picture is still unclear about how the pandemic will be and the existing kinds of retail businesses that will look post the pandemic phase. Most retail businesses would have to reinvent their business models to keep up with the pandemic’s changes. Nevertheless, we carry out primary and secondary analyses to unravel some concerns as well as trends that assist in comprehending the disruptions plus the changes that begin to unfold (Mohsin et al. 2020), (Mohsin et al. 2018) and (Mohsin et al. 2021). There is no doubt that the newly established order will be upended, and the variations will re-establish a new normal.

Furthermore, electronic media platforms have become prevalent instruments to grow e-trade globally via sharing, promoting, and selling products and services from the B2C and the other way round (Mteki et al. 2019). The explosion of Web 2.0 tools resulted in the novel, innovative opportunities of using the e-trade by making it social (Zhu et al. 2020). About (Irfan et al. 2021), s-commerce is an amalgamation of the undertaking of e-trade activities as well as socialization through facilitating technologies to make up buying choices, whereas trade focuses on cost efficiency for twofold sellers and purchasers, s-commerce stresses customer product information dissemination (Feng et al. 2021). The tense increase in social computing has caused the transformation of social commerce (Ahmad et al. 2020). There is an inadequate grasp of how these variations might occur with thorough academic research. To bridge this knowledge deficit, we used the twofold strategy event data of a couple of China sellers and the intuitions from previews alongside retail asset managers plus Landlords, applying a mixed-analysis approach.

As government agencies and private organizations implemented measures to contain the virus’s spread, lockdowns, and movement limitations, and consumers practiced social distancing to avoid a pandemic, a sizable portion of domestic and international trade in goods and services was redirected via digital channels. During the pandemic, digital services and online purchasing increased significantly, mainly via previously existing platforms and marketplaces (Feng et al. 2021). Increased use of digital payments by businesses and customers and the fact that many people worked from home increased the strain on Internet services. This allowed many organizations and consumers to enter the online and digital markets for the first time, while others used the circumstance to bolster their online presence (Chen et al. 2021a).
The pandemic has increased the preexisting transitions trajectories and compelled extra retailers to improve their multi-channel business units. Even though the different channel synergy impacts and current analysis all show that the physical stores have exclusive performance in particular business sectors, the economic meltdown causes the retailers to be austere in their retailing activities. Moreover, retailers ought to evaluate the costs and efficiency within the location choosing and functional design of the outlets (Sun et al. 2020a, b). Due to the long-run performance of the short-term business crisis, it is anticipated that the correlation among the retail occupants and landlords will witness a structural transformation. The diverse channel business advancement needs more flexibility and capital (Fargnoli, 2020). Within this case, brands’ partnership to access the current platform or supply channels or delivery network could become a novel pathway in the short run. Inversely, the contagion reemphasizes the value of setting the environmentally sustainable governance framework for a retail brand, which gives consequences in tenant selection, including a mixed plan of action (Shao and Er, 2016).

Similarly, retrospectively considering the incidences of epidemics and pandemics, the transmissible diseases impact the economies, including human lives within a level not measurable. Yet, it is not forecastable to determine the length as the persistence of the disease. The WHO reports are very worrying, particularly for emerging countries (Han et al. 2020). The increased diffusion of the pandemic has negatively impacted all aspects of human endeavor beyond retarding economic growth and inclusive development targets. Nevertheless, other than the destructive impacts of the pandemic, it has equally provided the opportunity for human ingenuity and innovation (Gao et al. 2021). Within current times, several researchers have evaluated the diverse parts of the contagion, particularly the coronavirus, plus its impacts from the healthcare and industrial angles (Silva and Henriques, 2021).

Thus, this study seeks to measure the role of e-trade and resource utilization in the economic build back better post the coronavirus of 2019. The current analysis is concentrated on searching for the direct aspects of the contagion on sociopsychological behavior of persons and the world societies, considered a unit. The manner E-trade and resource utilization assist for economic resuscitation post the pandemic. The end of the analysis depicts social, psychological, and emotional representation, where humanity is seen partnering to develop societies from poverty and deprivation. The concept of utopism, naturalism, and suitability is restored, and innovation and inventions are reiterated. Besides all the adverse impacts of the pandemic, the upheaval has equally added to the world’s social, emotional, and psychological advancement. The coronavirus presented a novel direction of new ideals, clean eagerness, novel philosophies, and impeccable taking into account how to combat the virus.

The remaining part of the paper is structured as follows, unit two sheds light on the literature, unit three deals with methodology and data, unit four explains the results and findings, and unit five concludes the analysis.
2 Literature review

2.1 Background

Although e-commerce has been increasing in previous years, it has soared in the pandemic scenario. E-commerce serves as a "springboard" for new company prospects and market entry, as well as a conduit for digital technology to reach outlying and rural areas (Lea et al. 2017), where enterprises were severely impacted by the pandemic (Abid et al. 2021). Implementing an e-commerce system stems from improving commercial administration, resulting in a new company orientation, new sales opportunities, and new clients, and thus increased production and sales. Ma et al. 2013 identify the following current trends in e-commerce and sustainable development: a focus on sustainability, a shift in consumer expectations regarding last-mile delivery, transportation companies meeting customer demands, and the adaptation of sharing economy business models.

Today, with the advancement of information technology, people no longer have a problem with distance, location, or time constraints. The Internet was created due to information technology; the Internet provides numerous benefits for businesses looking to expand their product marketing (Zhu and Qin, 2019). According to (Chien et al. 2021), the Internet enables SMEs to collaborate with other entrepreneurs. Social media is one of the Internet technologies gaining traction and can boost business marketing significantly. Social media offers the potential to connect many individuals quickly and for free.

There are numerous benefits to utilizing social media in SMEs’ development. They are a significant motivator for businesses to continue using social media to grow their organization, enhance product sales, engage with consumers, and expand their market network. Social media is highly beneficial as a conduit for information and contact between producers and customers, regardless of their location or distance. Social media has evolved into a prevalent mode of commercial communication. According to (Li et al. 2021), social media is a collection of Internet-based apps built on the Web2.0 conceptual and technological framework and facilitates the creation and exchange of information content between Internet users. Web 2.0 serves as the foundation for the development of social media. An observational study is essential given the critical nature of information on using social media for businesses and the associated benefits.

2.2 China’s e-commerce development

China is the world’s largest developing country, which has achieved significant economic strides since its structural transformation. However, numerous structural distortions contribute to this rise, such as the disparity between urban and rural development (Liu et al. 2017).

In China, the most renowned type of e-commerce in the Chinese market is the business-to-customer framework, where goods and services are sent directly to businesses plus end-users (Graham and Harvey, 2001). There are two principal kinds of
Business to consumer e-trade platforms. The initial group gives an Internet marketplace like Alibaba, Taobao, Tmall, and JD.com. TikTok, Tencent, and WeChat represent another group of venues, whereas TikTok is mainly shown as a video-sharing networking service, WeChat is a multi-purpose social media platform texting app. At the same time, the two can act as e-trade platforms as retailers can sell their products via the real-time streaming platform (Mohsin et al. 2021).

Chinese E-trade enterprises have increased considerably in the last twenty years, mirroring China’s quick advancements in e-trade. Inversely, China is a nation that has a vast population and a large consumer market. The Chinese e-trade market has enjoyed considerable support from the state, which is vital for the sector’s viability. Around 2005 the State Council of China released "Many Views opinions on Spending on the Advancement of E-commerce," which caused Chinese inspiration to apply E-trade as the causing force within socioeconomic advancement (Iqbal et al. 2021). Previously, the state council initiated the “Internet Plus campaign that encouraged e-commerce not only in towns but equally in rural areas and assisted cross-border e-trade enterprises (Radonjić and Tominc, 2006).

Concerning the regulations of these E-trade platforms, the Chinese firms’ government persistently adopted prudential management principles (Cheng et al. 2020). Within this principle, the government won’t actively interfere with the sector’s functioning by giving them a free hand to operate and only acts as a regulator in the marketplace of E-trade (Liu et al. 2021). Nevertheless, it might not prevail in reality. A phenomenon has been noticed within the Chinese market space that competition among firms is often skewed toward the accommodating aspect, leading to not interfering with the competition of e-trade platforms. Similarly, competing alongside the correlation among accommodative and prudential regulations in particular instances might seem cumbersome for the competition for watchdogs.

2.3 E-commerce and market dominance during COVID-19 crises

China’s economy has been significantly impacted by the COVID-19 situation in the three months since the end of January 2020. People are more concerned about their health and safety, which has resulted in fundamental shifts in their shopping habits and preferences. China’s businesses have been severely impacted and are actively seeking new market prospects amid the protracted crisis (Li and Yan, 2020).

Another survey on the impact of the COVID-19 crisis on business management indicates that firms are generally confronted with a sharp decline in orders, cost pressures such as rent, wages, and taxes, a general increase in raw material prices: insufficient demand, and difficulty locating alternative suppliers (Pramborg, 2005). Additionally, consumers’ purchasing activities have fallen significantly due to house quarantine. Consumers’ consumption attitudes have shifted toward conservatism following the emergence of COVID-19 (Sun et al. 2019). They choose to cut unnecessary Spending (Vos and Cattaneo, 2021), resulting in a significant reduction in firms’ revenue in the first quarter of 2020.

Recent e-commerce patterns, exacerbated by the COVID-19 pandemic, demonstrate significant shifts in online customer behavior. Numerous experts speculate on
the emergence of a new consumption paradigm and future evolutions toward sustainable consumption (Badri Ahmadi et al. 2017). Infrastructure development and increased customer confidence contribute to the growth of “web shops” worldwide, with experts predicting that 18.1 percent of total revenue will come from electronic channels by 2021. While electronic sales of some products, such as software, have already surpassed traditional sales (Mohsin et al. 2020). E-commerce produces a more significant share of the revenue for business retailers than it does for some of the largest corporations. In the aftermath of the pandemic, businesses have shifted their focus to social media and sales via e-commerce websites. In contrast, consumers’ shopping patterns have shifted in response to the need to acquire vital commodities (Jiang et al. 2019).

### 2.4 Sustainability support during the COVID-19

Sustainability is beginning to take on a greater significance in the modern world. It might be defined as "filling current needs without jeopardizing future generations’ ability to meet their own" (Swanepoel et al. 2019). It is referred to in numerous sources as the e-commerce market, sustainable transportation, and last-mile deliveries. Environmental, social, and economic sustainability are examined in various ways in the pertinent literature. Several of them address organizational and technological concerns, specifically last-mile typology (Fornell and Larcker, 1981) and last-mile costs (Hair Jr. et al. 2017). Additionally, some articles evaluate alternatives to home delivery, such as parcel lockers and pick-up locations (Guo et al. 2017).

With the growing popularity of online shopping, or "e-commerce," and the continued support of mobile networks for these e-commerce applications, Mukhisa Kituyi, Secretary-General of the United Nations Conference on Trade and Development (UNCTAD), explains that "the digital economy is expanding, and more businesses are affected" (Treiblmaier and Sillaber, 2021)." The reason is to develop a more suitable and sustainable business activity, capitalize on the immense potential that informatics contributes to it, and avoid the obstacles that informatics introduces. However, while this significant commercial center transformation will gradually occur, some residents may have urban amnesia (Humphrey et al. 2020).

### 2.5 Research hypotheses

Theories including experiential analysis scraps of proofs to support the connection among Economic Recovery (ECRV), Resource utilization (RSTU), E-commerce (ECOM), environmentalism (ENVS), sustainability (SUST), Covid-19 aid (COVIDA), Manufacturing (MANU), Loss due to lockdown (LDTL), and household spending (HOCP), COVID-19 prevention (COVIDP). Participants’ education level increases the innovative application of information, knowledge of the pandemic precautionary measures Internet plus the pandemic control measures. Education and Cooperation (CPRT) causes people to be conscious of their education relevance and socio-cultural tasks. Relatively, well-educated people become extra aware of their immediate environment and community and problems within the communities,
such as the pandemic. Additionally, the contagion inferred destructions in the form of lockdown results in these literate people being extra conscious and resorting to the Internet to learn more about the pandemic from research from academia to be informed about the contagion. These people are opinion leaders who tend to be highly connected to the Internet to surf for information regarding the pandemic to educate community members on preventive measures about the contagion. More so, the activities regarding fellow emotions and communal services more or less rely on the levels of peoples literacy. Thus, the Economic recovery (ECRV), Resource utilization (RSTU), E-commerce (ECOM), environmentalism (ENVS), sustainability (SUST), Covid-19 aid (COVIDA), Manufacturing (MANU), Loss due to lockdown (LDTL), and household consumption (HOCP), COVID-19 prevention (COVIDP) levels of the people assumes meaningful causal factor of economic expansions.

The following hypotheses are set for conducting this study:

**H1** Economic recovery (ECRV) attains a direct effect impact on Covid-19 prevention.

**H2** Resource utilization (RSTU) directly affects economic recovery.

**H3** E-commerce (ECOM) attains a direct effect on economic resuscitation.

**H4** Environmentalism (ENVS) directly influences economic resuscitation’s effect on economic resuscitation.

**H5** Sustainability (SUST) attains a direct effect on economic resuscitation.

**H6** Covid-19 aid (COVIDA) attains a direct effect on economic resuscitation.

**H7** Manufacturing (MANU) achieves a direct effect on economic resuscitation.

**H8** Loss due to lockdown (LDTL) directly affects economic resuscitation.

**H9** Household consumption (HOCP) directly affects economic resuscitation.

### 3 Methodology and data

Apart from the content evaluations and previous previews, an Internet survey was conducted using social media platforms such as Facebook, Twitter, and others to bolster the subject matter under consideration. The Internet- and email-based methods were also used to reach additional respondents worldwide. Nearly, 411 Chinese individuals were contacted for the study’s purposes. The demographic granularity is shown in Table 1, which demonstrates that all participants came from diverse backgrounds, ensuring a diversified research population. According to (Li et al. 2020), when the study population is infinite, approximately three hundred seventy
responses in survey research are deemed to satisfy the data required for the study population. Thus, the hypotheses are analyzed using a structural equation modeling approach. The structural modeling equation is a practical way of establishing the association between various parameters, yielding substantial and precise results (Baloch et al. 2020). The AMOS (version 26) and SPSS software packages are used for mathematical analysis. Additionally, a thematic analysis of the interview and a focus on the debate were conducted to provide a more nuanced understanding of the hypotheses. They were equally connected with the majority of correlated plus referenced theories.

4 Results and discussions

4.1 Demography of the participants

The demography of the respondents is presented in Table 1: 40.30 percent females and 50.70 percent males who willingly use e-commerce, with 25.37 percent 30–40 years category, 47.76 percent 41–50 years category, and 27.37 percent 51–60 years category. The study further grouped participants according to their educational levels; 49.75 percent of the study sample had the highest academic degree. Most of the participants were married and belonged to different occupations, such as social science, engineering, medicine, etc.
4.2 Descriptive analysis, correlation analysis

Table 2 shows the statistical data for the information in the form of the mean value, variance, and coefficient estimation. A similarity approach was utilized to analyze the association of the factors. The evaluation discovered a substantial correlation among the parameters. The approximation coefficient of variance explained was utilized to find out fast importance. The square root of AVE is significant, just its interrelatedness alongside the different structures; the results reiterate forecast importance (Fornell and Larcker, 1981). A comparative evaluation of the AVE value systems alongside the most significant shared difference figures for every factor is a different approach for ascertaining discriminant validity (Ahmad et al. 2020). Truth is obtained when the AVE figure for a particular parameter surpasses the MSV figure for a single parameter only. The AVE figures concerning the entire parameters are more significant than the MSV figures, signifying that this presumption is factual. Thus, a convergent validity analysis was undertaken to see how connected the items were (Cheng et al. 2020). The finding depicted that the AVE figures for each variable exceeded 0.50, signifying that the forecaster parameter upheld over fifty percent of their variance, refer to Table 2. Table 3 shows correlation.

4.3 Reliability analysis

The Cronbach alpha was estimated to evaluate the consistency coefficient. The result illustrates that the Cronbach figure for the entire variables surpassed the least needed value of seventy percent, so alluded by (Treiblmaier and Sillaber, 2021), specifying the data’s precision. A composite reliability (CR) evaluation was utilized further to investigate the steadiness of the entire explanatory parameters items. Additionally, the finding shows that the Composite reliability figures are over the suitable upper

Table 2 Descriptive statistics of the data analysis

| Variables | Items | Observations | Coefficient of variation(CV) | Mean  | Std. Dev |
|-----------|-------|--------------|------------------------------|-------|----------|
| ECRV      | 4     | 641          | 0.142                        | 4.76  | 0.503    |
| RSTU      | 5     | 641          | 0.621                        | 3.092 | 2.947    |
| ECOM      | 5     | 641          | 0.082                        | 4.783 | 0.321    |
| ENVS      | 5     | 641          | 0.134                        | 4.672 | 0.503    |
| SUST      | 7     | 641          | 0.223                        | 3.674 | 0.453    |
| COVIDA    | 5     | 641          | 0.567                        | 3.671 | 2.674    |
| MANU      | 7     | 641          | 0.5231                       | 13.543| 2.7850   |
| LDTL      | 5     | 641          | 0.6875                       | 4.87362| 2.9983  |
| HOCP      | 7     | 641          | 0.3216                       | 6.78463| 0.9127  |
| COVIDP    | 8     | 641          | 0.3945                       | 5.08924| 2.8471  |

Economic recovery (ECRV), resource utilization (RSTU), E-commerce (ECOM), environmentalism (ENVS), sustainability (SUST), Covid-19 aid (COVIDA), manufacturing (MANU), Loss due to lockdown (LDTL), Household consumption (HOCP), COVID-19 prevention (COVIDP)
Table 3  Correlation and discriminant validity analysis

| Variables | ECRV   | RSTU   | ECOM   | ENVS   | SUST   | COVIDA  | MANU   | LDTL   | HOCP   | COVIDP  | AVE    | MSV    |
|-----------|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|--------|--------|
| ECRV      | (0.673) | 0.532  | 0.119  |        |        |         |        |        |        |         | 0.532  | 0.119  |
| RSTU      | 0.323  | (0.652)| 0.645  | 0.288  |        |         |        |        |        |         | 0.645  | 0.288  |
| ECOM      | 0.422  | 0.56   | (0.903)|        |        |         |        |        |        |         | 0.621  | 0.289  |
| ENVS      | 0.402  | 0.19   | 0.423  | (0.923)|        |         |        |        |        |         | 0.789  | 0.121  |
| SUST      | 0.162  | 0.398  | 0.276  | 0.287  | (0.903)|        |        |        |        |         | 0.642  | 0.421  |
| COVIDA    | 0.212  | 0.504  | 0.523  | 0.221  | 0.766  | (0.897)|        |        |        |         | 0.643  | 0.433  |
| MANU      | 0.201  | 0.732  | 0.676  | 0.211  | 0.202  | 0.673   | (0.879)|        |        |         | 0.934  | 0.354  |
| LDTL      | 0.1621 | 0.782  | 0.864  | 0.167  | 0.487  | 0.763   | 0.632  | (0.809)|        |         | 0.521  | 0.112  |
| HOCP      | 0.1276 | 0.89   | 0.952  | 0.198  | 0.602  | 0.432   | 0.089  | 0.864  | (0.876)|         | 0.068  | 0.985  |
| COVIDP    | 0.0867 | 0.051  | 0.112  | 0.183  | 0.772  | 0.809   | 0.652  | 0.676  | 0.623  | (0.765)| 0.643  | 0.578  |

Diagonal values in parentheses represent the root square of AVEs.
Table 4 portrays the summaries of the results.

That is mathematically meaningful varied among the motivation figure of \( p = 0.003 \). Post the contagion, 30.5 percent of those surveyed indicated buying food using the Internet at least once a week. During the half-year survey, that percentage grew to 51.4 percent. That is a growth of fifteen-point eight percent, and it is a mathematically meaningful growth \( (p = 0.059) \). If questioned that if Chinese want to buy food using the single Internet time in a week post the contagion, forty-nine-point four percent answered yes. Meaningfully \( (p = 0.025) \), the contagion can enforce several orders and homeowners to implement wide-ranging Internet-controlled customer behaviors. Delivery service fees and service fees are important barriers for several Canadians looking to utilize Internet services, whereas forty-five-point seven percent of China’s nationals don’t want to settle fees for Internet services, thirty-two percent want to settle up to five percent. These categories are not mathematically meaningful. \( (p = 0.131) \). This is as a result of the reason forty-six-point four percent of participants didn’t buy food before the pandemic. As well as forty-five-point five percent won’t buy food post the pandemic ends. Food management (seventeen percent) and food quality (14 percent) are referenced to be serious worries for E-commerce actors. These twofold worries are mathematically extra meaningful with the entirely different worries alongside food E-trade. This should be explained that the participants weren’t observed as participants and presented with the choice of a cost as a worry with grocery E-commerce.

### 4.4 Multicollinearity

To analyze for multicollinearity, the estimation was utilized to ascertain the figure systems of the Variance Inflation Factor and the tolerance level. The VIF figure VIF has to be lower than ten, plus the tolerance figure is usually bigger than 0.1. The research findings show that the equation didn’t suffer multicollinearity concern, so the variance inflation factor figure is within the required level, and the value of Tolerance for the entire parameters range within the suitable bracket and online with the analysis of (Feng et al. 2021). The results are presented in Table 5.

### 4.5 Factor analysis

The consistent analysis of the results was done with Bartlett’s Test of Sphericity (BTS) and Kaiser–Meyer–Olkin (KMO). According to Kaiser–Meyer–Olkin (Sun et al. 2020a), the ramifications provided a meaningful, signifying the PCA was the appropriate approach. Table 6 depicts the findings of the Kaiser–Meyer–Olkin and the BTS analysis. BTS presented vital meaningfulness of 6,874.96 which equally satisfies the criteria for the EFA. The different merit of these convenient shops is their extensive service to their consumers, whether in the high streets or seller’s shops. Partnerships, as well as improvement for mini conduits enterprises, are famous among the seller areas.
| Variables               | Items | Standard loadings | Cronbach-α | CR  |
|------------------------|-------|-------------------|------------|-----|
| Economic recovery      |       |                   | 0.984      | 0.983 |
|                        | ECRV 1 | 0.823             |            |     |
|                        | ECRV 2 | 0.787             |            |     |
|                        | ECRV 3 | 0.892             |            |     |
|                        | ECRV 4 | 0.786             |            |     |
|                        | ECRV 5 | 0.798             |            |     |
| Resource utilization   |       |                   | 0.873      | 0.987 |
|                        | RSTU 1 | 0.872             |            |     |
|                        | RSTU 2 | 0.876             |            |     |
|                        | RSTU 3 | 0.787             |            |     |
|                        | RSTU 4 | 0.762             |            |     |
| E-commerce             |       |                   | 0.854      | 0.867 |
|                        | ECOM 1 | 0.798             |            |     |
|                        | ECOM 2 | 0.987             |            |     |
|                        | ECOM 3 | 0.723             |            |     |
|                        | ECOM 4 | 0.766             |            |     |
| Environmentalism       |       |                   | 0.913      | 0.944 |
|                        | ENVS 1 | 0.653             |            |     |
|                        | ENVS 2 | 0.856             |            |     |
|                        | ENVS 3 | 0.832             |            |     |
|                        | ENVS 4 | 0.988             |            |     |
|                        | ENVS 5 | 0.876             |            |     |
|                        | ENVS 6 | 0.856             |            |     |
|                        | ENVS 7 | 0.904             |            |     |
| Sustainable activities |       |                   | 0.876      | 0.888 |
|                        | SUST 1 | 0.921             |            |     |
|                        | SUST 2 | 0.801             |            |     |
|                        | SUST 3 | 0.702             |            |     |
|                        | SUST 4 | 0.932             |            |     |
|                        | SUST 5 | 0.933             |            |     |
|                        | SUST 6 | 0.663             |            |     |
| Covid-19 aid           |       |                   | 0.823      | 0.856 |
|                        | COVIDA 1 | 0.756           |            |     |
|                        | COVIDA 2 | 0.876           |            |     |
|                        | COVIDA 3 | 0.833           |            |     |
|                        | COVIDA 4 | 0.766           |            |     |
| Manufacturing          |       |                   | 0.943      | 0.963 |
|                        | MANU 1 | 0.723             |            |     |
|                        | MANU 2 | 0.832             |            |     |
|                        | MANU 3 | 0.873             |            |     |
|                        | MANU 4 | 0.766             |            |     |
| Loss due to lockdown   |       |                   | 0.987      | 0.932 |
### Table 4 (continued)

| Variables                      | Items | Standard loadings | Cronbach-α | CR  |
|-------------------------------|-------|-------------------|------------|-----|
| LDTL                          | 1     | 0.784             |            |     |
|                              | 2     | 0.87              |            |     |
|                              | 3     | 0.723             |            |     |
| Household consumption         |       |                   | 0.933      | 0.943|
| HOCP                          | 1     | 0.627             |            |     |
|                              | 2     | 0.763             |            |     |
|                              | 3     | 0.973             |            |     |
|                              | 4     | 0.773             |            |     |
| COVID-19 prevention           |       |                   | 0.983      | 0.903|
| COVIDP                        | 1     | 0.762             |            |     |
|                              | 2     | 0.673             |            |     |
|                              | 3     | 0.873             |            |     |
|                              | 4     | 0.987             |            |     |

Rotation method: Promax with Kaiser normalization and Extraction method: Maximum likelihood

### Table 5 The results of the collinearity diagnostics test

| Variables   | Statistics for collinearity |
|-------------|-----------------------------|
|             | Tolerance | VIF     |
| ECRV        | 0.82467  | 1.13249 |
| RSTU        | 0.91782  | 1.23984 |
| ECOM        | 0.80932  | 1.32939 |
| ENVS        | 0.81092  | 1.27837 |
| SUST        | 0.92153  | 1.32783 |
| COVIDA      | 0.81673  | 1.34849 |
| MANU        | 0.79786  | 1.29842 |
| LDTL        | 0.79235  | 1.32843 |
| HOCP        | 0.89253  | 1.26739 |
| COVIDP      | 0.89235  | 1.03674 |

Dependent variable: COVIDP

### Table 6 Bartlett’s test and Kaiser–Meyer–Olkin (KMO)

| KMO and Bartlett’s test                                                               |
|----------------------------------------------------------------------------------------|
| Kaiser–Meyer–Olkin measure of sampling adequacy                                       |
| Approx. chi-square                                                                     |
| Df                                                                                     |
| Sig                                                                                   |
| 0.923                                                                                  |
| 6,987.35                                                                               |
| 442                                                                                    |
| 0.000                                                                                  |

*Sig* Significance, *df* Degree of freedom
In comparison to proofs from the Dutch market (Han et al. 2020) and China’s market (Zhu et al. 2020), where supermarkets are not reactive to the increase in E-trade, the chosen grocery brands within the study area have introduced the rendezvous activities plus different conduits retailing policies uninterruptedly. Throughout the contagion, many everyday sales products partner with Uber and Deliveroo in grocery supplies, which extra advance the consumer reach, excluding formulating a novel delivery system.

Indeed, the pandemic speeds up the energy exiting transition pathways and compels retailers to improve their different channels’ business models. Even though the other channels’ synergy impacts, including preexisting analysis, show that the physical shops obtain various performances in particular enterprises domains, the economic meltdown causes the retailers to be extra conscious regarding their spending levels and selling programs. Sellers ought to find the prices and efficiency within the location choice beyond the functional buildup of shops. Due to long-run function performance and the midterm financial meltdown, the correlation between the retail occupants and owners will be anticipated to witness a structural transformation. The different conduits to enterprise advancement need additional malleability as well as finance. Within this context, brands partnerships to access the current platform or supplies network could become a novel trend in a short phase. Inversely, the contagion reiterates the importance of setting up an environmentally sustainable governance framework for a retail brand that presents consequences in occupant choosing and tenancy mix programs.

4.6 Hypotheses results and structural model

The variance value of the explained parameter was ascertained via the estimation of the $R^2$ to know the variance predicted—the R-squared explains the forecastability of the model. Thus, the growth in telecommuting will attain a meaningful investment effect on the food sector since many people live and have jobs outside of the urban centers. Of the participants wanting to work by distance ($n=2653$), fifty-four percent aim to spend less at restaurants, mainly situated within the urban centers, whereas this is a huge number of people, the variation wasn’t supported before the coronavirus outbreak; thirty-six-point eight percent of people surveyed ate at restaurants two days in seven days. However, that figure grew to twenty to point four percent when quizzed concerning plans regarding public healthcare approaches to stop the pandemic. ($p=0.148$). The reduction was not meaningful ($p=0.081$).

Tables 7 and 8 show that before the pandemic, fifty-six-point two percent of people surveyed indicated eating or having a meal at a restaurant during the holidays. Curiously, the amount grows to seventy-point seven percent throughout the contagion, whereas there is a proportion spike, the increase is not supported ($p=0.267$). Surveyors asked participants if they would meet friends for dinner or a drink at a restaurant; this figure increased to 83.5 percent. This is yet not supported ($p=0.088$) as given in Table 9.
4.7 Endogeneity testing

The analysis is principally applied to confirm the reliability of the results (Irfan et al. 2021). Endogeneity biasedness within the study can mar the results. Further, the endogeneity could not predict posterior probability, depicting a significant concern to the robustness of the results, whereas examining the endogeneity, we applied the Heckman analysis to tackle the problem. The findings generated the same confidence as the original version, signifying that endogeneity biases are just not found in the research (see Table 10).

Table 7 Communalities findings

| Variables | Communalities |
|-----------|---------------|
|           | Initial | Extraction |
| ECRV      | 1       | 0.612       |
| RSTU      | 1       | 0.722       |
| ECOM      | 1       | 0.782       |
| ENVS      | 1       | 0.622       |
| SUST      | 1       | 0.702       |
| COVIDA    | 1       | 0.803       |
| MANU      | 1       | 0.898       |
| LDTL      | 1       | 0.673       |
| HOCP      | 1       | 0.787       |
| COVIDP    | 1       | 0.667       |

Maximum likelihood: Extraction method

Table 8 Cumulative variance and Eigenvalues

| Variables | Eigenvalues (Initial) | Squared loadings extraction sums |
|-----------|-----------------------|----------------------------------|
|           | Total | Variance % | Cumulative % | Total | Variance % | Cumulative % |
| 1         | 8.464 | 33.092     | 33.784 | 10.231 | 31.927 | 31.987 |
| 2         | 4.782 | 14.782     | 45.782 | 4.097 | 12.098 | 43.687 |
| 3         | 4.703 | 55.423     | 55.423 | 3.798 | 7.097 | 52.997 |
| 4         | 3.628 | 7.022      | 60.892 | 2.094 | 6.034 | 53.753 |
| 5         | 2.893 | 7.093      | 69.872 | 2.893 | 6.432 | 69.097 |
| 6         | 2.894 | 4.092      | 71.093 | 0.9 | 3.554 | 67.096 |
| 7         | 7.98439 | 30.78929 | 30.89928 | 9.03873 | 31.78263 | 32.89373 |
| 8         | 4.79282 | 12.78490 | 39.78832 | 4.09381 | 12.72867 | 39.68655 |
| 9         | 3.67 | 8.6        | 52.89488 | 3.80384 | 8.56478 | 48.92873 |
| 10        | 2.09743 | 7.67493 | 51.09342 | 2.09483 | 6.10931 | 56.09323 |

Rotation method: Promax with Kaiser normalization, Cumulative variance: 64.930%
Besides undertaking the research via the survey, phone calls through the field experts such as doctors, lecturers, and business professionals were equally surveyed to solicit their viewpoints and reactions. Every meeting session focused on themes extensively concerning how the pandemic has affected their lives and their practical measures against it. The disruptions occasioned by the pandemic have made people move toward nature and the readiness to take the fundamental aspects of life seriously. The safety measures such as keeping social distance could be called physical space because they kept humans bonded, and eating a healthy diet. Together, maintaining healthier lifestyles to ensure protection against diseases, separating oneself from others (when needed) and thinking about life, spending a good time with loved ones, and learning new hobbies. A good number of the people in the survey said in the lockdown phase, they gained how to finish their private tasks, worked on rebuilding via mediation, had good silence time, and came in tune with nature.

### Table 9: Hypotheses’ results

| Hypotheses | Structural paths | β-value | t-statistics | Description |
|------------|------------------|---------|--------------|-------------|
| H1         | ECRV → ECRC      | 0.039***| 4.067        | Not different |
| H2         | RSTU → ECRC      | 0.864   | 8.323        | Not different |
| H3         | ECOM → ECRC      | 0.612***| 3.784        | Not different |
| H4         | ENVS → ECRC      | 0.056***| 5.876        | Not different |
| H5         | SUST → ECRC      | 0.454** | 8.678        | Not different |
| H6         | MANU → ECRC      | 0.674***| 6.766        | Not different |
| H7         | LDTL → ECRC      | 0.076***| 3.676        | Not different |
| H8         | HOCP → ECRC      | 0.664***| 3.887        | Not different |
| H9         | COVIDA → ECRC    | 0.786** | 5.098        | Not different |

***p < 0.00, **p < 0.01, *p < 0.05

### 4.8 Factor analysis with NVIVO-11

### Table 10: Endogeneity test

| Hypotheses | Structural paths | β-value | t-statistics | Description |
|------------|------------------|---------|--------------|-------------|
| H1         | ECRV → ECRC      | 0.142***| 3.877        | Not different |
| H2         | RSTU → ECRC      | 0.0367  | 9.878        | Not different |
| H3         | ECOM → ECRC      | 0.502***| 3.939        | Not different |
| H4         | ENVS → ECRC      | 0.403***| 4.039        | Not different |
| H5         | SUST → ECRC      | 0.287** | 7.098        | Not different |
| H6         | COVIDA → ECRC    | 0.432   | 9.045        | Not different |
| H7         | MANU → ECRC      | 0.503***| 3.675        | Not different |
| H8         | LDTL → ECRC      | 0.677***| 4.565        | Not different |
| H9         | HOCP → ECRC      | 0.232** | 7.765        | Not different |

***p < 0.00, **p < 0.01, *p < 0.05
Personally, people derive additional health awareness and implement healthcare precautions. The separation plus quarantine of people within their houses have encouraged the spirit of cooperation and, togetherness, empathy for one another. Further, by evaluating the reality of life, sensing the fear of death, comprehending the human temperament of others, people have become extra-religious, which brought them very intimate with God. Within the third phase of the analysis, the contents from social media news reports were combed to determine the current pathways in philanthropic activities in social settings. The evaluation demonstrated that the governments and NGOs are expending considerable funds to assist the vulnerable in society. Youth and social workers are extending a hand of help to vulnerable people to assist them in all possible means. Within the advanced world, wealthy and prosperous countries, walkways, and the streets are displayed with foodstuffs to feed those who can’t afford to buy food.

The next theme of the survey entailed the theory of the start of de-globalization, which kick-started at the international level. Massive changes within the cultural, social, faith, political plus environmental orientations have surfaced from nowhere. Significant disruption among technological and groundbreaking ideas and restoring nature dictated the novel terms of the game. Rather traditional conflicts have ended, making way for global health crises. So, a significant amount of the national budget goes to research and development, innovation, and the dissemination of healthcare services and amenities. Amid the battle among the global giants in the healthcare sector, self-health care companies and pharmaceutical companies identified challenging situations to be viable. A new ecosystem and organizational structures will emerge along with further reiterations on digitization of labor, flexible work hours, and less human activity interface. Virtual integration expanded phenomenally. Education systems that no longer work appropriately will be phased out, and digital shopping malls will vary. This new phase will show how to be the leader in overwhelming AI plus robots in organizations and homes, a radical point in the global past.

Other variables with significant incidences were analyzed alongside NVIVO-11. Moreover, the Word Cloud supports the study’s previously stated assertion and detailed evaluation. Additionally, numerous participants expressed a desire to advance their healthcare through green Spending and mediation. They are equally concerned with conserving the environment and the domain’s sustainability, advancement, and promotion. Similarly, the participants’ figures depict their friendliness and social ties.

Additionally, compassion, empathic ability, generosity, and caring for others have been promoted. This study demonstrates that people are rediscovering their connection to nature and core human values. They wish to promote, advance, sustain and conserve the ecosystem and wildlife. Specifically, green Spending and consumption and mediation are more robust indicators of social advancement since they foster empathy and beneficence among individuals, organizations, and communities, thus the re-establishment of a more favorable schedule.
4.9 Discussion

Beyond the real adverse impacts of the pandemic, that comprise nonetheless are not exclusive to the adverse health impacts on humanity, failing economies, interruptions in sociopsychological safety, grim poverty, and deprivation. Human separation and communal lockdowns, the pandemic added inversely to the collective and physiological advancement of the globe (Li and Yan, 2020). Its contagion presents novel bearings, new plans, active interest, novel thought, new meanings, and forward-looking plans for human endeavors. It reemphasized the humanitarian lessons of fellow feeling empathy, fellow feeling and transformed job and living lifestyles of people (Zhu and Qin, 2019). The effects of the pandemic unintendedly caused direct gains to the globe and compelled people to accept nature, safeguard the ecology, and implement healthy and natural lifestyles.

The first discourse on the pandemic deduction implies that nature is acting on its components to recover itself. About (Ma et al. 2013), when a character attains an equilibrium, it evaluates itself for conventional energy from past events, wastages and releases it correspondingly. That is, nature regenerates itself. The globe is incomplete unclean mulls, tragedies; conflicts affect nature and game life, destroy the natural flora, and destroy the ecosystem (Lea et al. 2017). The negative impacts of all these happenings influence the living standards of humans. Hence, for nature to be self-sufficient, it has to act to revitalize itself from the contagion by readjusting human behavior.

Likewise, the novel spike of the current contagion has already changed the consumption and production curves of the world’s distribution channels (Jiang et al. 2019). The altitudinal variation in consumption, expenditure from the household, supplies have been upended. Subsequently, working from home is now the new normal by most technology and non-tech firms alike. The pandemic has dramatically impacted the tourism sector, as the aviation sector’s profit margins plummeted like never before. The distribution aspect is disrupted significantly as retail shops run out of supplies and vital supplies for households and critical medical supplies (Li et al. 2020). However, these variations are positive and will re-stabilize to an equilibrium condition when the pandemic is controlled.

Nonetheless, the benefits emanating from the pandemic occurrences are long-lasting. They will surpass generations. Significantly, the technological interruptions resulting from the technical shifts will re-mold global business models and communal living, whereas the consequences will fade in decades.

Excitedly, the global budgets on nuclear power, weapons, ammunition, and guns will witness a significant move in expenditure on healthcare and biodefense weapons (Shao and Er, 2016). The scholarly work will notice an extensive change, concentrating on current happenings, examining natural contagion revelation of events, and forecasting coming events.

More so, surrounded by the prior and post contagion crisis, the business distribution changes will become more resilient. The digital red tape will equally attain common causes, plus psychological healthcare facilities will be offered digitally (Fargnoli, 2020; Silva and Henriques, 2021). Further, the pandemic has been absolute destruction to the world’s economy and impacted billions of lives of families...
and persons alike. Firms that proactively react to these changes by adapting their business models will thrive; those that don’t will go under. The manner organizations will handle environmental, social, and governance issues will determine their viability in these difficult times (Chen et al. 2021b; Vos and Cattaneo, 2021). The organization will ensure that its workers and stakeholders are kept safe from the rampaging pandemic by ensuring their health as a top priority. In the future, it can be deduced that, via the established world order, the pandemic will permanently vary the means enterprises might compete over the next ten years. Companies will take advantage of this pandemic occurrence to state changes to institutes measures to thrive and go beyond the short run.

5 Conclusions and recommendations

When COVID-19 struck, the world was unprepared to deal with its scope and severity, resulting in its detrimental impact. The corona contagion makes the world wonder about its philosophies and systems regarding global healthcare management and delivery because the globe is overwhelmed by the contagion. This has been clear ever since the World Health Organization and several health ministries designated COVID-19 a pandemic, affecting education, Business, travel, and tourism. Because of this, companies have come to a complete stop. In other words, there were no policies or infrastructure in many developing nations to properly support and implement e-commerce without government assistance in all sections of the country. Since the globe is collaborating, the whole world, plus individuals, possess plans for the readiness and reactions to the pandemic, whereas there are underlying variations over the past few years caused by urbanization and digitalization, the pandemic looks to speed up the rate. This study evaluated the two plan of actions event datasets of certain China sellers and intuitions from interviews alongside retail asset managers and owners concerning the evolution of retail property firms’ high street landscape within China. The findings shed more intuitions on trends and sectors of importance. For instance, going away from non-core assets, greater relevance on asset choosing, refiguring the performance of physical shops, environmental social and governance issues in asset plus finance management plus consumer engagement as causal factors for occupant choosing. The results equally demonstrate a group of consequences for the high street and cities retail landscape. Maybe this is the set time to imagine an economy for the people shared globe of economy constructed on the ideals of taking care of humanity. Besides that, global superpowers seek to remodel their economies in the public interest concerning the thematic evaluation of the reaction. The pandemic will necessarily cause countries to change and manage the evolution of earth’s essential laws that will cause humans to be kind, participate in implementing human-focused economic programs, and cause humanity to understand what it is like to be humane.

The COVID-19 crisis had a profound effect and resulted in an economic revolution. One of the most obvious answers has been forced digitalization, which has become strategic for many businesses, some of which have adopted digitalization to
survive. Companies are under great strain due to the global catastrophe sparked by the COVID-19 pandemic.

Our study further indicates that formal credit has a greater impact on e-commerce utilization for businesses, new business entities, and mobile payment users. To survive, businesses adapt their behavior through various digital technologies. Additionally, business models have had to be altered, with a growing emphasis on e-commerce, online platforms, and applications, resulting in lower fixed costs. The advancement of technology possesses enormous potential and creates numerous chances. However, technology distribution is unequal due to logistical, financial, and behavioral reasons; it is precisely because of this uneven diffusion that governments and administrations must develop and implement digitalization policies. Policymakers could utilize these findings to develop policies that target both small- and large-scale entrepreneurs in order to foster this shift. Policy recommendations based on our findings could encourage these entrepreneurs to take advantage of the Internet’s e-commerce advantages. Simultaneously, in an era of increased Internet sales, businesses should adopt an entrepreneurial mindset centered on knowledge management. E-commerce must unquestionably be a component of this plan and a consumer-centric orientation. It is reasonable to believe that these firms will become more efficient due to the crisis. Additionally, it is recommended that both small- and large-scale business owners utilize digital technology in their day-to-day operations. Retailers in the business sector have had to adjust to the digital environment for persuading the businesses to embrace cloud computing services, which will benefit them. Online sales of all things, including food, have soared. Moreover, online customer behavior is changing, affecting businesses’ strategy and supply chain development. Companies must address altering consumer habits and evolving their business models in the new environment.

The COVID-19 pandemic’s impact has resulted in the development of measures such as the adoption of various action programs to boost business retailers’ competitiveness through research and innovation and improve access to finance; the stimulation of new reflections on economic recovery, reconstruction, and strengthening resilience. In contributing to the essential literature and knowledge in this growing field, we hope that the conversations generated by this research assists to the advancement of dialogues and engagement between entrepreneurs and customers. The collected results can serve as a springboard for the organization’s future adaptation efforts, both in light of COVID-19 and new economic realities that place a greater focus on digitization. A specific analysis could be undertaken using data from countries worldwide. Moreover, additional indications could be incorporated through statistical processing to illuminate different facets of organization and customer behavior in a pandemic setting.

Further collaborative studies in other domains are needed to understand the consequences of the COVID-19 pandemic better because COVID-19 is still a new phenomenon, and researchers are on the verge of figuring out its full scope. This research was undertaken only in China; however, expanding the size of the study would yield more generalized findings. Based on this study, future researchers may include a broader range of stakeholders to understand better contextual issues that can influence sustainability in e-commerce.
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