



Impact of COVID-19 Pandemic on Consumer Behavior towards Online Shopping in Punjab, Pakistan

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ABSTRACT

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The objective of this research is to examine the influence of pandemic on the purchase behavior of customers. Based on this objective, this research aims to explore utilitarian consumption pattern, hedonic consumption pattern, food supply security, and contact limitations that influenced the consumer intention towards online shopping under the mediating role of consumer preference in Pakistan context. For collecting an authentic and reliable data, an online random survey was conducted. 225 valid responses were collected from customers in Punjab, Pakistan. Structural equation modeling technique was employed to analyze the data. According to its outcomes, a significant influence of utilitarian consumption pattern, hedonic consumption pattern, food supply chain and contact limitation in COVID-19 pandemic on the Pakistani consumers' intention towards online shopping has developed. Within these relationships, consumer preference is acting as a significant mediator that strengthened their influence, except the hedonic consumption pattern's influence on dependent variable. Overall, this research will give new direction of research to the local, national and international communities to ponder on e-commerce businesses' importance in the changing consumer environment. But its methodological and contextual gaps can be covered by future researchers in their upcoming researches.

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1. Introduction

1.1. Background

The world has suffered the blow of COVID-19 pandemic during 2019-2021. In Pakistan, there were 467,222 confirmed cases and 9,753 deaths in the mid of 2020 (Ali et al., 2020; Anser et al., 2020; Shafi et al., 2020). An in-depth evaluation of functional sacrifices and benefits is known as utilitarian value (Arranz-López et al., 2025; Audrain-Pontevia et al., 2025; Lin, Bruning, & Swarna, 2018). Hedonic value is an overall assessment of the whole experience, such as escapism and entertainment. It is not just about completing the task but it is shopping for experience and valuing it (Turkson, 2025; Clarkson et al., 2018; Mittal et al., 2020). Contact limitation gives leverage to the people to avoid physical contact with others. Food Supply Security ensured enough amount of food stored (Szymkowiak et al., 2021). This pandemic has forced people all around the globe to adapt to the new forced lifestyle. Among all the activities of life, the buying behavior of consumers has been largely affected because of the social distancing and lockdowns (Sheth, 2020).

1.2. Problem Statement

Due to continuously increase of coronavirus victims within Pakistan, life became static and day to day its activities got affected. Hence a problem arose regarding shopping for

different items related to grocery, clothes shopping or anything else in day-to-day necessities. In literature (Ahmad et al., 2025; Aruldoss et al., 2023; Boratyńska, 2025; Diaz-Gutierrez et al., 2024; Ali (2020); Ben Hassen et al., 2020; Gao et al., 2020; Kulkarni & Barge, 2020; Nguyen et al., 2020) majorly showed the shift in buying behavior of consumer's due to COVID-19, where they concluded that their consumption is directed towards digital shopping due to lockdown. Likewise, a number of previous literature comprised of the aspects regarding the economy, industrial factors, medical-related issues; but no majorly studied on considering the influence of COVID-19 pandemic on Pakistan's consumer purchases and their preferences. Therefore, this study aims to see how consumers use the technological advancements to their benefit and shift towards online shopping to ensure their safety; and what are their preferences during these whole lockdowns and smart lockdowns whilst online shopping. To fulfill such aims, this study discussed the utilitarian consumption, hedonic consumption, food supply security and contact limitation, and their consequence on the intent of buyers towards online shopping during coronavirus and how they impact the consumers' preferences in Pakistan context.

1.3. Research Objectives

The prime research objectives of this study are majorly based on;

- Critically evaluate the influence of utilitarian consumption pattern, hedonic consumption pattern, food supply security, and content limitation on the consumption intention towards online shopping in Pakistan state's perspective
- Strategically analyze the mediating role of consumer preference in strengthening the impact of utilitarian consumption pattern, hedonic consumption pattern, food supply security, content limitation and consumption intention towards online shopping in Pakistan state's perspective

1.4. Research Questions

The related research questions of this research article are mentioned below;

- What is the influence of utilitarian consumption pattern, hedonic consumption pattern, food supply security, and content limitation on the consumption intention towards online shopping in Pakistan state's perspective?
- What is the mediating role of consumer preference in strengthening its influence of utilitarian consumption pattern, hedonic consumption pattern, food supply security, content limitation and consumption intention towards online shopping in Pakistan state's perspective?

2. Literature Review and Hypothesis

2.1. Cognitive Behavioral Theory

The basic "theory of cognitive-behavioral therapy" (CBT) is that a person's perception plays a major and prime role in the production and preservation of behavioral and emotional responses to life events (Dutta et al. 2025; Boateng et al., 2016; Käll et al., 2020). Cognitive processes associated with specific life events, such as meanings, decisions, appraisals, and assumptions, are the major determinants of one's feelings and behavior in response to life events in CBT models, and thus either promote or impede the adaptation process. In order to improve their study, many scientists utilized this theoretical understanding. A cognitive science, which attempts to understand the brain and mind of humans, which receives, retains, and processes knowledge, is a key approach that attracts much interest. Cognitive science concentrates on reasons, perception, retention, cognition, emotions, awareness, creativity, and links used to understand human brain capacity (Mohammadzadeh & Beheshti, 2017).

2.2. Utilitarian Consumption Pattern and Consumption Intention

Utilitarian consumption ranges from basic living needs, such as food, clothing or medical treatment, that cannot be prevented or refused. It was proposed that the attitude was based on two distinct but corresponding components: utilitarian and hedonic (Fuadah et al., 2025; Deb & Lomo-David, 2020). This variation is somehow based on the fact that the purchasing of goods & services and consumption behaviors of consumers are based on two basic reasons: "(1) consummators affective (hedonic) gratification (from sensory attributes), and (2)

instrumental, utilitarian reasons". Ladhari, Souiden and Dufour (2017) also reported that the influence of a functional element of an experience is greater than the emotional factor in a utilitarian service setting. However, in a hedonic service sense, the emotional component's experience majorly play a significant role; while in a utilitarian service context, it played a minor role. Indeed, when compared to hedonic/recreational intent shopping environments, task-oriented shopping environments can struggle to produce positive feelings from customers (Ragmoun, 2024; Wided, 2024). When people communicate socially, they first engaged in an identity negotiation, after which they focus on the task that brought them around (Cho, Park, & Kim, 2019). This identity negotiation mechanism acts as a "thread" that keeps social interaction together in this situation. The following hypothesis has been proposed after considering these studies:

H1: There is a significant relationship between Utilitarian Consumption Pattern in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.3. Hedonic Consumption Pattern and Consumption Intention

Emotions are among the utmost important interpreters of consumer behavior, and when it comes to consumption, it applies to the wide range of emotional responses stimulate throughout consumption. Service encounter, connections with service workers, salespeople, and in-store structures can all evoke consumption emotions (Febrilia et al., 2024). Emotional reactions are an important part of the service experience, and appreciated in a variety of environments, both hedonistic and utilitarian (Hepola, Leppäniemi, & Karjaluoto, 2020). Majority of businessmen and marketers utilized the meaningful video in order to increase the consumer intention towards shopping. Such a hedonic video directly enhanced the motivation level of consumers (Jang et al., 2019). Consumers mostly shop for the liking of the experience instead of for the drive of completing a mission (Dedeoglu et al., 2018; Wasaya et al., 2016). Hence following hypothesis has been suggested, after considering previous scholars' point of view;

H2: There is a significant relationship between Hedonic Consumption Pattern in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.4. Food Supply Security and Consumption Intention

Inadequate food supply, hunger, food adulteration, and other issues have remained a major concern in developing economies to this day. After evaluating the food security issue, customers now consider having awareness of the product's quality and other aspects to be important. As a result, consumers' gained awareness and perceived value are used to evaluate the aspects that drive their purchasing intent. Furthermore, it is clear that consumers' perceptions of risk are linked to their degree of confidence, and belief is a crucial perception in food security and safety (Hoyos & Chinelato, 2025; Song et al., 2021; Vartiainen et al., 2020). When there is widespread food insecurity, the population is more likely to fall victim to health threat, and the danger multiplies rapidly, known as social enhancement of risk. Moreover, research by Nasir and Karakaya (2014) When adjusting for demographical variables, it was discovered that socially responsible eating, health orientation, hedonic & utilitarian consumption habits and intentions are important predictors of healthy food buying intention and consumption. All these authentic studies proposed the following hypothesis;

H3: There is a significant relationship between Food Supply Security in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.5. Contact Limitation and Consumption Intention

In the pandemic period where whole stuck and everyone limited in their houses, a tendency has seen that strives the use of mobile apps as support in contact tracing to manage the virus. While many mobile applications purposed to safe the independent isolation, the essence of contract tracing must disclose some independent isolation information. Person risks inherent in contact tracing cannot be eliminated by technical means, and can require an official and profitable outcome (Bengio et al., 2020). In their paper, they studied how COVID-19 attacks people's consumption intentions. The structural equation model (SEM) was used to evaluate the research theories whose outcomes depicted that more the pandemic period lasts, the more people's consumption intentions increased (Li et al., 2020). The variable of contract

limitation and consumption intention is correlated to each other to justify a significant relationship. Thus, the following hypothesis has been proposed;

H4: There is a significant relationship between Contact Limitation in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.6. Mediating Role of Consumer Preference

Consumer preference was found to be a significant mediator between utilitarian consumption, hedonic consumption, food supply, and contact limitation and consumption intention. The pandemic of COVID-19 built economic devastation all over the world and also changed the consumer way of life. This paper examined the utilitarian consumption pattern of Turkish consumers in which the convenience sampling method was used (Yerden, 2020). Due to COVID-19, public places have been shut down. Using the reliable information from the huge sample of smartphones and typical buyer preference surveys, the relative swing declining interest and social rate of US places are measured (Zielke & Komor, 2025; Mohammad, 2015; Mohammad & Ahmed, 2017). The outcomes show that there is an effective impact of consumer preference in COVID-19 as well as the utilitarian consumption pattern. As per the papers, the utilitarian consumption pattern and consumer preference are correlated to each other (Benzell et al., 2020). Consumption of sports affairs has lifted the experts' concern since it has developed a universal context and reachable to the huge frame of consumers. Sports affairs consumption belonged to the class of consumption reactions that assume the entire suggestion apart from the personals and accordingly, their emotional association. This involvement has corresponded on two sides. Their consumer involvement shows that consumer preference has an effective impact on the hedonic consumption pattern (Gârdan et al., 2020). The COVID-19 has built the antagonistic working system. Companies trying to clarify the ways for increasing the food supply chain to survive in and post-pandemic.

In 2020, Sharma and others discussed the food supply security in the COVID-19 pandemic and the mediating impact of consumer preference, and stated that the Supply Chain Network Viability (SCV) is the important basis of managing the relationship of consumer-supplier and increasing the survivability of food supply security during the pandemic period. They determined the significant mediating impact of consumer preference on food supply security (Sharma et al., 2020). To examine the mediating impact of consumer preference on the contact limitations, the outcomes of observed examinations of batches, individual attitude in the digital economy, and suspensions to these crucial problems were studied. In this pandemic period, the contact limitation also increased the digital economy and market with consumer preferences. That result shows that consumer preference has a mediating impact on contact limitations (Watanabe, Tou, & Neittaanmäki, 2018). Nowadays, the preference of online and digital marketing goes high like during the COVID-19 pandemic, the whole society used virtual and online marketing for shopping. In 2019, scholars discussed the consumer consumption intention towards online and digital marketing with the mediating impact of consumer preferences that result in upgrading the purchasing of halal food with consumer preferences. In the end, they concluded that there is an effective relationship between consumer preference and consumer consumption intention (Bashir et al., 2019). After critically consider the previous scholars' outcome, the given hypotheses have been proposed;

H5: There is a significant relationship between Utilitarian Consumption Pattern in COVID-19 Pandemic and Consumer Preference

H6: There is a significant relationship between Hedonic Consumption Pattern in COVID-19 Pandemic and Consumer Preference

H7: There is a significant relationship between Food Supply Security in COVID-19 Pandemic and Consumer Preference

H8: There is a significant relationship between Contact Limitation in COVID-19 Pandemic and Consumer Preference

H9: There is a significant relationship between and Consumer Preference and Consumption Intention towards Online Shopping

2.7. Mediating Role of Consumer Preference between Utilitarian Consumption Pattern and Consumption Intention

In 2018, Wang and others examine the impact of consumer preference between the utilitarian consumption pattern and consumption intention to visit the hotels through the consumption values along with the environmental knowledge on consumer' intentions. Their outcome depicted that the utilitarian consumption pattern and also environmental knowledge are correlated with the consumption intention under the mediating impact of consumer preference (Wang et al., 2018). TBP significantly used to examine the relationship between utilitarian consumption pattern and consumption intention on consuming functional food in Norway, where scholars concluded that utilitarian consumption pattern is strongly associated with the consumption intention in food with the mediating role of consumer preferences (Nystrand & Olsen, 2020). Hence, the following hypothesis has been suggested;

H10: There is a significant mediating role of Consumer Preference between Utilitarian Consumption Pattern in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.8. Mediating Role of Consumer Preference between Hedonic Consumption Pattern and Consumption Intention

The relationship between the hedonic consumption pattern and consumption intention along with the mediating role of consumer preferences of men and women discussed by (Govind et al., 2020). They hypothesized that the females have a strong impulsive action to the situations of weather persuades the large enhancement in their hedonic consumption as compared to men, and also the relationship between the weather condition and hedonic application in both food and other products is differentially mediated by the effect for women and men. For that aim, the diverse methodologies were used, and the result justified that there is a significant linkage between the hedonic consumption pattern and consumption intention with the mediating impact of consumer preference (Afaq et al., 2020; Alam et al., 2020). Hence, the following hypothesis has been proposed;

H11: There is a significant mediating role of Consumer Preference between Hedonic Consumption Pattern in COVID-19 Pandemic and Consumption Intention towards Online Shopping

2.9. Mediating Role of Consumer Preference between Food Supply Security and Consumption Intention

There is a major role of organic food corporate image with the consumer preference on the consumption intention and food supply security (Hoyos & Chinelato, 2025; Hoque & Alam, 2018; Stubbs, Scott, & Duarte, 2018; Zheng, Wang, & Lu, 2018). The scholars conducted a study on organic food consumers to examine the impact of corporate responsibility (CR) image and corporate ability (CA) image on the consumption intention and food supply security. Their outcomes have shown that the corporate responsibility (CR) image and corporate ability (CA) image significantly impact on the association between food supply security and consumption intent. Additionally, consumer preference, trust, and intension to buy played a mediating impact on the relationship between food supply security and consumption intention (Yu et al., 2020). Therefore, the following hypothesis has been proposed;

H12: There is a significant mediating role of Consumer Preference between Food Supply Security in COVID-19 Pandemic and Consumption Intention towards Online Shopping

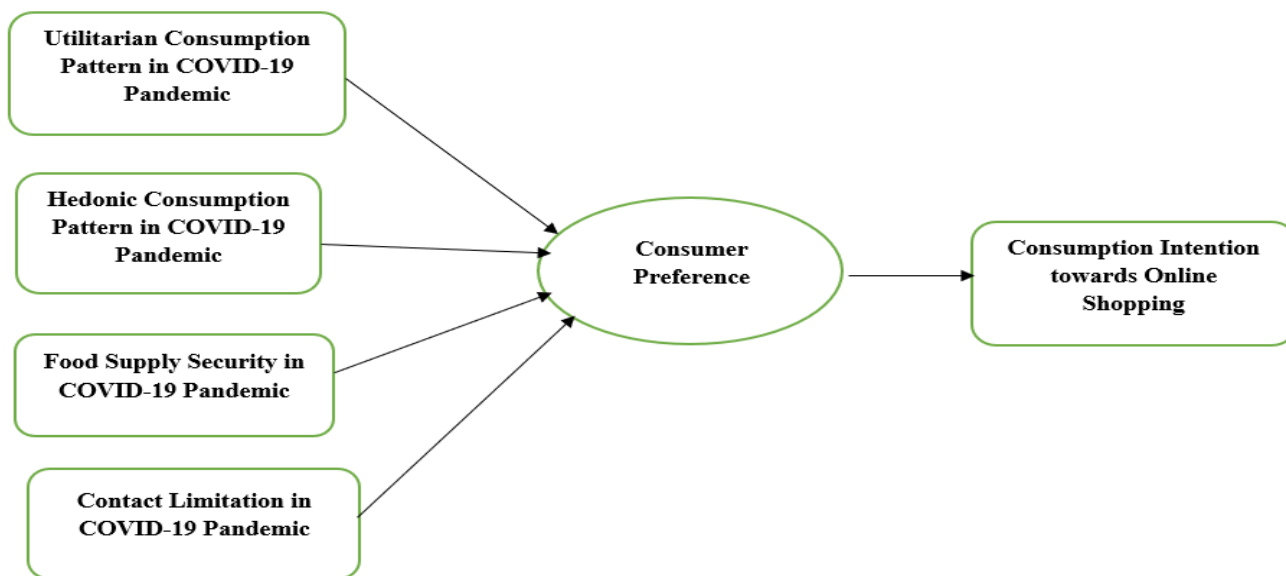
2.10. Mediating Role of Consumer Preference between Contact Limitation and Consumption Intention

Brand fertile has been proposed as the same source of consumer-based brand equity (CBBE) (Roy, Mukherjee, & Bhattacharya, 2018; Steenkamp, 2016). Machado with others correlated the relationship of consumer brand equity & limitation and consumer consumption intentions with the mediating role of consumer preferences in their study. They utilized the structural equation modeling (SEM) to test the theories and in results, half of the theories show that there is a significant relationship of consumer brand equity & limitation and consumer consumption intentions with the mediating role of consumer preferences (Machado et al., 2019). So, the following hypothesis has been suggested;

H13: There is a significant mediating role of Consumer Preference between Contact Limitation in COVID-19 Pandemic and Consumption Intention towards Online Shopping

3. Theoretical Framework

Figure 1: Research Framework



4. Methodology

4.1. Data collection

This research was conducted through a quantitative design study. In its accurate data collection, the value scales was established from preceding research of J. W. Overby and E. J. Lee (2006) and Szymkowiak et al (2021) and optimized by expert analysis. The final instrument was gathered by using an online survey through various Internet-related websites and apps i.e. Gmail and WhatsApp. The study was organized by using a self-administered questionnaire. It included statements related to utilitarian consumption (UC), hedonic consumption (HC), food supply security (FSC), consumer preferences (CP), and consumption intention (CI). Its survey website’s visitors were informed to complete the survey in terms of their experience regarding shifting towards online shopping during COVID-19.

4.2. Measures

Measurement scales were adopted from the previous studies as follows: Food supply security (Szymkowiak et al., 2021) , Contact limitation (Szymkowiak et al., 2021), Utilitarian Consumption Pattern (Overby & Lee, 2006) , Hedonic Consumption Pattern (Overby & Lee, 2006), Consumption Intentions (Overby & Lee, 2006), Consumer preferences (Overby & Lee, 2006).

4.3. Sampling technique

Simple random sampling technique were majorly utilized in data collection process in order to gain the Pakistani consumers’ intention towards online shopping. In closed-ended questionnaires, all items were considered based on the 5-point Likert scale (1= strongly disagree to 5= strongly agree).

5. Results and Analysis

Table 1: Sample Characteristics

	Frequency	Percent	Cumulative Percentage
1.Gender			
Male	81	36.0	36.0
Female	144	64.0	100.0
2.Age			
18-25	149	66.2	66.2
26-35	65	28.9	95.1
36-45	6	2.7	97.8
46-55	4	1.8	99.6

Above 55	1	0.4	100.0
3.Family Income			
200,001 and above	225	100.0	100.0
4.Marital Status			
Single	165	73.3	73.3
Married	55	24.4	97.8
Separated	2	.9	98.7
Divorced	3	1.3	100.0
5. Education			
Primary Education	1	.4	.4
Matriculation	6	2.7	3.1
Undergraduate	115	51.1	54.2
Postgraduate	98	43.6	97.8
PhD	5	2.2	100.0

As we discussed above, total 300 questionnaires were randomly distributed to the general consumer market in Punjab province, Pakistan, from which 225 of them gave a valid outcome. Data was collected from the general public following their gender, age, marital status and education. Around 36% of the sample data carried males and 64% carried females as active respondents. In addition to this, 66.2% of them belonged to 18-25 age group, while 29% respondents were 26-35 years old. All of them had more than 20,000 monthly family income. Moreover, most of them were single having no spouse/family and were undergraduate students as we can see around 51 percent.

Table 1: Convergent Validity

No. of Items	Loadings	α	Composite Reliability	AVE
(CP1)	0.76	.552	0.813	0.686
(CP2)	0.89			
(CI1)	0.707	.843	0.889	.616
(CI2)	0.828			
(CI3)	0.807			
(CI4)	0.784			
(CI5)	0.792			
(CL1)	0.515	.365	0.721	.584
(CL3)	0.951			
(FC1)	0.682	.745	0.849	.568
(FC3)	0.713			
(FC4)	0.809			
(FC5)	0.801			
(HC1)	0.878	.615	0.78	.551
(HC2)	0.536			
(HC4)	0.771			
(UC2)	0.582	.552	0.764	.523
(UC3)	0.816			
(UC4)	0.752			

The above table demonstrated that all the factors are effectively uploaded. Not only this, but the average variance extracted (AVE) and composite reliability (CF) values are also within their threshold range which depicted that there is no convergent validity issue has been raised within this testing model.

Table 2: Discriminant Validity

	CP	CI	CL	FC	HC	UC
CP	0.828	-	-	-	-	-
CI	0.543	0.785	-	-	-	-
CL	0.528	0.621	0.764	-	-	-
FC	0.405	0.491	0.413	0.753	-	-
HC	0.315	0.609	0.533	0.404	0.742	-
UC	0.377	0.582	0.421	0.305	0.595	0.723

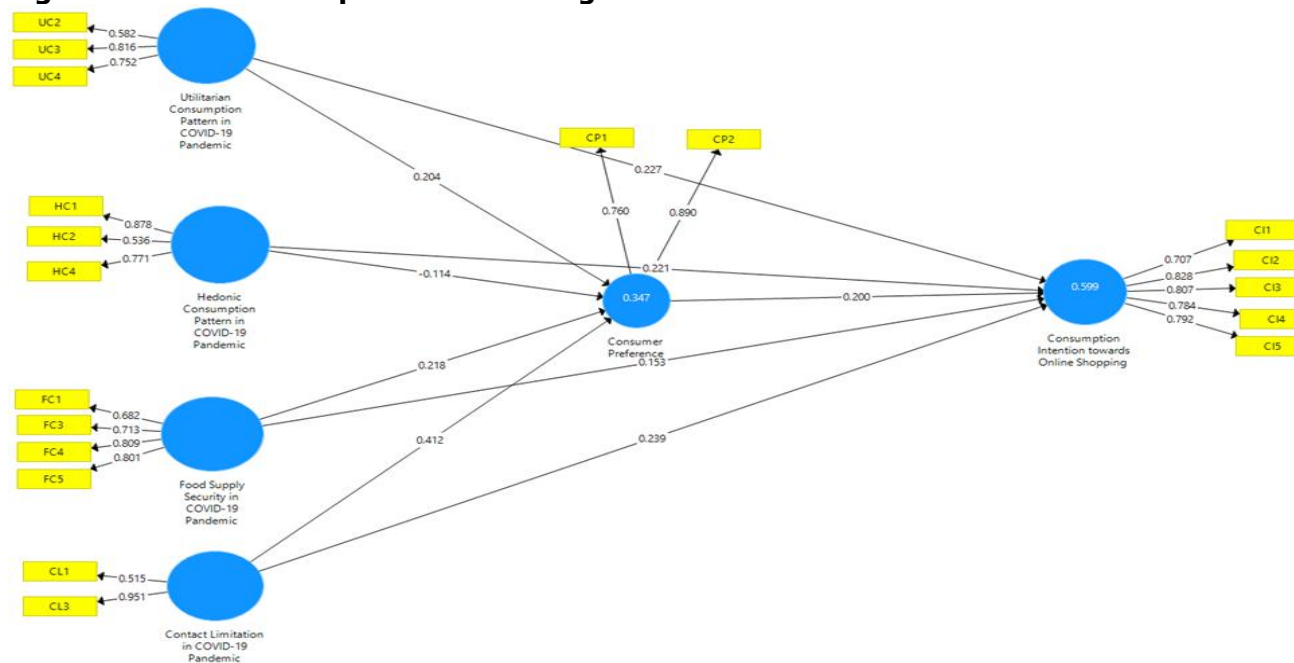
The above-mentioned discriminant validity table depicted that all the values of diagonal are greater than the values below them, which means that there is no discriminant validity issue existed in this testing model. Now, this model is ready to implement the hypothesis testing mechanism in order to justify or nullify the proposed hypothesis of this study.

Table 3: Structural Equation Modeling based Hypothesis Testing

		Standard Beta	Standard Error	t-value	p-value	Result
H1	CP->CI	0.2	0.056	3.569	0	Supported
H2	CL->CP	0.412	0.07	5.892	0	Supported
H3	CL->CI	0.239	0.062	3.844	0	Supported
H4	FC->CP	0.218	0.064	3.418	0	Supported
H5	FC->CI	0.153	0.055	2.798	0.003	Supported
H6	HC->CP	-0.114	0.08	1.417	0.078	Supported
H7	HC->CI	0.221	0.068	3.238	0.001	Supported
H8	UC->CP	0.204	0.074	2.799	0.003	Supported
H9	UC->CI	0.227	0.064	3.549	0	Supported
H10	CL->CP->CI	0.082	0.027	3.007	0.001	Supported
H11	FC->Cp->CI	0.044	0.017	2.498	0.006	Supported
H12	HC->CP->CI	-0.023	0.018	1.261	0.104	Not Supported
H13	UC->CP->CI	0.041	0.02	2.054	0.02	Supported

In the above table, the majority of outcomes justified the hypothesis of this study. Results show that H1 becomes justified and a positive relationship existed between CP and CI (β . 0.2; $t=3.569$; $p=0$). Likewise, there exists a significant and positive relationship between hedonic consumption pattern and consumption intention, H2 is supported by the results (β . 0.239; $t=5.892$; $p=0$). H3 is supported as it demonstrates a significant relationship between food supply security and consumption intention (β . 0.239; $t=3.844$; $p=0$). H4 also showed a positive relationship between contact limitation and consumption intention (β . 0.218; $t=3.418$; $p=0$). H5 that is considered for the positive relationship between utilitarian consumption and consumer preferences is also supported with values (β . 0.153; $t=3.798$; $p=0.003$). H6 is also supported in showing the significant relationship between hedonic consumption and consumer preferences (β . -0.114; $t=1.417$; $p=0.078$). H7 reflected a positive relationship between food supply and consumer preferences (β . 0.211; $t=3.238$; $p=0.001$).

Figure 1: Structural Equation Modelling



H8 indicated that the relationship between contact limitation and consumer preferences is positive (β . 0.204; $t=2.799$; $p=0.003$). H9 is supported by showing a significant relationship between consumer preferences and consumer intention with values (β . 0.227; $t=3.549$; $p=0.000$). H10 also supported in showing a significant mediating role of consumer preference

between utilitarian consumption pattern and consumption intention with values (β . 0.082; $t=3.007$; $p=0.001$). H11 showed a significant mediating role of consumer preference between hedonic consumption pattern and consumption intention (β . 0.044; $t=2.498$; $p=0.006$). Also, H13 was supported indicating that there is a significant mediating role of consumer preference between contact limitation and consumption intention (β . 0.041; $t=2.054$; $p=0.02$) It shows that all the hypotheses of this study are supported with efficient values except for H12 which is not supported as values of its t-value is less than 1.5 and p-value is greater than 0.05. It means H12 become nullify that consumer preferences mediate the relationship between hedonic consumption and consumer intention. Well, the graphical representation of this structural equation modeling-based hypothesis testing model is mentioned above.

6. Discussion and Conclusion

6.1. Discussion

The theoretical evidence mentioned in these results statistically explored the relationship between utilitarian and hedonic consumption, food supply security and contact limitation towards consumption intention for online shopping and what role consumers' behavior played in it. The results of our study are also in synchronization with a lot of other authors. Specially those who have been trying to see the effects of pandemics like how the pandemic has been changing decisions, and behaviors of people towards online shopping. The results showed that hedonic and utilitarian consumption, food supply security and contact limitation are the aspects that effect consumers' behavior to shift towards digital shopping. Hedonic and utilitarian consumption were important too in essence of shopping value. It was seen that hedonic consumption was not taken as a preference factor for online shopping, but it was a necessary need that existed due to the social distancing and staying safe factor. Elena Anastasiadou and others (2020) also worked on a similar topic, and concluded that differences in supermarket activities and consumer behavior in both states are majorly influenced by different mentalities and diverse experiences (Anastasiadou et al., 2020). While Hoang Viet Nguyen with others stated that during the COVID-19 pandemic, the utilitarian and hedonic consumptions of people towards online book buying was massively increased.

Their multivariate data analysis depicted that the COVID-19 pandemic situation caused a positive and significant impact on the customer intent towards online book shopping, and also the utilitarian motivation wields a robust influence on the consumer intention to purchase the book through digital sources (Nguyen et al., 2020). Food supply security has been discussed in various researches before and it always influences the shopping of food in crisis situations. In that research, it has also been proved empirically that food supply security, seen in the sense of bulk shopping and food, increased due to the threat of the natural disaster posed by the COVID-19 pandemic. In Taiwan, sales were increased by 5.7% and customers increased by 4.9% (Zaidan et al., 2025; Chang, 2020). Demand for fresh fruits, grains and frozen food increased during the pandemic. Similarly contact limitation showed major significance as it was derived on the back by major health standards. Contact limitation plays a huge role when it comes to any kind of pandemics and forced or self-isolation seems like the only solution, hence paving path for online shopping for basic to luxury products. Correspondingly, all the above aspects influenced the shift towards online shopping where consumers started going for online purchases. According to Lee and Wu, COVID-19 pandemic generated fear amongst consumers, fear for survival, fear for life and shortage of daily use products. Such behavioral change caused the consumers to shift towards online buying and moreover panic buying as well (Lee & Wu, 2021). Different studies in present literature regarding technology, commonality of mobile phones, stress triggered by the lockdown situation support the plaintiff towards online shopping during COVID-19 pandemic. Its outbreak caused closure of physical stores owing to the health hazards accompanying physical visits of stores. Hence the rise in online shopping trends was seen and extensive marketing efforts were seen during the pandemic. These factors caused consumers to shift the buying of their necessities and luxury items towards online channels. After excessive testing, it can be said that COVID-19 indeed has had its effects on consumer's behavior. It caused limited physical visits to stores and more usage of websites, applications, and social networking sites for shopping.

6.2. Conclusion

This empirical study about the relationship between hedonic & utilitarian consumption, food supply security and contact limitation and the shift in consumer behavior towards online shopping, was conducted to monitor and analyze the trends regarding the transformation of

consumer actions due to COVID-19 pandemic. To fulfill that goal, a quantitative research design approach was specifically considered where different online surveys were conducted with Punjab's consumers market, Pakistan, on randomly basis. After this, we ran the Convergent Validity, Discriminant Validity, KMO and Bartlett's Testing, Confirmatory Factor Analysis and Structural Equation Modeling based authentic statistical tests of Smart PLS to justify/ nullify the expected hypothesis of this study. Based on the outcomes, it becomes evident that there is a significant influence of utilitarian consumption pattern, hedonic consumption pattern, food supply security and contact limitation in the COVID-19 pandemic on the consumption intention towards digital shopping in Punjab, Pakistan. As far as the mediating role of consumer preferences is concerned, it becomes clear that this factor acted as a significant mediator within the connection of utilitarian consumption pattern and consumption intent towards online shopping; hedonic consumption pattern and consumption intention towards online shopping; and contact limitation and consumption intention towards online shopping. Hence the study has tried to express and target the change in consumer behaviors in perspective to the mindsets of Pakistani consumers by significantly covered the previous research gaps

6.3. Research Implications

In light of all the findings in this research, it carried practical, theoretical and policymaking-based implications. From a business perspective, they can consider a way Pakistani consumers are shifting towards online purchasing. They can adapt and change their new strategic approach according to the new life style of Pakistani customers after considering this study. This shows that its authentic data can be considered by Pakistani business community, management, marketing strategies developers, decision makers and related bodies to critically understand the current consumer market preferences towards digital shopping in the aftermaths of COVID-19 pandemic. In addition to this, its related-field policymakers can also get benefit from this research, since this research has highlighted the shift of trends in consumer behavior. They need to ensure food supply throughout the country. Moreover, create efficient business policies ensuring an effective economy for the benefit of all the small to large industries operating within this country. Also, Citizens of our country can utilize this research to gain knowledge about effective and smart shopping, training their elders at home how to use advanced technology and shop; while staying at home and being safe for themselves and the community. Moreover, theoretical implications conclude that this research study is providing a new direction to research by specifically focusing on the aftermaths of COVID-19 pandemic in Pakistan context. The future researchers can apply this reliable data in their literature review, discussion and analysis portion. Not only this, they can also utilized its authentic and verified variables for their framework-based hypotheses development. Overall, this research is innovative and a challenging approach to significantly contribute in the business field of academics.

6.4. Limitations and Future Directions

Despite that this study is very helpful with versatile features; but still, it carries some major limitations. Like, this study is only restricted to Punjab, Pakistan. In addition to its contextual gap, there are also some major methodological gaps like only quantitative research design approach is considered. Also, most of responses were collected online and hence it was focused on those people who use internet, laptops, computer, and mobile phones. This study is a cross-sectional design study rather than a longitudinal study due to the time restrain. Other limitation is related to its small sample size of 300 from the target population which was reduced to 225 because of lockdown situation in Pakistan. After considering these limitations, it becomes clear that there is an ample opportunity in front of future scholars to cover its contextual gap by focusing on other states' consumers and their buying preferences change because of COVID-19. They can considered a comparative study. In future, researchers can increase the sample size to get true and more authentic data by representing the population more broadly. In future, more physical responses can be collected to increase diversity in the data collected. Also, they can adopt a mixed method of research to derive a constructive and versatile outcome. Future researches can also focus over, that does the shift towards online shopping by consumers prevents the spread of the pandemic. Future researchers can look up the government policies over how the government is facilitating small and large business units, what are the laws regarding monitoring policies and coordination of government sectors to facilitate the community and citizens of the country towards easy online shopping with the

availability of products, services, and food supply all over the country. Future research can be done on in how businesses are operating and managing the online forums i.e websites, representation on social networking sites; their coordination, ability to track down their activities, level of rules and regulation abidance, and how do they support and promote their products and services online. This research also provides useful insights for future researchers to identify the target markets for online shopping usage all over the country.

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