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Unravelling the Effect of Pandemic on Online Shopping Attitude: Testing Protection Motivation Theory, TAM, Online Trust and Perceived Ease of Use

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By drawing on protection motivation, the study explored consumers' motivations to engage in adaptive behaviour from offline to online shopping during the pandemic. This study aims to find the impact of protection motivation, online trust, and perceived ease of use on online shopping attitudes in the post-pandemic period. A quantitative research design was employed, and data were collected from online shoppers using an online survey. The total number of respondents was 373, including both males and females. Additionally, the study used a convenience sampling method. Data were analysed through confirmatory factor analysis and PLS SEM. The findings of the study state that threat appraisal, online trust, and perceived ease-of-use positively impact adaptive behaviour by increasing online shopping attitudes. In contrast, Coping Appraisal has no direct effect on adaptive behaviour. This study provides a blueprint for designing marketing activities and strategies and assists managers in making decisions effectively during health crises and challenging events. The managers can formulate contingency strategies and plan to overcome the situation. The pandemic has been examined as an accelerator to adopting online shopping. Managers might adapt to the digital transformation in the market to recover or even grow sales further after the pandemic.

1. Introduction

The pandemic ecommerce trends indicate that the digital economy has significantly boomed during the crisis. Social distancing has been embraced, and people have turned to online shopping more than ever. Due to the pandemic, 67% of consumers report that they shop differently now.(Mat Dawi et al., 2024). The nature of spending is changing due to online shopping on high streets. For instance, fashion before the pandemic accounted for about a fifth of all offline sales in city shopping centres. According to the survey report, an online pre-pandemic figure of about 38% of urban spending was made in this sector. Although the share has increased significantly, it remains substantial.(Orszaghova & Blank, 2024).In many cities where the proportion of fashion spending is higher, brick-and-mortar fashion is vulnerable to increased online shopping. (Di Crosta et al., 2021)

There has been a drastic change in the global trends, and every business has encountered a rapid change. The United Nations Conference on Trade and Development (UNCTAD) states that global e-commerce saw a dramatic increase in sales, and many businesses reported a significant growth in online revenues during the pandemic. Moreover, the conduct of human beings, how trade is conducted, companies' operations, and how people live their lives have undergone significant alterations. People became scared and hesitated to interact with others. (Bhatti et al., 2020). Different products influence pandemics like the coronavirus differently based on their characteristics. Bhatti et al. (2018) Some products see a substantial impact while others are affected to a lesser degree. Amid social distancing and people's hesitance to venture outside, overall e-commerce sales have surged. Items like toilet paper, gloves, sanitizers, yoga mats, and exercise equipment have emerged as the top purchases during the pandemic. Although e-commerce has boosted the number of buyers in developing nations such as Malaysia and Thailand, Pakistan has also kept pace.

According to Bhatti et al. (2018), although e-commerce in Pakistan began in 2000, the proportion of people buying online was only 3%. However, Niazi et al. (2020) report a rise in e-commerce activity in Pakistan, with daily records indicating a 10% increase, while internet users have grown by 15%. Pakistan’s e-commerce is rising, and Food Panda has been launched for people's convenience. Alhaimer (2022) study in Kuwait revealed that females had a higher rate than Males, as suggested by the demographic characteristics results for online shopping. The reason was the use of pattern preferences and internet disparity. He also found that online tools require knowledge to browse the internet and purchase online products, as youngsters participated in the study and indicated that the Millennial generation is more familiar with internet usage and online activities than older generations.

Studies by Agag and El-Masry (2016) and Liang and Xue (2010) have focused on cyber threats and privacy concerns. These studies have highlighted how perceived threats and self-efficacy influence protective behaviour. At the same time, there is a lack of understanding regarding how pandemic health threats affect consumers' motivation to protect themselves when shopping online. Other similar studies by Kim et al. (2008) and McKnight et al. (2002) emphasize the importance of trust in facilitating online transactions. However, the pandemic has introduced new dimensions of trust concerning product reliability, product availability, and

post-purchase support. These aspects, which are crucial in times of crisis, have not been sufficiently explored in the context of a pandemic. (Sheth, 2020)

Regarding technology adoption during the pandemic, consumer expectations and experiences with online shopping platforms have rapidly changed. There is a need to investigate how consumers' continuous technological adaptations and evolving digital literacy affect perceived ease of use (PEOU) during a pandemic. (Donthu & Gustafsson, 2020). In addition, individual factors such as conservation motivation, trust, and ease of use have been studied separately. (Gefen et al., 2003; Zhao & Kim, 2021). Previous studies have examined these factors in isolation rather than in combination. Thus, this study would be the first to examine the combined effect of these factors. Understanding how these factors influence online shopping attitudes is essential for developing holistic strategies to improve consumer experiences. (Kim et al., 2008; Rogers, 1975). There is a lack of research that has investigated how government-mandated lockdowns have shaped consumer perceptions of online shopping in Balochistan. This study is innovative in analysing the pandemic's effects on these perceptions, considering various influencing factors. Consequently, it fills a gap in current literature by highlighting the importance of risk. Factors in shaping the online shopping habits of Balochistan's residents in Pakistan.

A study by Alhaimer (2022) indicates that digitization and globalization have made people, places, and products more accessible. However, the pandemic halted all aspects of life. Essentials like toilet paper and flight tickets became less accessible. Business plans, meetings, and travel faced global disruptions, affecting every sector and individual. Thus, staying home and limiting contact became key since viruses like coronavirus spread mainly through contact with infected individuals and surfaces(Jogezai & Baloch, 2024). In India, the initial surge in online users declined after a week due to order and delivery delays. Research shows many who are reluctant to shop online became first-time users (FTUs) while at home. The pandemic's impact forced the clothing and textile (C&T) industries to reassess their positions and adjust for the future, as noted by another study.(Johnston & Warkentin, 2010). Pandemics pose a significant threat to society. Visiting physical stores is challenging for consumers. Xie et al. (2020) noted that, to ensure safety, consumers must use online shopping platforms, also warned that physical contact and gatherings significantly threaten the community.

The pandemic has greatly affected many industries, especially retail. Consequently, many consumers have shifted to online shopping, increasing demand for e-commerce platforms.(Mason et al., 2020). However, obstacles prevent full engagement in online transactions, such as concerns over personal information security, distrust in online retailers, and challenges in navigating e-commerce sites.(Zhao & Kim, 2021). This study explores how protection motivation, online trust, and ease of use affect online shopping attitudes during the pandemic. It aims to provide insights for retailers to enhance their online services and strategies.

2. Literature Review and Hypothesis Development

2.1 Online Shopping Attitude

Consumer attitude towards online shopping reflects their set of beliefs in terms of making purchases over the internet. Attitudes and behaviors had crucial impacts on propelling the phenomenon of online shopping in society. According to Ibrahim et al. (2017) People will not adopt the process unless they find it likable. They also emphasized the importance of social perceptions, stating that the development of online shopping would have no value unless it was recognized by the public. The term "online shopping attitude" encompasses an individual's overall assessment, viewpoint, and inclination when it comes to participating in online shopping. It represents a person's overall feelings, opinions, preferences, and intentions regarding the act of making purchases through online platforms or websites.(Chetioui et al., 2021)

Currently, few researchers Aryani et al. (2021), found that more than half of the people preferred to use both modes of shopping (traditional and online) during the pandemic and concluded that both modes of shopping aided them in collecting information online about the product as well as comparing its price at the physical store. Oghazi et al. (2021) elaborated on gender differences and found that females have a higher purchase intention due to the high reputation of online stores. Meanwhile, males are numerous purchasers due to increasing trust in online retailers. Previous studies by Dennis et al. (2010) stated that most young females are not using e-shopping currently. Instead, young male adults are found to be its users. Watanabe and Omori (2020) have also found that Malaysian and Indian citizens have started online shopping while maintaining traditional shopping.

While online shopping represents a significant advancement in today's world, many elderly individuals are not familiar with its complex features. Nevertheless, a considerable number of people turned to online shopping during the pandemic. Essentially, the pandemic has prompted numerous consumers who had not previously participated in online shopping to embrace this method. Furthermore, research examining online shopping behaviors in the context of the pandemic is limited. Drawing from existing literature, this study will focus on women who adopted online shopping in response to the pandemic's risks.(Chetioui et al., 2021)

2.2 Effect of Threat Appraisal on Online Shopping Attitude

In simple terms, Threat appraisal involves cognitive and emotional processes determining the potential and level of threat in a given situation. It is composed of two factors: perceived severity, which pertains to the degree of harm expected, and perceived vulnerability, which pertains to the likelihood of experiencing such harm. These factors are evaluated independently of the perceived rewards or positive aspects of the situation.(Rogers, 1975). Moreover, the risk level the user perceives related to careless behavior, e.g., the potential for harmful situations to occur and the severity of their consequences. It is the possibility and severity of losing something that is of value. The value is in terms of social status, financial wealth, and physical wealth, etc. Therefore, Xie et al. (2020) andKhan (2021) evaluated that as the global COVID-19 pandemic has led to substantial changes in social norms worldwide, and people are afraid to come out of their homes. So, they should adopt online means for the

shopping. Threat is also the intentional interaction with uncertainty (Safa et al., 2015). Further, in the midst of the pandemic, individuals are taking the evaluative measure of staying at home to minimize the risk of infection for their colleagues at work (Milaković & Miocevic, 2022; Teasdale et al., 2012) . Therefore, the context of a pandemic threat provides a suitable environment for investigating this matter.

Also, it was discovered that when consumers perceived vulnerability and severity of a threatening situation, they become more favourable to cope with it and avoid it (Youn et al., 2021). Envisioned through Protection Motivation Theory (PMT), the possibility of perceiving a threat is vulnerability, and a higher perceived threat indicates a higher probability of adaptive behaviour, i-e, online attitude. Similarly, severity refers to the extent of harm an individual perceives in response to a threat. Given this information, it can be assumed that individuals who perceive a higher degree of severity and vulnerability to the pandemic are likely to perceive a greater threat associated with purchasing clothes from a physical store. Hence, this study hypothesizes as follows:

H_1: Perceived severity is positively associated with the attitude toward online shopping.

H_2: Perceived vulnerability is positively associated with online shopping attitude.

2.3 Effect of Coping Appraisals on Online Shopping Attitude

Response efficacy pertains to an individual's belief about the advantages of engaging in a particular behaviour or action. It is a belief that one can avert potential and undesirable threats by taking adaptive measures (Kursan Milaković & Miocevic, 2022). According to a study carried out by Sun and Zhang (2006) and Wang et al. (2023), in order to prevent health emergencies, consumers have exhibited coping behaviour by adopting a new health mobile app, increasing their health knowledge, and positively to the app. Similarly, Ramkumar and Woo (2018) in e-commerce shopping context, found that there has been increase in positive attitude towards fashion & beauty online subscription services due to self efficacy of online transactions. Thus, when fashion consumers have a knowledge that the safest escape to pandemic is to shop online for fashion products and subsequently switch their purchasing habits to online stores they will have favourable online shopping attitude. Thus, it can be hypothesized that

H_3: Response efficacy is positively associated with online shopping attitude

H_4: Self efficacy is positively associated with online shopping attitude.

2.4 Effect of Perceived Ease of Use on Online Shopping Attitude

Davis (1989) defined perceive ease of use as degree to which consumers believe that online shopping can make their lives easier. In the context of online shopping, perceive ease of use refers to a customer's perception that it would be effortless to navigate and interact the e-commerce websites. Based on the Technology acceptance model (TAM), the perception of usefulness is positively influenced by online shopping websites that are user-friendly and easy to use(Davis, 1993). Researchers have found that people's perception of usefulness is increased with technology that is easy to use. Moreover, PEOU is estimated to have positive effects on

purchase intention(Ozili, 2025). Customers prefer online shopping when they find that online shopping is easy, searching for product information, and paying online is easy (Cheema et al., 2013). With the increasing technologies, the structure of websites is also becoming complex. The convenient site for shopping intention will attract more customers (Barkhi & Wallace, 2007). The above discussion concludes that PEOU will develop an online shopping attitude. Based on the above literature, it can be hypothesized that:

H_5: PEOU is positively associated with the online shopping attitude.

2.5 Effect of Online Trust on Online Shopping Attitude

When it comes to online shopping, online trust is a necessity (McCole, 2002). Similarly, when making a purchase online and sharing personal information and financial data, online trust needs to be there. Another way to define it is as a "*positive attitude characterized by a sense of assurance that one's weaknesses or susceptibilities will not be taken advantage of in an online environment posing a potential threat."*(Eggert, 2006, p. 554). Lee and Lin (2011)stated that trust is referred as an individual trust. This individual trust is belief in other people that is determined by their perceived honesty, morality and competence. According to the Theory of Reasoned Action (TRA), there is a direct relationship between trust and attitude, meaning that a more favourable attitude is developed when there is a higher level of trust (Fishbein, 1975).However, Rasty et al. (2021) findings revealed that several significant barriers exist in the realm of online shopping. These barriers include concerns about "privacy risk," the absence of a tactile shopping experience, "psychological risk," "social risk," and the perception that e-vendors might not genuinely prioritize buyers' well-being. The most critical barrier identified in this research pertains to "privacy risk." In the context of online shopping, consumers often worry about the potential misuse of their personal and financial information by third parties. Consequently, e-vendors should take steps to ensure their websites feature transparent privacy policies and employ cutting-edge technologies to create a secure environment for their customers.

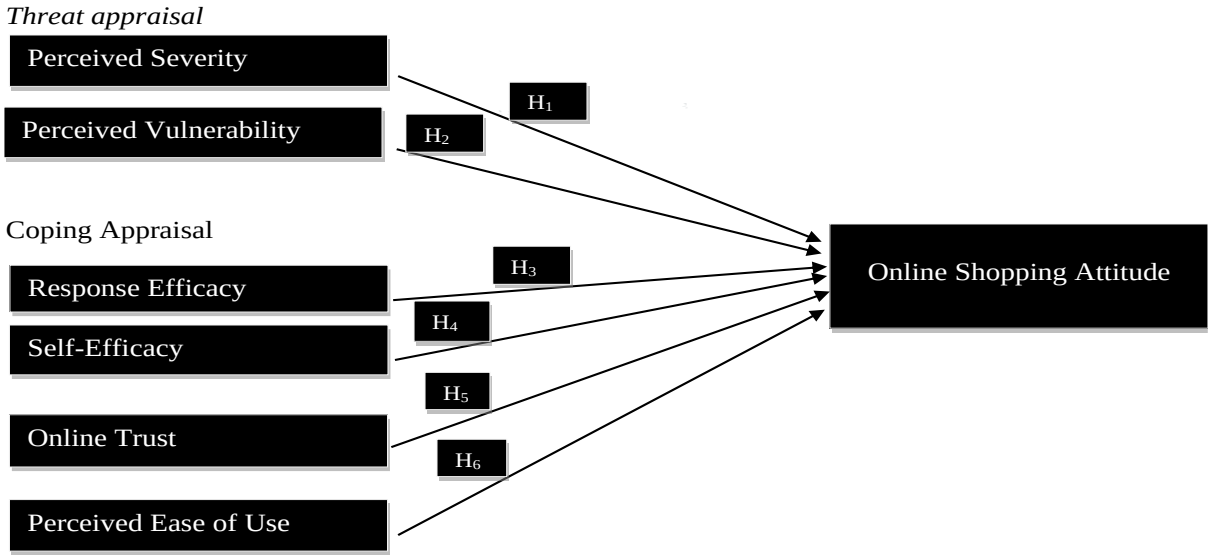
Eggert (2006) also identified another barrier that arises from the inability to physically interact with products before making a purchase decision. When consumers cannot closely examine a product or test its features, their likelihood of making a purchase diminishes. To address this, e-vendors should provide extensive product information, including multimedia content showcasing product performance, a platform for customer reviews, and testimonials from satisfied buyers. "Psychological risk" emerges when consumers second-guess their choices and fear that they could have made better purchasing decisions, often stemming from their inability to physically inspect products beforehand. E-vendors can alleviate this risk by implementing flexible return and exchange policies and offering various payment options, such as cash on delivery.

Also, E-vendors can normalize online shopping by employing effective advertising strategies and leveraging endorsements from well-known and trusted individuals. Lastly, some consumers inherently harbor distrust toward e-vendors. To counter this, e-vendors should enhance their reputation by maintaining high-quality, secure websites and providing comprehensive information about products, payment methods, delivery procedures, and other

factors that benefit consumers (Rasty et al., 2021). Moreover, Hsu et al. (2013) investigated that consumer purchasing decision is influenced positively and significantly by trust. Several studies have established that there is a positive correlation between consumer online trust and their intention to make purchases online. In other words, the higher the level of online trust those consumers have, the more likely they are to make online purchases (Thamizhvanan & Xavier, 2013). Similarly, when consumers perceive pandemic threat to themselves and others while going out for shopping they will have a more online trust and a favourable attitude towards switching channels to online. Therefore, it is hypothesized as:

H_6: Online trust is positively associated with online shopping attitude

Figure No 1: Conceptual Framework



3. Methodology

The research design of the study was quantitative, utilizing a deductive approach. According to Creswell (1999), quantitative research involves gathering, scrutinizing, explaining, and presenting the findings of a study. The research philosophy is Positivism, a quantitative approach where the researcher and settings remain independent. It employs a deductive method to develop hypotheses that address the objectives and questions. Data is collected through surveys using a questionnaire, and this research is cross-sectional, as data is gathered at one point in time. Moreover, the research is explanatory, as its underlying objectives are to examine the associations between threat appraisal, coping appraisal, online trust, perceived ease of use, and attitudes towards online shopping. (Blanchet et al., 2008) stated that explanatory research is best utilized to explore the relationships among variables. The study used convenience sampling because the sampling frame was unknown, whereby not all individuals in the population have an equal likelihood of being chosen. Online buyers were chosen for this study because consumers were already accustomed to online shopping prior to

the onset of the pandemic. The target population consisted of males and females aged from teenagers (18 and older) to adults (46 and above). This population comprised internet users, with a sample size of 400. According to Mundfrom et al. (2005) a minimum sample size of 200 is needed to achieve the desired statistical results. Therefore, the study met the minimum criteria.

The study employed various validated measures to assess the factors outlined in the conceptual framework. Approved scales were appropriate for the sample in this research. An analysis utilized a 35-item scale to measure the factors. Table 1 below summarizes the items and sources used to evaluate each construct.

Table No 1: Constructs and Items

Constructs	Items	Source
Online shopping attitude	4	Hernández et al. (2010)
Perceived severity	3	Sun et al. (2013)
Perceived vulnerability	3	Sun et al. (2013)
Response-efficacy	3	Johnston and Warkentin (2010)
Self-efficacy	3	Sun et.al (2013)
Perceived ease of use	12	Davis (1989) and Gefen et al. (2003)
Online trust	7	Chen and Barnes (2007).

4. Analysis

IBM (SPSS) Statistics 26 was used to break down information in the initial step. (Zikmund et al., 2003). SPSS was utilized in this study for data screening involving coding, normality assessed through skewness and kurtosis, and identification of outliers using univariate boxplots and z-scores. In the subsequent phase, according to Hershberger (2003), structural equation modelling was used to test the hypothesis, as previous studies suggest that it is a key technique for multivariate data analysis. PLS-SEM was chosen over other structural equation modelling techniques for several reasons: Partial Least Squares modelling has been widely used in studies in management and other disciplines (Hair Jr et al., 2021).Second, PLS is predictive-oriented, while other methods are parameter-oriented, and the present study aimed to demonstrate an interactive model of factors(ATTA & KHAN, 2021; Atta et al., 2022). Third, since this research aimed to measure the dependent variable this technique was an effective analytical method to conclude(Joe F Hair et al., 2011).

Table 2 shows the statistical summary and variables of this study. The table indicates that the minimum score was 1, the maximum score was 5, and the average of responses. The normality of the data is checked through skewness and kurtosis. According to the threshold,

the parameter values should be between +2 and -2. The values in the table depict the normal distribution of the data.

Table No 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
AT	373	1.00	5.00	3.6468	.94082	-1.064	.749
PS	373	1.00	5.00	3.1296	.82135	-.380	.286
PV	373	1.00	5.00	3.1716	.89288	-.486	.347
RE	373	1.00	5.00	3.4567	1.01113	-.563	.-218
SE	373	1.00	5.00	3.5889	.93241	-1.183	.970
PEOU	373	1:00	5.00	3.3698	.75899	-1.042	1.231
OT	373	1:00	5.00	3.2433	.76140	-.712	.443

According to Tabachnick et al. (2007) the assumptions regarding normality, multicollinearity, and common bias are preliminary steps. These steps serve as prerequisites for assessing reliability and validity. The specific assumptions about normality and multicollinearity are evaluated prior to checking reliability, validity, and structural path. The measurement model for the present study was computed and assessed using Smart-PLS (Sarstedt et al., 2014).To assess the reliability of individual items for each variable, factor loadings were calculated (Sarstedt et al., 2014). Ideally, all item outer loadings should exceed 0.6, although some researchers suggest a cutoff range of 0.4 to 0.7 (Hair Jr et al., 2021). In this study, composite reliability for each latent variable ranged from 0.881 to 0.946, surpassing the acceptable threshold of 0.70. Furthermore, Cronbach's alpha values above 0.70 indicate the internal reliability and consistency of the indicators (Fazal et al., 2021; Joe F Hair et al., 2011). The Cronbach's alpha values are as follows: 0.858 for attitude towards online shopping; 0.898 for online trust; 0.922 for perceived ease of use; 0.767 for perceived severity; 0.805 for perceived vulnerability; 0.866 for response efficacy; and 0.885 for self-efficacy. A confirmatory factor analysis (CFA) was performed using Smart-PLS to evaluate model fit, confirming the instrument's adequacy. One item with a loading below 0.5 was removed. Researchers emphasize that factor loadings should exceed 0.5, preferably above 0.7 (Joseph F Hair et al., 2011). Numerous studies support that factor loading estimates should be higher than 0.5 (Anjum et al., 2021; Eneizan et al., 2020; Napitupulu et al., 2017).

Ertz et al. (2016) reported that the acceptable range for factor loadings in confirmatory factor analysis should be 0.4 and above for optimal results. Consequently, there is no strict requirement that loadings must exceed 0.7. In this study, the researcher removed any loadings below 0.5. The “perceived ease of use” scale included 12 items, but PEOU5 was eliminated due to its low factor loading of 0.449, adversely affecting convergent validity, discriminant validity, and composite reliability. The “attitude toward online shopping” scale comprised four retained items. The “protection motivation” scale featured 12 items, with 3 for each dimension:

perceived severity, vulnerability, response efficacy, and self-efficacy. Since all items met the required threshold criteria, none were removed. Lastly, the "online trust" scale contained seven items, with no deletions.

Table No 3: Factor Loadings

Items	Factor Loadings	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
Online Shopping Attitude		0.858	0.904	0.701
AT1	0.842			
AT2	0.847			
AT3	0.828			
AT4	0.830			
Online Trust		0.898	0.92	0.623
OT1	0.822			
OT2	0.844			
OT3	0.807			
OT4	0.859			
OT5	0.745			
OT7	0.657			
Perceived Ease of Use		0.922	0.934	0.563
PEOU11	0.776			
PEOU12	0.643			
PEOU2	0.778			
PEOU3	0.719			
PEOU4	0.773			
PEOU6	0.747			
PEOU7	0.831			
PEOU8	0.828			
PEOU9	0.713			
Perceived Severity		0.767	0.866	0.683
PS1	0.852			
PS2	0.832			
PS3	0.791			
Perceived vulnerability		0.805	0.885	0.72
PV1	0.823			

PV2	0.873			
PV3	0.848			
Response Efficacy		0.866	0.918	0.789
RE1	0.902			
RE2	0.909			
RE3	0.852			
Self-Efficacy		0.885	0.929	0.813
SE1	0.914			
SE2	0.919			
SE3	0.869			

Notes: (AT)= Attitude for Online Shopping. (OT) = Online Trust. (PEOU)= Perceived Ease of Use. (PS)= Perceived Severity. (PV)= Perceived Vulnerability. (RE)= Response Efficacy. (SE)= Self Efficacy.

According to Ertz et al. (2016) factor loadings in confirmatory factor analysis should ideally be 0.4 or higher for optimal results; thus, no strict guideline requires them to exceed 0.7. In this study, any loadings below 0.5 were eliminated. Therefore, the results confirmed that convergent validity was acceptable for all constructs. The FL criterion test Fornell and Larcker (1981) was used to test discriminant validity. As per the benchmark of this criterion, the (AVE) square root ought to be larger than the correlation coefficients between the definite constructs (Umrani et al., 2018). Nonetheless, the conditions are met, as shown in Table 5. Thus, the analysis and its results support discriminant validity. The (HTMT), heterotrait-monotrait ratio criteria, is followed by the researchers for evaluating discriminant validity of the constructs (Roemer et al., 2021). This procedure and technique are used in business research to assess discriminant validity. The acceptable level of heterotrait-momotrait (HTMT) should be smaller than 0.85. Henseler et al. (2015) also stated that this value is acceptable for evaluating discriminant validity. The results show that 0.828 is the highest HTMT value, which satisfies the criteria.

As stated by Henseler et al. (2009), the structural integrity of the model is assessed through R^2 in PLS. R^2 indicates the measure of the variation of the endogenous variable described by one or more exogenous variables together (Elliott & Woodward, 2007). In PLS, the R^2 values criteria proposed by Chin (1998) are as follows: 0.60 is viewed as significant, 0.33 as reasonable, and 0.19 as weak. For the present study, the value of R^2 was 0.685, as shown in the table, indicating that the obtained R^2 value is strong. This suggests that together, protection motivation (threat appraisals and coping appraisals), online trust, and perceived ease of use account for 68% of the variance in attitudes toward online shopping.

In accordance with the guidelines established by Chin (2009); Hair et al. (2013)the study performed the Q^2 test to assess the predictive relevance of the model. Henseler et al. (2009) note that a Q^2 value greater than zero confirms the model's predictive relevance. The table below indicates a Q^2 value of 0.672, which exceeds zero, thus demonstrating strong predictive relevance. The effect size of the model's exogenous and endogenous variables is analyzed using the f^2 test, which is not influenced by the sample size evaluated (Cohen, 2016). This test evaluates how much an endogenous variable is influenced when exogenous variables are

excluded. The f-square is derived from the R-square by removing an exogenous variable. According to Cohen (2016), the influence of an exogenous variable is deemed maximal at f2 of 0.35, medium at f^2 of 0.15, and minimal at f^2 of 0.02. The results presented in the table below indicate that the effect size is minimal for PS (perceived severity), PV (perceived vulnerability), and RE (response efficacy).

4.1 Hypotheses Testing

The hypotheses H_1, H_2, H_3, H_4, H_5, and H_6 were tested with Smart-PLS software. As evidenced by the standardized coefficients of the structural paths, overall results were significant, as shown in the table. Results of this research are supporting the relationship among online trust and online shopping attitude ($\beta = .046$, $p < .001$), perceived ease of use and online shopping attitude ($\beta = .067$, $p < .001$), perceived severity and online shopping attitude ($\beta = .045$, $p < .001$), perceived vulnerability and online shopping attitude, ($\beta = .036$, $p < .001$), self-efficacy and online shopping attitude ($\beta = .065$, $p < .001$). However, response efficacy and online shopping attitude do not show a significant relationship ($\beta = .047$, $p > .001$).

Table No 4: Hypotheses Summary

Structural path	(ST.DEV)	t values	2.5%	97.5%	P values	Hypothesis
OT -> AT	0.046	7.149	0.234	0.412	0.000	Supported
PEOU -> AT	0.067	3.146	0.087	0.352	0.002	Supported
PS -> AT	0.045	2.364	0.020	0.196	0.018	Supported
PV -> AT	0.036	2.506	0.022	0.162	0.012	Supported
RE -> AT	0.047	1.786	-0.006	0.177	0.074	Not Supported
SE -> AT	0.065	2.653	0.044	0.297	0.008	Supported

5. Discussion and Conclusion

This study builds a model to explore protection motivation, online trust, perceived ease of use, and their effect on online shopping attitudes during the pandemic. The pandemic has transformed consumer behaviour, especially in online shopping. The framework is based on Protection Motivation Theory and the TAM model, enhancing understanding of customers' risk-preventive behaviour pandemic (Agag & El-Masry, 2016).

Perceived severity is the evaluation of a potential threat or risk by an individual. In online shopping, it relates to concerns about risks in physical shopping environments, including exposure to infectious diseases (e.g., during a pandemic), physical security threats, and general inconvenience. Many previous studies show that the perceived severity of pee significantly pandemic influenced consumers' shift from physical to online shopping, driven by the desire to avoid crowds and reduce infection risk (Sheth, 2020). Studies indicate that perceived vulnerability to various risks (health, safety, convenience) drives consumers to adopt online shopping. Garbarino and Strahilevitz (2004) suggested that perceived vulnerability to identity theft and fraud influences consumers' attitudes toward online shopping. However, these vulnerabilities can also act as barriers if consumers view online shopping as unsafe due to trust

factors related to online platforms. (Belanger et al., 2002). Thus, both hypotheses (H_1 and H_2) support the broader theories in consumer behavior that suggest risk perception regarding health and contracting the virus significantly impacts decision-making processes. Both of the threat appraisal components, perceived severity and vulnerability, influence how consumers evaluate the safety and convenience of shopping methods. In a nutshell, when consumers perceive high severity and vulnerability associated with physical shopping, there is a greater chance of developing a favorable attitude for online shopping as a protective, convenient, and free of risk alternative.

Response efficacy refers to a consumer's belief that online shopping meets their needs and offers benefits like convenience, cost savings, and a wider product variety. Previous studies indicate that response efficacy aligns with perceived usefulness, reflecting the belief in the benefits of online shopping. (Van Bavel et al., 2019). This study does not support the hypothesis of response efficacy for several reasons. Firstly, many consumers are experienced online shoppers or already familiar with this process. (Rohm & Swaminathan, 2004). Therefore, the concept of response efficacy might be less relevant for them. Consumers have formed attitudes based on past experiences, convenience, and satisfaction, rather than a belief in online shopping efficacy. Initially, new shoppers consider trust factors and ease of use. Their primary concern is navigating the online shopping, not focusing on response efficacy as a key feature. (Thwaites & Freeston, 2005). Thirdly, efficacy is less salient and often taken for granted in established online shopping markets, where attitudes are shaped more by attributes like price, variety, and delivery options than by beliefs in effectiveness. Fourth, cultural differences in technology usage also play a role; in some cultures, social influence and normative beliefs significantly shape online shopping attitudes over individual efficacy beliefs. (Venkatesh et al., 2003). Fifth, emotions related to online shopping, such as enjoyment, excitement, or anxiety, can significantly influence attitudes. These emotional responses may be more immediate and impactful than the cognitive evaluation of response efficacy. (Childers et al., 2001). Lastly, consumers' comfort with technology and psychological readiness to shop online may influence their attitudes more than response efficacy. Psychological comfort encompasses familiarity, absence of anxiety, and a positive emotional response to online platforms. Thus, from the above discussion, it can be concluded that online shopping behavior is multifaceted. As suggested by Thwaites and Freeston (2005), Attitudes are shaped by complex psychological, social, and contextual factors. Non-significant results for response efficacy suggest consumers' attitudes towards online shopping stem from broader considerations beyond belief in its efficacy.

Considering self-efficacy, Bandura (1977) has defined it as a key component in adopting new behaviors and technologies. Higher self-efficacy leads to greater ease and willingness to engage in online shopping. Consumers with higher self-efficacy tend to have successful and satisfying online shopping experiences, reinforcing positive attitudes. (Hong & Cha, 2013). Furthermore, when consumers feel confident navigating online shopping platforms, it reduces their anxiety and enhances enjoyment, leading to a more favorable view of online shopping. In conclusion, self-efficacy significantly influences online shopping attitudes. The findings are consistent with the study of Milaković and Miocevic (2022) Consumers' attitude towards online shopping improves with confidence in using online

platforms, highlighting ease of use, reduced anxiety, and a more satisfying experience. Self-efficacy enhances positive attitudes towards e-commerce adoption, reinforcing the proposed hypothesis. (Hong & Cha, 2013; Salisbury et al., 2007).

Hypothesis 5 is confirmed by the findings of the studies by Gefen et al. (2003) and Kim et al. (2008), Trust is key in reducing perceived risk in online transactions, fostering a positive attitude towards online shopping. When consumers trust retailers, they become highly satisfied, positively influencing their attitudes towards online shopping Online trust is essential because individuals feel more confident that their digital identity is secure and under their control. Consumers who believe their personal information is private and secure are more likely to favor online shopping. Reichheld and Schefter (2000) and Alhaimer (2022) also believe that when consumers trust an online platform, they are more likely to return and recommend it to others. The positive "word of mouth" also reflects a positive attitude and helps maintain customer loyalty and retention. Put, online trust leads to an online shopping attitude. In other words, when consumers feel their data is protected, they are more likely to develop a positive attitude towards those shopping platforms that serve online. (Belanger et al., 2002). Trust is a key predictor of customer satisfaction. Online retailers can shape consumer attitudes and promote online shopping by prioritizing and maintaining trust.

H_6 is confirmed by the study's findings, which claim that consumers find e-commerce platforms easy to operate if a positive attitude is developed towards their usage. Some researchers like Lederer et al. (2011) found the role of PEOU in using the internet, concluded that ease of use is a major predictor in forming positive attitudes towards internet shopping. Gefen and Straub (2004) also support that attitude towards online shopping platforms significantly improves with an easy-to-navigate interface and user-friendly design. Their studies state that user-friendly design reduces frustration and increases satisfaction, fostering a positive attitude towards online shopping. Moreover, the cognitive effort needed to navigate and complete transactions is reduced by PEOU, resulting in a more enjoyable and less stressful shopping experience, thus enhancing overall attitudes. This empowerment fosters a positive attitude towards online shopping. User-friendly experiences also evoke emotions like enjoyment and satisfaction, which are crucial for developing favourable attitudes. (Sun & Zhang, 2006).

Research supports the hypothesis that PEOU positively influences attitudes toward online shopping. PEOU reduces cognitive effort, enhances user satisfaction, and increases perceived control, leading to favorable attitudes toward online shopping. By improving usability and user experience, retailers can positively influence consumer attitudes and foster greater adoption of online shopping.

5.1 Implications

The study's findings will provide valuable insights for businesses, especially online retailers, into factors influencing consumer attitudes towards online shopping. By emphasizing protection motivation, online trust, and perceived ease of use, companies can enhance their strategies to attract customers. This knowledge supports effective marketing, website optimization, and improved customer experiences, leading to increased online sales and

loyalty. Additionally, policymakers and regulatory bodies can use these findings to shape policies promoting online shopping growth during and after the pandemic. Understanding the drivers of consumer attitudes will help develop guidelines ensuring safety, security, and ease of use on online platforms. Policymakers can establish consumer protection measures to foster trust, creating a secure online shopping environment.

Consumers will benefit from insights into the key factors affecting their online shopping attitudes. Recognizing the importance of protection motivation, online trust, and perceived ease of use enables them to make informed decisions. This knowledge helps assess the safety of online platforms, leading to a more satisfying shopping experience. The pandemic accelerated the shift to online shopping, causing even less tech-savvy consumers to rely on digital platforms. Understanding how protection motivation, online trust, and perceived ease of use influence attitudes during these times is vital for businesses to adapt their strategies to retain these new digital consumers post-pandemic.

This study in Balochistan, an underdeveloped province of Pakistan, identifies a substantial gap in the literature, as few studies address factors influencing online shopping attitudes during the pandemic. It explores theoretical implications that contribute to consumer behaviour, e-commerce, and the acceptance of technology theories. Key contributions include extending Protection Motivation Theory (PMT) to online shopping during a global health crisis, which is traditionally associated with health-related behaviours. The findings show that protection motivation, fuelled by health concerns during the pandemic, can influence non-health-related behaviours, such as online shopping. This broadens PMT's applicability, suggesting it helps understand a broader range of behaviours under threat conditions (Rogers, 1983). The research enhances the Technology Acceptance Model (TAM) by emphasizing the crucial role of perceived ease of use (PEOU) during a crisis. This indicates a greater need for user-friendly technology, as TAM asserts that PEOU and perceived usefulness are key factors in technology acceptance (Davis, 1989). This finding suggests that PEOU's weight in TAM may vary by context, especially when users must rapidly adopt technology.

The study has also shed light on how external contexts, such as the COVID-19 pandemic, influenced consumer behaviour. The pandemic, an unlikely event before its outbreak, has been identified as one of the key threats for businesses and consumers. Additionally, the study has considered situational factors and their importance when applying traditional consumer behaviour theories (Kim, 2020). By combining PMT, TAM, and trust theories, the study can present a more holistic view of online shopping attitudes during crises. Future research should continue to explore such integrative frameworks to enhance theoretical development in the field.

5.2 Future Research

The study's findings encourage future research avenues. The information can enhance current insights, address limitations, and explore new consumer behaviour and online shopping aspects. Given the pandemic's dynamic nature and evolving responses from governments and businesses, researchers should use longitudinal designs to track changes in attitudes and behaviours over time. Longitudinal studies can help understand behaviour changes as the

pandemic evolves. Choosing a diverse sample is crucial for the study. Future research should include participants from different age groups, socio-economic backgrounds, and regions for generalizable findings. Examining interactions among these factors, protection motivation, online trust, and perceived ease of use can reveal demographic variations in online shopping behaviour.

Cross-cultural studies are also needed to assess how cultural differences impact the relationships among protection motivation, online trust, perceived ease of use, and online shopping attitudes, offering a nuanced view of global consumer behaviour during crises. Additionally, future research should analyse how advancements in e-commerce technology, like AI, augmented reality, and enhanced cybersecurity, affect online shopping attitudes. Investigating these innovations can yield valuable insights into theory and practice.

Future studies should include psychological, economic, and social variables affecting online shopping attitudes. Understanding the interplay among these variables and protection motivation, online trust, and perceived ease of use can present a comprehensive view of consumer behaviour. Moreover, research could compare consumer behaviour across different crises (e.g., economic, natural disasters, political unrest) to establish whether patterns from the pandemic are unique or applicable to other situations. This can refine theoretical models for various disruptions. Finally, as the world adapts post-pandemic, examining how pandemic-related changes in online shopping behaviour persist or revert to pre-pandemic norms is vital. Understanding the enduring impact on consumers can help businesses develop sustainable e-commerce strategies.

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