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Resilience and transformation: The impact of COVID-19 on Pakistan's textile industry

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Abstract: The economy of Pakistan has faced many challenges due to COVID-19, leading to numerous systemic failures and leaving it struggling to recover. This research aims to shed light on the specific challenges faced by Pakistani textile companies during the pandemic. Comprehensive data was collected from one hundred fifty-three textile managers in Pakistan. Upon examining the impact of COVID-19 on businesses, it has been found that the most pressing issues revolved around working capital and strategies for generating new sales. Interestingly, many of these businesses were well-prepared in the digital realm, readily embracing digital knowledge and seizing opportunities by pivoting to the production of personal protective equipment (PPE) and N95 masks. This study aims to evaluate the early consequences of COVID-19 on Pakistan's textile industry. Considering the scarcity of research on these challenges and opportunities, our work contributes to a better understanding of the hurdles the textile sector faces. Furthermore, it sets the groundwork for future research in this domain. It provides valuable insights for textile businesses, enabling them to align their strategies with the ever-evolving digital marketing landscape.

Keywords: COVID-19; textile industry; challenges; opportunities; working capital; digital marketing; textile sales; global impact; supply chain

1. Introduction

The textile industry has suffered major consequences due to the global pandemic's features. First, global textile supply chain disruptions have caused several complex challenges. When China, the world's biggest textile and clothing manufacturer, contracted COVID-19 for the first time, the lockdown delayed output (Galindo and Tovar, 2022). Since most textile goods are seasonal, these interruptions have been extremely onerous for textile company owners. When the virus was detected in most countries in March, India and Pakistan suffered big order cancellations and delay (Zaidi and Shukri, 2022). Raw material shortages, labour problems, and rising shipping and transit costs plague textile companies that have resumed production in South Korea or China. Second, a lack of customer demand or concern that consumer preferences may quickly change has significantly impacted company operations (García-Salirrosas et al., 2022). Numerous countries have reintroduced physical retail stores, which have traditionally accounted for 80% of textile company sales, but

buyers still dread virus-spreading crowds and avoid face-to-face connections. Everyone prioritised needs above fashion during the shutdown. Luxury is the worst hit in fashion capitals due to travel restrictions. Third, the current economic crisis means many firms cannot acquire finance owing to poor crisis management or flexible planning (Gazolla and Aquino, 2022). Companies are struggling due to order cancellation, store leasing costs, late payments, and other concerns, and typically lack backup measures. Historically, COVID-19 has caused medical and economic disaster (Zhelev, 2021). Textile businesses also deal with COVID-19's economic repercussions, including employment losses in a sector that employs millions worldwide (Zhao and Kim, 2021). No one foresaw the magnitude of the crisis, but certain clothing firms are better prepared owing to their digital capabilities.

In anticipation of a move toward online sales, marketing expenses on digital media will be increased (Voss, 2020). Analytics and digital analytics may increase supply chain efficiency, price, flexibility, and sustainability, boosting top-line growth. Some multinational corporations are already using radio-frequency identification to track inventories and decrease in-store merchandising fraud more accurately. Moreover, the automation of logistics through digital retail outlets and predictive exception management has the potential to enhance efficiency dramatically (Varnavskii, 2021). Consumers will reap the benefits of expanded product availability and faster, more affordable, and more precise delivery. Major online stores use algorithms driven by artificial intelligence to anticipate sales of particular products in specific regions and cities and then stockpile the expected amount of inventory in warehouses nearby.

It has been reported that COVID-19 has severely impacted the growth of the textile industry in Pakistan. It is essential to pay attention to this sector because it is Pakistan's primary manufacturing industry (Vadgama, 2021). Many people earn their livelihood from this sector. Therefore, proper research is required to thoroughly study the challenges and opportunities COVID-19 faced by the textile industry in Pakistan. This study will help policymakers make new policies to deal with such emergencies.

In Pakistan, Faisalabad is the hub of textile production and more than half of the exports of Pakistan only because of the textile industry. Pakistan has lost textile export in recent years because Pakistan needed to modernize its machinery and equipment, so the production cost is higher than in other countries because of obsolete technology (Dash and Chakraborty, 2021). During COVID-19, firms are non-operating, and everyone is working from home. COVID-19 is a disaster for everyone, but for a few people, it is a blessing in disguise. At the start of the year 2020, Pakistan witnessed the pandemic outbreak. To control this pandemic, the government is taking necessary steps. The government decided to impose a lockdown.

People isolated themselves at their homes, offices were closed, and firms were also non-operational. It is a tough time, and many people face financial constraints.

Moreover, this pandemic badly impacted the mental health of people. Due to the outbreak of COVID-19, the fundamental changes of business models globally give rise to extraordinary disturbances and difficulties in different business sectors (Debata et al., 2020). Companies revise their business policies and strategies because of these difficulties and change (Espitia et al., 2021). All business sectors experience short-term challenges, and these challenges are related to customer demand, supply chain,

health, workforce, marketing and profitability. Anyhow, successfully tackling these problems will not assure a great future. After this pandemic, business challenges, opportunities, trends and models became very different. All the practical terminologies of businesses need to be changed.

This research study provides an overall understanding of the business challenges and opportunities faced by the textile industry during COVID-19. This study provides implications for future emergencies and guidelines for policymakers to make effective policies. In this way, policymakers will be having long-term benefits for Pakistan.

The textile sector has a significant impact on the GDP of Pakistan. 2018 the textile industry accounted for 8.5% of Pakistan's gross domestic product. Pakistan's textile industry contributes just 3.4% of the country's overall gross domestic product (GDP), much less than other nations. The impact of COVID-19 has created many challenges for all industries. Many concepts are discussed with the help of a literature review. The textile industry of Pakistan has been unsettled due to this pandemic. The textile industry faced many challenges, such as cancellation of orders, difficulty in delivering products to customers, shortage of material due to the non-functioning firms,. Moreover, the trend of digital marketing has increased during the pandemic. Different opportunities also exist during the pandemic, such as the manufacturing of masks and Personal Protective Equipment (PPE) during pandemic.

This research aims to determine opportunities and assess the challenges faced by the the textile industry during COVID-19 in Pakistan.

The objectives are based on the research cycle's chronological order. The objectives of the research are as follows:
1) To evaluate the impact of digital marketing on sales during a pandemic.
2) To assess the influence of working capital on sales during pandemic.
3) To analyze the challenges faced by the textile industry during a pandemic.
4) To determine opportunities that exist during pandemic.
   The following research questions for this study:
1) Does digital marketing help textile businesses increase their sales during the pandemic?
2) What effect does working capital have on sales of textile businesses during the pandemic?
3) Do opportunities affect the growth of sales during the pandemic?

This study unfolds different aspects by collecting primary data from one hundred and fifty-three textile managers in Pakistan. Firstly, this study shows a positive relationship between digital marketing and sales during a pandemic. These findings imply that digital marketing helped Pakistani textile firms increase their sales during a pandemic. Secondly, it has been found that there is a negative relationship between working capital and sales. For this study, working capital means cancellation of orders and delay in delivering orders due to lockdown and trade restrictions during a pandemic. The prevailing economic crisis has resulted in several textile firms encountering difficulties obtaining financial resources due to inadequate working capital. Thirdly, it has been observed that opportunities have a positive relationship with sales during a pandemic. This implies that people have the opportunity to start their new small businesses from home, and existing textile firms have the opportunity

to manufacture N95 masks and PPE, which in turn increases their sales.

2. Literature review

Multiple countries have performed research on the implications of COVID-19 on businesses. Aditya, (2020) analysed the effect of COVID-19 on U.S. small businesses using a nationally representative sample. It has been discovered that practically every company sector experiences a decline and commercial activities in Africa and the Caribbean have decreased by 41%. Arania et al. (2022) researched the effects of COVID-19 on commerce and found that brands and retailers faced several short-term difficulties. A significant obstacle for the textile industry is obtaining sufficient labour force for manufacturing. Fifty per cent or more of businesses have reached a stage where they are no longer operational (Meyer et al., 2021). Young customers will continue to shop even though the market will be open. Those with job stability will prefer online shopping as they keep working from home, encouraging them to check out the latest fashion trends and affect their purchasing decisions (James, 2021). Younger consumers will comprise more of the textile sector than older consumers (Kaur, 2021). After the lockdown is lifted, the pandemic's impact on consumer behaviour will persist, causing internet shopping to grow.

Pakistan's textile sector has also faced many challenges during the pandemic. Recovery has also been seen during this period, but overall, the pandemic caused sudden changes in the industry (Adawiyah and Adhitya, 2021). The textile industry of Pakistan has also experienced a loss in exports. According to a statistical analysis by the State Bank of Pakistan (SBP), textile exports decreased from $13,580,585 in 2019 to $12,782,608 in 2020 (Abba Ahmed, 2020). This decrease is because of various factors like changes in monetary and fiscal policy; because of lockdowns, there was a massive cancellation of orders and delay in delivering orders. The government of Pakistan declared different policy measures in response to the challenges, including a reduction in provincial and federal tax rates, a reduction in policy rates, a refinance scheme, a reduction in utility costs, the use of digital payments, and the introduction of online payments by commercial banks and State Bank of Pakistan (Abbasi et al., 2022). These policy measures were helpful during the pandemic and strengthened the textile industry.

According to the survey, it was found that 85% of enterprises were not functional during the pandemic (Karmacharya et al., 2021). Most textile firms are in Sindh and Punjab, followed by Khyber Pakhtunkhwa. Consequently, non-functional firms face different challenges associated with sales turnover and the highest share going to Sindh, followed by Punjab and Khyber Pakhtunkhwa. 6.2% of the firms in Sindh did not observe any change in sales turnover, but the firms of Khyber Pakhtunkhwa have entirely a completely low sales turnover (Gereffi, 2020). Sales declined due to a decline in export orders, followed by logistical disruptions, changes in consumer behaviour, and supply and demand fluctuations. Moreover, costs were also involved, such as financial costs imposed by commercial banks and procurement costs, such as compensation of damaged products (Giantari et al., 2022). Besides these challenges, entrepreneurs are motivated to overcome the challenges.

The majority of Pakistan's supply networks eventually link to the informal sector. This indicates that, except huge organisations, the vast majority of supply chains, irrespective of size, are at some point dependent on the cash economy. The market term might vary from 30 to 90 days, depending on the industry (Jamir, 2020). This credit sales model implies that by modifying the period of credit sales, the same cash is cycled in the market so that at any one time, only one market agent has the cash. In a fundamental cycle, manufacturers sell on credit to wholesalers, who sell to retailers and cash flows back when retailers make sales. The administration was apprehensive about instituting a lockdown in March, and their comments hinted that a complete lockdown was impossible. The provincial governments, on the other hand, ordered a total closure with no grace period. As a result, the cash cycle has been disturbed (Junzhi, 2021). Stores were left with unsold inventory, which prevented them from paying wholesalers; wholesalers, in turn, were unable to pay manufacturers, manufacturers could not pay for their inputs, notably imported goods waiting at ports (Kanupriya, 2021). This outage produced substantial liquidity problems in the market and for producers. Due to a scarcity of cash, trade restrictions, and disruptions in product movement, there were input shortages. Because of restrictions and labour shortages, small firms could not fulfil their duties (Karmacharya et al., 2021). This resulted in price hikes for several goods, further complicating supply networks.

The manufacturing sector of Pakistan's textile industry was also affected by COVID-19. Textile factories were closed worldwide because they cannot maintain the category of essential products and services; it brought industry to one of its greatest crises in a century (Missoni et al., 2020). Whether in Pakistan, Bangladesh, China, or Vietnam, this sector suffers severe supply chain disruptions and delayed production activities (Arora and Nangia, 2021). By which they face cancellation of contracts and need help in obtaining raw materials from the source country.

The pandemic has heightened the need to digitise the whole value chain. On the one hand, while firms have suffered due to operating offline, digital media and platforms economy organisations (Google, Alibaba, Amazon, and Netflix) continue to grow in importance. They are moving to the heart of infrastructure organisations. During the pandemic, as internet marketing takes centre stage for selling and promoting products globally, local brand designers and owners were questioned whether they were acquainted with digital marketing. Companies should integrate digital transformation technology into their innovation strategy, according to Pandey and Pal (2020). While the finance, education, and healthcare industries rapidly adapt to the digital revolution, the fashion and textile industry needs to catch up. Digital transformation does not necessitate that Pakistani firms relinquish their existing business models.

In contrast, the new digital value chain model will supplement the current conventional models and provide them with a futuristic outlook (Modi and Jindal, 2021). Regarding technical capabilities, Pakistan has a competitive edge over other rising economies. To counteract the problem, it is advised that the value chain be digitized.

Digital marketing is the best way to increase sales during a pandemic. This feature indicates that textile businesses could weather the storm even though the COVID-19 outbreak drove the textile industry to its breaking point. Entrepreneurs

were confident in effectively advertising their products online (Nabil, 2021). Additionally, they can make electronic payments to their stakeholders without difficulty. In addition, they foresee a rise in orders as businesses worldwide seek other suppliers to lessen their reliance on China.

Hypothesis 1: Digital Marketing has a positive relationship with sales during a pandemic.

Following a decline in production and worldwide sales, Pakistan textile industry employees' employment and compensation conditions deteriorated gradually. The greatest threat to textile employees was not receiving a paycheck and plant closing. Working capital consists of the postponement and cancellation of pre-booked orders, difficulties in getting raw materials due to shutdown, and suspension of imports, each of which will harm the textile industry's working capital. In addition, there are many migrant workers in the industry sector, which presents significant business difficulties (Nurjaman, 2021). Because of the unemployment created by the lockdown, they were forced to return to their hometowns.

Consequently, a large number of unemployed workers will remain in existence shortly. COVID-19 significantly influences public health and results in quick lifestyle changes, social distance, and home isolation, which have economic and social consequences. This indicates that the economic growth of the nation has halted. It has now severely affected all businesses globally, including the e-commerce industry (Okenna, 2020). Prominent merchants temporarily close their outlets.

Moreover, medium and small-sized establishments need to improve due to declining foot traffic. In truth, the list does not exclude internet firms. Pakistan is also significantly influenced by them. Multiple e-commerce enterprises get the bulk of their products from China. China's lockdown policies substantially limited product production.

Consequently, it is expected to substantially impact Pakistani Internet businesses, especially regarding Chinese products. Sample survey analysis is used in primary research to enhance outcomes. China is the biggest producer and has the most prominent industries (Purnamawati and Yuniarta, 2021). Consequently, the influence of coronaviruses has injured all transportation methods, negatively impacting domestic economic development. COVID-19 has had a substantial influence on the lives of humans (Rashata, 2021). The worldwide shutdown of industry to combat the outbreak has led to a decline in aggregate production, while increased investment and spending have reduced demand. Scientists are investigating recent pandemic outbreaks. As a consequence of people staying at home and economies collapsing due to the COVID-19 epidemic, it is anticipated that a large number of well-known companies in various industries will fail.

The extensive shutdown of businesses and industries in Pakistan and worldwide due to the coronavirus is affecting. Several retailers, warehouses, and other businesses have closed. China is the world's largest importer, has a land border with Pakistan, and is suffering greatly from the Coronavirus. Corocoronavirus all shipping procedures that have impandestic economic growth (Saif et al., 2021). Most importers are attempting to obtain their items from many other sources to begin their business cycle. Second, Pakistan's economy is mainly reliant on cash. Customers quickly dismissed electronic payment methods. According to State Bank of Pakistan data, just

0.2 per cent of online transactions occur yearly. The pandemic had a significant impact on e-commerce firms. The country is in serious trouble as the danger of death rises due to the pandemic (Satrio and Muhardono, 2022). The pandemic of COVID-19 has had lasting impacts on global supply systems (Sehrawat and Khurana, 2022). Cancellation of orders by international merchants would generate supply chain disruptions and significant effects in these sourcing nations (Shah et al., 2022). Low-cost sourcing nations that depend largely on textile exports for their earnings have disrupted the global value chains.

Hypothesis 2: Working capital has a negative impact on sales during the crisis of COVID-19.

During the COVID-19 epidemic, the textile industry played a vital role in facilitating the production of personal protective equipment (PPE) kits and medical masks. Thus, some textile industry owners think that opportunities still exist despite the COVID-19 scenario. Moreover, brand partners affiliated with these businesses did not want to disrupt their supply chain. In such situations, however, company owners must regularly confront workplace cleaning obstacles to promote productivity (Nilufer, 2020). Pakistan allegedly lost one-third of its income and fifty per cent of its exports as a consequence of the COVID-19 outbreak and closure. Amid Pakistan's viral lockdowns, analysts anticipate a recession. Similarly, the World Bank predicts that Pakistan may experience a recession.

Numerous small and medium-sized firms are also confronted with formidable difficulties. The lockdown has substantially influenced the textile and garment sectors, for example. A decrease in export demand for food and beverage products, tobacco products, and textiles would disproportionately negatively impact Pakistan (Novitasari, 2021). Additionally, there are increasing opportunities for mergers and acquisitions of distressed brands during the COVID-19. To combat the adverse effects of the pandemic and survive the crisis, textile businesses think outside the box. Textile companies manufacture personal protection equipment (PPE) and respirators. Several textile companies have shifted d to producing PPE and respirators in other nations, including China (Barbu, 2020). This would not only assist Pakistan in combating the COVID-19 epidemic by addressing the rising demand for PPE and respirators but also assist businesses in expanding into new markets. Perfume manufacturers and distilleries may also manufacture hand sanitisers (Bureau et al., 2021). The need for hand sanitiser is increasing globally, including in Pakistan. Considering that the market for hand sanitisers has expanded by 500 in Pakistan (Chakraborty and Biswas, 2020), there is an excellent potential for perfume manufacturers and distilleries to capitalise on this trend.

Hypothesis 3: Opportunities have a positive role in the growth of sales during a pandemic.

3. Research methodology

This chapter explains the philosophical background, approach, and design of research, process of data collection, identification of variables, and data sources of study. Moreover, a brief description is already mentioned below for the selected study, questionnaire design, and the data analysis techniques.

This research is based on Positivism. According to Svenson, (2021), Positivism maintains that only "factual" knowledge gathered by observation, especially measurement, is trustworthy. In positivist research, the investigator's role is limited to the collection and examination of data in an objective manner. The current study is concerned with quantitative data and observable results.

Exploration strategy is used as a research approach in this research. This study, which adheres to a positivist research philosophy, concentrates on the quantitative research method among the many research methodologies. It is also helpful to present the information in charts and graphs so that they may be compared, connections discovered, and everyone can understand how one item impacts another. Aside from that, this study uses a deductive method when it comes to logic (Varnavskii, 2021). In a deductive method, hypotheses are initially designed based on a conceptual framework and a methodological approach to examine the designed hypothesis.

A sufficient theoretical basis is provided with the help of current literature. The deductive approach establishes the correlation between data and theory. The research design determines how the study will be done and guides the data collecting, evaluation, and report writing processes. This study used a single cross-sectional methodology. A cross-sectional study collects data from a single data point of population members. Cross-sectional studies employ single and multiple cross-sectional methods (Voss, 2020). In single cross-sectional methods, just one sample of respondents for this study is taken, and information is gathered from the sample only once.

Primary data is collected to solve a specific problem. Primary data collection is considered expensive and time-consuming (Zaidi and Shukri, 2022). To collect primary data, the current study relied on a web-based questionnaire. The questionnaire was created in Google Forms and circulated to the intended respondents through popular Social Networking Sites.

The questionnaire for this study was developed by using the conceptual model generated from existing literature and the research issue in mind. Furthermore, to address the specific research topic, it was decided to divide the questionnaire into portions. The survey was only sent to textile managers living in Pakistan's main cities. The first section of the questionnaire analyzed the respondents' gender, age, and marital status. The second set of questions was selected to collect information based on the survey's four variable scales (One dependent and three independent). The current study's population is made up of textile managers from Pakistan. The sample element is an individual in the textile industry and the sampling unit, drawn from major cities in Pakistan.

It is decided that roughly 153 Pakistani textile managers will participate. The current study is expected to be evaluated using Smart Partial Least Square (PLS) Structural Equation Modelling (SEM) software according to the study requirements. According to Zhelev (2021), the sample size must be ten times bigger than the actual number of internal or outer model links reflecting any latent variable in the conceptual framework. The PLS-SEM method is very appealing in estimating large models with several constructs, indicator variables, and structural routes without imposing distributional assumptions on the data.

In this study, purposive sampling, a form of non-probability sampling, is employed for sample selection. The participants comprise textile managers from Pakistan.

4. Results and discussion

This section discusses the findings of the statistical data collected through the questionnaire and empirically evaluates it in the form of tables and figures. Results are interpreted according to the statistical standards.

Table 1 presents response rates, which are calculated by dividing the total number of qualified respondents in the sample by the total number of collected responses. The response rate is the percentage of respondents that answer a specific call to action.

Table 1. Response rate calculation.

Details of Responses	Responses Count
Shared respondents count	180
Responses received	153
Inaccurate responses	0
Accepted responses	153
Response Rate	85%

Source: Data is developed by the researcher.

The total response count was 153. The responses were not only received virtually but also in physical mode; therefore, the response rate is as high as 85%. As the responses were filled physically, the researcher requested the respondents to answer every question, and as a result, no response was found inaccurate or irrelevant. The study's respondents were textile managers from mostly big cities in Pakistan.

The respondents' demographic information and behavioural patterns are covered in the first portion of the questionnaire. Thus, descriptive and frequency statistics were generated. The respondents were male and female.

Innovative PLS 3 software is used for the analysis of constructs. The variables were renamed as S for sales, DM for digital marketing, WC for working capital, and O for opportunities.

In the PLS method, evaluating the model contains testing the reliability and validity of the items concerning discriminant and convergent validity. The PLS Algorithm was run with a valid response sample size of 153. The validity and reliability were interpreted after a few indicators were eliminated.

The indicators' dependability is tested using outside loadings. Indicator reliability may be calculated using the square of the outside loadings (James, 2021). The lowest acceptable number for indication dependability is 0.4, with 0.7 being the preferred value.

Table 2. Indicator reliability.

Indicators	Outer Loadings
S1	0.824
S2	0.835
S3	0.716
WC1	0.724
WC2	0.833
WC3	0.839
DM1	0.688
DM2	0.704
DM3	0.851
O1	0.931
O2	0.846

Source: Data is developed by SmartPLS.

The values of the outer loading in the **Table 2** are equal to or more than the minimum acceptable value of 0.4 (Sehrawat and Khurana, 2022). The outside loadings are suitable for all indications of sales, working capital, digital marketing and opportunities.

Internal consistency dependability is a measurement of how well a test handles diverse structures and generates consistent findings. Cronbach's Alpha or Composite reliability ratings are used to measure internal consistency dependability (Giantari et al., 2022). A Cronbach's Alpha of 0.7 or above is considered as satisfactory.

Table 3. Internal consistency reliability.

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
S	0.704	0.712	0.630
O	0.744	0.817	0.791
WC	0.720	0.739	0.641
DM	0.701	0.712	0.564

Source: Data is developed from SmartPLS.

Table 3 exhibits the results of Cronbach's alpha and Composite reliability values which are above their acceptable levels for all constructs, demonstrating a significant level of internal consistency for all reflecting constructs in the model.

The extracted average variance (AVE) is used to assess convergent validity. The extracted average variance must be 0.5 or more (Kanupriya, 2021). The average variance retrieved is larger than 0.5, suggesting that the measures of all of the aforementioned constructs have a high degree of convergent validity, according to the table below.

Construct validity is a subtype of discriminant validity. In other words, it demonstrates how effectively a test assesses the topic for which it was created. Discriminant validity shows that concepts or tests that should not be related are actually related. The objective of discriminant validity evidence is to distinguish between measurements of distinct constructs (Karmacharya et al., 2021). Discriminant

validity should not be greater than convergent validity coefficients. The discriminant validity of cross-loadings is explored. Furthermore, the square root of each build's AVE should be bigger than the strongest link between the construct and any other structure in the model (Kaur, 2021). The square root of each construct's AVE was greater than its greatest correlation with all other construct in the model, hence all four variables satisfied the criteria.

Structural model models were utilized to test the research hypothesis. The PLS Algorithm was used to assess the relationships between the variables initially. The significance of the relationships was then assessed using the Bootstrapping approach.

The direct effect between dependent and independent variables can be evaluated without the presence of mediating variable. The *p*-value for the direct effect has been less than 0.05, suggesting that the effect is significant (Arora and Nangia, 2021). The *t* value of all the three independent variables is greater than 1.96 showing a significant direct effect among the constructs.

As there is no mediating variable in the model and therefore there are no indirect effects.

One statistical method to evaluate the connection between two variables in a data set is to create a correlation matrix. **Table 4** displays the correlation matrix, wherein each column features correlation coefficients. A coefficient of 1 indicates a strong relationship, 0 signifies a neutral relationship, and −1 denotes a weak relationship between the variables (Missoni et al., 2020). When two variables tend to increase and fall simultaneously, there is a positive correlation between them.

Table 4. Correlation matrix.

	DM1	DM2	DM3	O1	O2	S1	S2	S3	WC1	WC2	WC3
DM1	1	0.29	0.309	−0.089	−0.005	0.203	0.243	0.273	0.058	0.276	0.329
DM2	0.29	1	0.464	−0.21	−0.068	0.172	0.172	0.198	0.202	0.216	0.295
DM3	0.309	0.464	1	−0.151	−0.066	0.365	0.361	0.25	0.229	0.282	0.437
O1	−0.089	−0.21	−0.151	1	0.592	−0.358	−0.416	−0.384	−0.291	−0.276	−0.304
O2	−0.005	−0.068	−0.066	0.592	1	−0.235	−0.329	−0.223	−0.213	−0.206	−0.188
S1	0.203	0.172	0.365	−0.358	−0.235	1	0.564	0.391	0.304	0.381	0.463
S2	0.243	0.172	0.361	−0.416	−0.329	0.564	1	0.37	0.356	0.382	0.478
S3	0.273	0.198	0.25	−0.384	−0.223	0.391	0.37	1	0.28	0.375	0.351
WC1	0.058	0.202	0.229	−0.291	−0.213	0.304	0.356	0.28	1	0.453	0.391
WC2	0.276	0.216	0.282	−0.276	−0.206	0.1	0.382	0.375	0.453	1	0.54
WC3	0.329	0.295	0.437	−0.304	−0.188	0.463	0.478	0.351	0.391	0.54	1

Source: Data developed by SMART PLS.

R^2 is a value between 0 and 1 that indicates how effectively a statistical model predicts an event. It measures how well the model anticipates the occurrence. Furthermore, R^2 represents the sum of the exogenous factors' effects on the endogenous variables (s). This effect has a scale from 0 to 1, with 1 denoting perfect predictability. R^2 of 0.75, 0.50, or 0.25 represents large, moderate, or weak levels of predictive accuracy (Nabil, 2021). According to the above figure, the three

independent variables have a 47.2 percent predictive relevance of sales, indicating a moderate level.

Table 5. Significance of path coefficients.

Hypo-thesis	Paths	Original sample (O)	Sample mean (M)	Standard Deviation (STDEV)	*T* Statistics (|O/STDE V|)	*P*-Values	Accepted or not
H1	DM > S	0.209	0.210	0.063	3.306	0.001	Accepted
H2	WS > S	0.302	0.306	0.084	3.605	0.000	Accepted
H3	O > S	0.397	0.398	0.071	5.622	0.000	Accepted

Source: Data developed by SMART PLS 3.

In **Table 5**, the path coefficient was designated as significant if the *t* value was more than 1.96 and the *p*-value was less than 0.05. As a result of the findings, hypotheses 1, 2, and 3 are accepted.

In a regression model, collinearity is the correlation between independent variables) that expresses a linear connection. When independent variables in a single regression model are interrelated, the dependent variable's value cannot be estimated independently. The constructs' collinearity was evaluated by verifying Variance Inflation Factors (VIF) values, which had to be less than five or have a Tolerance value of 0.20 or below. **Table 6** documents that all the constructs' VIFs are less than 5. Therefore, there is no difficulty with collinearity between the constructs (Novitasari, 2021). Collinearity, therefore, does notis fine when estimating the PLS path model. The table below shows the VIF values of the constructs.

Table 6. Collinearity statistics.

Indicators	VIF
DM1	1.140
DM2	1.314
DM3	1.330
O1	1.541
O2	1.541
S1	1.555
S2	1.526
S3	1.228
WC1	1.309
WC2	1.564
WC3	1.468
Sum	**15.516**

Source: Data developed by SMART PLS.

5. Conclusion

Most nations worldwide have been affected by COVID-19, and Pakistan is one of them. Both large- and small-scale industries are affected, particularly the textile sector, which is unrelated to medical needs. The wholesale and retail sectors exhibit novel consumption trends (Berg et al., 2020). As the internet world has expanded, it

has been discovered that the need for businesses to have a digital marketing plan has only increased over time. As a result of the pandemic, the Internet has now become a vital resource for the majority of companies. If there was ever a moment to invest in digital marketing, it is now. Various sorts of digital marketing are used by many businesses to promote their events. Convenience and value have also altered consumers' buying behaviours. During the economic downturn, several customers have experimented with new brands or made their first purchases online. Regarding the retail experience, people are less interested in buying in a physical setting and are more price-conscious. Consumers appreciate one-stop shopping and expect businesses to safeguard their safety in shops. Textile firms must boost their online presence to embrace a more dynamic and fluid strategy for delivering goods to customers.

Shop closures and laws encouraging stay-at-home regulations reduced demand for textile and fashion products, as measured by marketing. Financial turnover within the organisations was disturbed due to the subsequent fall in revenue after the decline in demand. Due to financial disruptions, many businesses find it challenging to make payroll and settle debts. In addition to demand-related financial concerns, the firms reorganised their debt and reduced staff to address this issue. The supply chain presents another issue. It concerns the policy of a few nations that have temporarily suspended their commerce with other nations. Additionally, some of the primary raw materials are imported, and certain locally produced goods are exported. Due to the issues above, the government has supported efforts to boost the economy by easing debt repayment and establishing laws that make it easier for commodities to be distributed internationally.

Companies' choices on new investments in PPE will be influenced by increased consumer awareness of healthy lifestyles. To adapt to customers ' shifting lives, businesses in the textile industry must use cutting-edge technology in their new product and branding initiatives. Another important method is allowing trade to continue as much as possible and taking all possible steps to avoid viral spread. It will boost the economy and help struggling small and medium-sized enterprises. The UNDP warned governments and business executives that "borders must be maintained open to products and services." Lockdowns, including temporary restrictions on local peoples' mobility, should not hinder trade. This is significant for Pakistan since its debt ratio is growing due to currency devaluation. Online banking lets textile companies deal without meeting. WeChat and AliPay are the leading social media tools for small business transactions in China. These apps seldom charge senders or recipients. Customers must have more advantages than lower money transfer rates to encourage local citizens and businesses to adopt online banking. In Pakistan, few people use online banking hence awareness is needed. This will minimise transaction costs and speed up the process for companies. Textile firms must invest in and create more sustainable and environmentally friendly face mask materials post-COVID-19 to attain sustainability and industrial competitiveness.

The COVID-19 outbreak has significantly impacted Pakistan's textile industry. For big industries to quickly provide garment SMEs with raw materials, there has to be government support for collaboration between small and medium-sized businesses and these industries. As the imports of this industry have increased over the last three years, the government offers protection for the local apparel market. It also puts import

substitution ideas into practice and supports Pakistani supplier networks. MSMEs must prioritise cooperation to reduce the COVID-19 pandemic's negative consequences. These companies may lend their personnel to other companies needing labour to avoid layoffs. 43% of firms lay off employees; many have already, and most will soon. Thus, employers may lease idle workers to online shops to save layoffs.

While the precise effect and countermeasures may be dynamic and evolvable as the crisis evolves, this paper examines several facets of COVID-19's consequences. The research underlines the need of 'out-of-the-box' thinking in addressing this unusual situation. COVID-19 is a critical situation that requires innovative and urgent solutions from all players in the Pakistan textile sector, including the government, industry, and people. Only then would there be possibility of adequately meeting this problem.

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References

Abba Ahmed, B. (2020). Impact of COVID-19 Pandemic on Global Economy. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3719949

Abbasi, M. N., Hassan, N. M., Abbas, J., & Liaqat, T. (2022). Should firms leverage Social Media usage to enhance Supply Chain Efficiency? A Post Covid-19 Empirical Investigation. Review of Education, Administration & Law, 5(2), 149–162. https://doi.org/10.47067/real.v5i2.226

Adawiyah, R., & Adhitya, F. (2021). Restructuring MSMEs Businesses Through the Use of Digital Marketing as a Reflection on the Economic Impact of the Covid-19 Pandemic. Journal of Digital Marketing and Halal Industry, 3(2), 133–148. https://doi.org/10.21580/jdmhi.2021.3.2.8440

Aditya, O. (2020). Marketing Strategy Analysis of Asin Asked MSMEs in The Covid-19 Pandemic Period in Kesenden, Cirebon. Devotion: Journal of Community Service, 1(2), 59–68. https://doi.org/10.36418/dev.v1i2.63

Arania, F., Putri, I. M., & Saifuddin, M. (2022). The Impact of Covid-19 on Textile and Fashion Industries: The Economic Perspective. Journal of Marketing Innovation (JMI), 2(1). https://doi.org/10.35313/jmi.v2i1.18

Arora, Dr. R., & Nangia, Dr. R. (2021). An Empirical Study of Consumer buying decision and Digital Marketing during COVID 19 Pandemic. Transnational Marketing Journal, 9(3). https://doi.org/10.33182/tmj.v9i3.1610

Barbu, A. (2020). An analysis of youth behavior on social networks during the COVID-19 pandemic. Evidence from Romania. Business Excellence and Management, S.I.(1), 177–193. https://doi.org/10.24818/beman/2020.s.i.1-15

Bureau, B., Duquerroy, A., & Vinas, F. (2021). Corporate Liquidity during the COVID-19 Crisis: The Trade Credit Channel. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3777929

Chakraborty, S., & Biswas, M. C. (2020). Impact of COVID-19 on the Textile, Apparel and Fashion Manufacturing Industry Supply Chain: Case Study on a Ready-Made Garment Manufacturing Industry. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3762220

Cho, B., & Saki, Z. (2021). Firm performance under the COVID-19 pandemic: The case of the U.S. textile and apparel industry. The Journal of The Textile Institute, 113(8), 1637–1647. https://doi.org/10.1080/00405000.2021.1943258

Dash, G., & Chakraborty, D. (2021). Digital Transformation of Marketing Strategies during a Pandemic: Evidence from an Emerging Economy during COVID-19. Sustainability, 13(12), 6735. https://doi.org/10.3390/su13126735

Debata, B., Patnaik, P., & Mishra, A. (2020). COVID -19 pandemic! It's impact on people, economy, and environment. Journal of Public Affairs. Portico. https://doi.org/10.1002/pa.2372

Espitia, A., Mattoo, A., Rocha, N., et al. (2021). Pandemic trade: COVID-19, remote work and global value chains. The World Economy, 45(2), 561–589. Portico. https://doi.org/10.1111/twec.13117

Galindo, A. J., & Tovar, J. (2022). Policy Support and Firm Performance During the COVID-19 Pandemic: Evidence from Colombia. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4179568

García-Salirrosas, E. E., Acevedo-Duque, Á., Marin Chaves, V., et al. (2022). Purchase Intention and Satisfaction of Online Shop Users in Developing Countries during the COVID-19 Pandemic. Sustainability, 14(10), 6302. https://doi.org/10.3390/su14106302

Gazolla, M., & Aquino, J. R. de. (2022). Reinvention of family farming markets in Brazil: the novelty of digital marketing sites and platforms in times of COVID-19. Agroecology and Sustainable Food Systems, 46(6), 902–927. https://doi.org/10.1080/21683565.2022.2072997

Gereffi, G. (2020). What does the COVID-19 pandemic teach us about global value chains? The case of medical supplies. Journal of International Business Policy, 3(3), 287–301. https://doi.org/10.1057/s42214-020-00062-w

Giantari, I. G. A. K., Yasa, N. N. K., Suprasto, H. B., & Rahmayanti, P. L. D. (2022). The role of digital marketing in mediating the effect of the COVID-19 pandemic and the intensity of competition on business performance. International Journal of Data and Network Science, 6(1), 217–232. https://doi.org/10.5267/j.ijdns.2021.9.006

James, L. (2021). Impact of Digital Marketing on SME Growth in South Asia: A Case Study on Faheem Haydar Dealzmag. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3758480

Jamir, I. (2020). Forecasting Potential Impact of COVID-19 Outbreak on India's GDP Using ARIMA Model. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3613724

Junzhi, D. (2021). The development of e-commerce in China during the COVID-19 pandemic on the example of the textile industry. BRICS Journal of Economics, 2(3), 54–69. https://doi.org/10.38050/2712-7508-2021-3-3

Kanupriya. (2021). COVID-19 and the Indian Textiles Sector: Issues, Challenges and Prospects. Vision: The Journal of Business Perspective, 25(1), 097226292098458. https://doi.org/10.1177/0972262920984589

Karmacharya, M., Kumar, S., Gulenko, O., & Cho, Y.-K. (2021). Advances in Facemasks during the COVID-19 Pandemic Era. ACS Applied Bio Materials. https://doi.org/10.1021/acsabm.0c01329

Kaur, K. (2021). The Early Impact of COVID-19 on Textile Industry: An Empirical Analysis. Management and Labour Studies, 46(3), 0258042X2199101. https://doi.org/10.1177/0258042x21991018

Meyer, B. H., Prescott, B., & Sheng, X. S. (2021). The impact of the COVID-19 pandemic on business expectations. International Journal of Forecasting, 38(2). https://doi.org/10.1016/j.ijforecast.2021.02.009

Missoni, E., Armocida, B., &Formenti, B. (2020). Face masks for all and all for face masks in the COVID-19 pandemic: community level production to face the global shortage and shorten the epidemic. Disaster Medicine and Public Health Preparedness, 1–13. https://doi.org/10.1017/dmp.2020.207

Modi, S., & Jindal, P. (2021). Forecasting Potential Impact of COVID-19 on India and Indonesia's GDP. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3884823

Nabil, B. (2021). Green Technology in Textile Industries. Journal of Textile Science & Fashion Technology, 8(2). https://doi.org/10.33552/jtsft.2021.08.000684

Nilufer, N. (2020). Critical assessment on business strategy from aviation to retail industry during COVID-19 Pandemic. International Journal of Business Ecosystem & Strategy (2687-2293), 2(2), 8–14. https://doi.org/10.36096/ijbes.v2i2.205

Novitasari, A. T. (2021). Digital Media Marketing Strategies for MSMEs during the Covid-19 Pandemic. FOCUS, 2(2), 72–80. https://doi.org/10.37010/fcs.v2i2.348

Nurjaman, K. (2021). MSMEs Marketing Strategy with the Use of Social-Media in the COVID-19 Pandemic Era. International Journal of Science and Society, 3(4), 203–211. https://doi.org/10.54783/ijsoc.v3i4.406

Okenna, N. P. (2020). An Overview of the Impact of the COVID-19 Pandemic on Nigerian Economy. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3654521

Purnamawati, I. G. A., &Yuniarta, G. A. (2021). Loan Restructuring, Human Capital and Digital towards MSME Performance in the COVID-19 Pandemic. Asia Pacific Management and Business Application, 010(02), 177–192. https://doi.org/10.21776/ub.apmba.2021.010.02.5

Rashata, H. (2021). Firm Characteristics and Firm Performance during the COVID-19 Pandemic: Evidence from an emerging market. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3960757

Saif, N. M. A., Ruan, J., &Obrenovic, B. (2021). Sustaining Trade during COVID-19 Pandemic: Establishing a Conceptual Model Including COVID-19 Impact. Sustainability, 13(10), 5418. https://doi.org/10.3390/su13105418

Satrio, D., &Muhardono, A. (2022). Digital Marketing as a Strategy to Defend MSMEs in the Covid-19 Pandemic. FIRM Journal of Management Studies, 7(1), 73. https://doi.org/10.33021/firm.v7i1.1545

Sehrawat, M., & Khurana, A. (2022). Unmuting the Mute: Turning Challenges into Opportunities. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4023477

Shah, F., Liu, Y., Shah, Y., & Shah, F. (2022). Trade credit promotes industrial growth during the COVID-19 pandemic: Evidence from the textile sector of Pakistan. R-Economy, 8(1), 68–76. https://doi.org/10.15826/recon.2022.8.1.006

Shahzad, A., Hassan, R., Abdullah, N. I., Hussain, A., & Fareed, M. (2020). COVID-19 Impact On E-Commerce Usage: An Empirical Evidence From Malaysian Healthcare Industry. Humanities & Social Sciences Reviews, 8(3), 599–609. https://doi.org/10.18510/hssr.2020.8364

Strange, R. (2020). The 2020 Covid-19 pandemic and global value chains. Journal of Industrial and Business Economics, 47. https://doi.org/10.1007/s40812-020-00162-x

Stukan, T. (2021). Role, Place and Significance of Digital Marketing In The System Of Production Distribution By Agricultural Producers In The Conditions Of The COVID-19 PANDEMIC. Black Sea Economic Studies, (66). https://doi.org/10.32843/bses.66-12

Suriyankietkaew, S., &Nimsai, S. (2021). COVID-19 Impacts and Sustainability Strategies for Regional Recovery in Southeast Asia: Challenges and Opportunities. Sustainability, 13(16), 8907. https://doi.org/10.3390/su13168907

Svenson, L. (2021). Voices of entrepreneurs: a review of entrepreneurs' perceptions of SME COVID-19 support measures in South Africa. Journal of Entrepreneurial Innovations, 2(SI). https://doi.org/10.14426/jei.v2isi.1070

Vadgama, A. (2021). The New Normal: Textile Crafts in Kutch Amidst the COVID-19 Pandemic. TEXTILE, 1–10. https://doi.org/10.1080/14759756.2021.1977465

Varnavskii, V. (2021). Global Value Chains (GVCS) and COVID-19 Pandemic. World Economy and International Relations, 65(1), 14–23. https://doi.org/10.20542/0131-2227-2021-65-1-14-23

Verbeke, A. (2020). Will the COVID-19 Pandemic Really Change the Governance of Global Value Chains? British Journal of Management, 31(3), 444–446. https://doi.org/10.1111/1467-8551.12422

Voss, H. (2020). Implications of the COVID-19 pandemic for human rights and modern slavery vulnerabilities in global value chains. Transnational Corporations, 27(2), 113–126. https://doi.org/10.18356/1d28cbee-en

Zaidi, Z., & Shukri, S. (2022). The effects of digital marketing implementation on online consumer in Selangor during COVID-19 pandemic. Management Science Letters, 12(1), 43–50. https://doi.org/10.5267/j.msl.2021.8.002

Zhao, L., & Kim, K. (2021). Responding to the COVID-19 pandemic: Practices and strategies of the global clothing and textile value chain. Clothing and Textiles Research Journal, 39(2), 0887302X2199420. https://doi.org/10.1177/0887302x21994207

Zhelev, P. (2021). Competitiveness of the textile and clothing industry in bulgaria after the eu accession and in times of COVID-19 pandemic. Trakia Journal of Sciences, 19(Suppl.1), 89–98. https://doi.org/10.15547/tjs.2021.s.01.013