

## **Investigating Post-Pandemic Consumer Buying Behavior in Oman: An Empirical Study of Online and Offline Preferences**

Amitabh Verma<sup>1</sup>, Abedalqader Al Rababah<sup>1</sup>, Yousef Abu Hajar<sup>2</sup>

<sup>1</sup>Business Department, Sohar University, 3111 Al Jamiah Street, Sohar, Oman

<sup>2</sup>Aqaba University College Al-Balqa Applied University, Jordan

*vermainfo123@gmail.com, ARababah@su.edu.om, yousef.abuhajar@bau.edu.jo*

**Abstract.** This research is exploratory and constructive, and it is concerned with the influence of the pandemic on customer purchasing behavior intentions for online and offline shopping. The main purpose of this study is to investigate the impact of the pandemic on Cultural and traditional values along with attitude, perceived usefulness, perceived economic condition, trust, and reliability on actual buying behavior intention. The article provides a conceptual framework for analyzing the variables influencing consumers' decisions to make online and offline purchases. PLS-SEM was used to analyze the data collected from 320 respondents using a full-structured questionnaire. The findings of this study support that Cultural and Traditional values and attitudes positively affect online buying behavioral intention after a pandemic along with, Perceived usefulness, Perceived Economic condition, and Trust and Reliability. The outcomes of this study reflect a significant migration of users to online buying. Practically, it will benefit the online industry, assisting them in projecting expected demand on their platforms and also assisting retailers in acquiring competitive advantages by allowing companies to adapt to market shifts.

**Keywords:** Consumer, Pandemic, Online shopping, Offline shopping, Buying behavior.

## **1. Introduction**

Traditional shopping allows customers to view, feel, and explore the things for sale. Consumers must examine the items personally. They will pay and bring them home if they are satisfied with the quality and cost. This is especially critical when purchasing necessities such as food and pharmaceuticals. Customers will return to the same stores because they are satisfied with the products and services (Sumi & Ahmed, 2022). Traditional shopping has been in existence for a long time. For centuries before the internet and e-commerce, it was one of the most common ways for society to acquire goods and services (Avçılar & Özsoy, 2015). Consumer purchasing and retail behaviors have been influenced by the COVID-19 outbreak, lockdown, and social distance regulations. Consumers are learning to adapt and form new habits (Febrilia & Warokka, 2021). For example, customers cannot go to the store, so the business comes to them. After the pandemic, advancements in the E-commerce industry resulted in substantial changes in client purchasing behavior intentions and a noticeable shift in customer activity toward online channels (Grashuis et al., 2020). On the one side, the pandemic has raised online shopping demand, which may benefit the retailing industry but may have reduced demand for physical shopping, which might harm shops. Nonetheless, the choice of shopping for making purchases is influenced by customer behavior, and purchase habits are very likely to change as a result of the pandemic's restrictions (Sorrentino et al., 2022).

However, there is currently a lack of scholarly material dealing with changing consumer buying behavior following Covid-19 especially in the context of Oman. While the literature acknowledges the general shift towards online channels and the potential impact on the retailing industry, there is a notable absence of in-depth exploration into the specific factors and dynamics shaping post-pandemic consumer behavior in Oman. The current body of literature primarily focuses on the broader trends and consequences of the pandemic on the retail landscape, but there is a lack of granularity in understanding the intricate motivations, preferences, and challenges faced by consumers in Oman as they navigate the evolving shopping landscape. The research gap is evident in the absence of detailed insights into how consumers in Oman adapt, form new habits, and make purchasing decisions in the aftermath of the pandemic, considering both online and offline options.

This study aims to bridge this gap by providing a focused analysis of the influence of COVID-19 on consumer purchasing behavior intentions in Oman, shedding light on the specific factors driving the shift towards online or offline shopping. The dearth of existing scholarly material in this specific context underscores the need for a targeted investigation to contribute meaningful insights to the evolving field of post-pandemic consumer behavior in Oman. Therefore, the research problem centers on the need for a focused investigation into the influence of COVID-19 on consumer purchasing behavior intentions in Oman, aiming to uncover the intricacies of this shift and contribute valuable insights to both academic and practical perspectives in the field of post-pandemic consumer behavior.

This study serves to enrich and advance existing consumer behavior theories by delving into the intricacies of post-pandemic purchasing decisions in the context of Oman. By providing specific insights into the unique interplay of cultural values, economic conditions, and technological shifts, it contributes to a more nuanced theoretical framework. The examination of lasting impacts on consumer behavior also adds depth to theories related to habit formation, consumer loyalty, and the sustainability of shifts towards online shopping. On a practical level, businesses stand to benefit significantly from the study's findings. Insights into changing consumer preferences and motivations can inform strategic adaptations, allowing businesses, particularly in retail and e-commerce, to tailor their offerings and marketing approaches. Moreover, the study provides valuable information for crafting targeted communication strategies to educate consumers about the benefits of online shopping, address concerns, and promote secure practices. In essence, the research not only contributes to academic discourse by advancing consumer behavior theories but also offers tangible and actionable insights for businesses, policymakers, and other stakeholders, fostering informed decision-making in the dynamic landscape of post-pandemic consumer behavior in Oman.

## 2. Literature Review

The global landscape of business operations and consumer behavior has been fundamentally altered by the impact of COVID-19. Initial reactions to the pandemic exhibited significant variability based on factors such as geography, nationality, economic status, educational background, access to vaccines, and political ideologies. The pervasive nature of the COVID-19 outbreak has sparked widespread concern on a global scale, mirroring the impact of previous serious epidemics and pandemics, thus influencing people's purchasing patterns. As a result of the global shifts influenced by the COVID-19 pandemic and the integration of technological advancements in E-commerce, the conventional approach to shopping has undergone a transformation, steering towards online platforms. This transition encompasses various sectors, notably the grocery industry, witnessing an upsurge in consumers' online purchasing behavior for groceries and food, both internationally and in Oman. On a global scale, 49% of consumers altered their shopping habits during the pandemic, favoring online platforms over traditional methods, a trend that has intensified compared to pre-COVID-19 times (Du, 2023). Specifically in the realm of grocery shopping, a noteworthy 79% of consumers worldwide opted for online channels, marking a substantial 19% increase from the previous year (Gu et al., 2021). These shifts in purchasing behavior play a pivotal role in shaping the future logistics landscape within Oman's online sector. Consequently, a comprehensive understanding of the evolving requirements and challenges is imperative for informed decision-making and strategic actions aimed at mitigating obstacles associated with electronic grocery shopping. This proactive approach is essential for enhancing logistics efficiency in the online business domain.

The culture and traditional values of a person have a significant impact on psychological processes and behaviors. Because it influences how people see their surroundings, their role in it, and how they make decisions, how and why they purchase things and services. It is generally evident how culture influences purchasing behavior. Some purchase trends are easily understood due to cultural restrictions on certain foods, such as alcohol or meat, or cultural preferences for apparel design. Cultural factors such as home size and women's roles in household management influence who buys what and how much. Oman consumers are more family-oriented than Western consumers, but that doesn't mean there aren't Oman customers who make highly personal purchasing decisions or think collectively. According to Durmaz (2014), Customer personalities and motivations are increasingly influencing consumer behavior, as are family relationships. A family is a social group that may be considered the basis of buyers; hence, it plays a vital part in marketing. Nastasi et al. (2017) discussed the fundamental foundations and competencies for cultural formation in program creation, adaptation, and evaluation. According to Kacen and Lee (2002), many facets of consumers' impulsive purchase behavior are moderated by cultural variables., including self-identity, normative influences, emotion suppression, and the postponement of instant gratification, all of which systematically influence impulsive purchasing behavior. Therefore, the hypothesis states as:

*H1. CT has a significant impact on the pandemic-affected buying behavioral intention of consumers.*

Cognitive trust, perceived risk, and purchase intent have an indirect relationship, which greatly contributes to a better understanding of online consumer behavior. It gave business owners advice on understanding the nature of online transactions, in which customers and businesses connect and trade primarily through websites and interfaces. This gives customers confidence and peace of mind (Tran & Nguyen, 2022). (Chetioui et al., 2021) proposes and tests a theoretical paradigm in which consumer purchase intention is mediated by identification with the cause, donation amount, emotional engagement, and subjective standards. To investigate the effects of trust, perceived advantages, perceived web quality, and electronic word of mouth on consumer attitudes toward online shopping, Al-Debei et al. (2015) developed a unified model that incorporates trust, perceived advantages, perceived web quality, and electronic word of mouth and their interrelationships. It was discovered that trust and perceived benefits influence consumer attitudes toward online shopping. Tran & Nguyen (2022) suggested that Cognitive trust significantly impacts attitudes about online purchasing, but perceived

threats have a negative influence. Consumer attitudes are tough to alter, but the COVID-19 outbreak caused consumers to reconsider their previous behavior patterns, and the hypothesis is derived as:

*H2: ATO significantly impacts the pandemic-affected buying behavioral intention of consumers.*

Renny et al.(2013) validate previous research by examining the effect of perceived ease of use and effectiveness on perceptions about usability. According to the findings, perceived usefulness has a more significant influence on attitudes than perceived ease of use and trust. Trust has an inverse association with perceived risk and has a favorable impact on online purchasing intent. The authors discovered that perceived risk did not directly affect online purchasing intention. Sumi & Ahmed (2022) investigated the influence of essential drivers of the technology acceptance model (TAM) and consumer value theory on purchasing attitudes toward behavior. They hypothesized that under pandemic conditions, hedonic and utilitarian motivational values and perceived usefulness and perceived ease of use would influence actual purchasing behavior. They discovered that perceived enjoyment and utilitarian attributes, as well as perceived usefulness and perceived ease of use, positively influence online purchasing attitudes. Perceived usefulness (PU) is a powerful motivator influencing online purchasing behavior, so the hypothesis derived as follows:

*H3: PU significantly impacts the pandemic-affected buying behavioral intention of consumers.*

The COVID-19 pandemic significantly influenced consumer attitudes, intentions, and purchasing habits. This study investigated the influence of the COVID-19 crisis on customer motivation and purchasing behavior and discovered several changes in consumer behavior linked to items, channels, and motives. These changes were related to consumers' perceptions of the crisis rather than its actual impacts. (Vázquez-Martínez et al., 2021). The COVID-19 epidemic has impacted many consumer behavior aspects, including spending, investments, financial reserves, and financial and social well-being. Consumers and their shopping habits have changed dramatically due to various restrictions. As a result, the factors driving new purchasing patterns must be identified to assist traders, retailers, and marketers in developing effective strategies to respond to critical market consumer developments. According to the findings of this study, customers' income, age, and employment all play critical roles in the context of new buying behaviors (Valaskova et al., 2021). During the new coronavirus pandemic's early phases, consumers and supply networks were unprepared. Mukit et al.(2021) exploratory investigations were conducted on various individuals from Islamic nations who had been panic purchasing in coronavirus-affected areas and faced regional limits. The study revealed that the economy had a severe financial impact, with buying power and remittance inflows declining, inflation rising, and lockdown measures increasing. In contrast, impulsive purchasing of items increased as a result of disinformation, and panic buying had a huge influence on the economy. The decision-making process has evolved, avoiding financial hardship, increased saving behaviors, and unwelcome harmful spending. Furthermore, there is apparent psychological anguish, sadness, anxiety, and post-traumatic stress disorder. Based on this the hypothesis as follow:

*H4: PEC significantly impacts the pandemic-affected buying behavioral intention of consumers.*

The introduction of the COVID-19 epidemic has altered consumer behavior and created a new opportunity for marketers. Alzaidi and Agag's (2022) research aimed to develop an integrated model of the critical role of trust and privacy issues in influencing customer purchasing behavior through social media. According to the findings, trust and privacy problems influence purchasing intent. The primary drivers of trust and privacy issues are information quality, security concerns, ease of use, a privacy/security assurance seal, and a willingness to accept third-party certification. Lee & Turban, (2001) developed a theoretical model for researching the important antecedent impacts on customer trust in Internet purchasing, a prominent kind of business-to-consumer e-commerce. According to their results, merchant integrity is a primary positive factor of customer trust in Internet buying, and the individual consumer's trust proclivity reduces its influence. Urban et al.(2009) examined developments in online trust research based on an overall framework, detailing major lessons gathered thus far, such

that internet trust goes beyond privacy and security, is inextricably tied to website design, is a continuous process, and varies between people and commodities. Therefore, the empirical hypothesis states as follows:

*H5: TR significantly impacts the pandemic-affected buying behavioral intention of consumers.*

People all across the world have been affected psychologically and behaviorally as a result of the COVID-19 pandemic. As a result, consumer purchasing habits have dramatically changed (Tao et al., 2022). Vázquez-Martínez et al., (2021). It was discovered that numerous shifts in consumer behavior happened during the COVID-19 crisis in terms of items, channels, and causes. These alterations were linked to consumers' perceptions of the problem rather than its actual impacts. Gu et al.(2021) found major trends and developments in consumer purchasing behavior. Their research examined whether changes in online consumer purchase behavior are common during the COVID-19 pandemic. Customer awareness and experience have risen in importance. Online buyers' shopping habits have altered as a result of their experience. During the pandemic, this study highlighted the different effects of variables impacting online customer buying behavior. Toska et al.(2022) explored an older group's internet buying intention. Their studies revealed that COVID-19, as a perceived risk, impacted online purchase intention. Furthermore, fear of perceived danger, perceived utility of social media, and timely delivery influenced this generation's online purchase intention. Soares et al.( 2022) estimated risk of getting infected with COVID-19 while purchasing in person had a beneficial influence on the perceived utility and simplicity of purchase. However, it had no statistical impact on online purchasing intent; perceived utility positively relates to online purchasing intent. Online buying intent has a favorable effect on online shopping (Davis & Davis, 1989). The following hypotheses are based on the preceding discussion related to online and offline consumer buying.

*H6. PBBI has a significant impact on consumer online buying.*

*H7. PBBI has a significant impact on consumer offline buying.*

The evolution of consumer behavior research during the COVID-19 pandemic is primarily concerned with investigating changes in requirements, types of goods, and prioritization of consumer needs during the COVID-19 pandemic. Consumer purchasing behavior is influenced by psychological variables, product selection (mostly fresh food components and staple foods), purchase consistency, consistency of changes in consumer habits, consumer risk awareness and consideration, and consumer behavior during a pandemic are all important factors to consider (Candrawati & Nuvriasari, 2021). The digital revolution has greatly impacted customer purchasing processes and behavior. Iuliana et al. (2022) examined the influence of perceived benefits, attitude, and loyalty on customers' intentions to continue using online shopping, a model that contains perceived benefits, attitude, and loyalty was proposed. The findings provide a better understanding of online customer behavior by providing a new framework for developing realistic marketing tactics. Sorrentino et al. (2022) hypothesized that the alterations in consumption behaviors caused by the COVID-19 epidemic are changing the consumer profiles studied by several organizations. They presented a contemporary character using a mixed-method technique. Gu et al.(2021) created a methodological strategy to examine the linkages and amount of effect of the elements activating online customers' purchasing behavior in the context of the COVID-19 epidemic. Customer awareness and experience have risen in importance. Online buyers' shopping habits have altered as a result of their experience. During the epidemic, this study showed the different effects of online customer purchase behavior elements. The growing relevance of customer decision-making speed while purchasing products and services online was determined.

Values and lifestyles heavily influence consumer behavior and intentions. The findings indicate a relationship between the usage of technology and its consequences on behavior. Among online consumers, The connections between values and conduct, as well as behavior and future intent, are more significant than the effects of lifestyle on behavior (Díaz, Gómez, and Molina, 2017). Aragoncillo & Orus (2018) examined online and physical channels to discover which leads to more significant

impulsive purchasing. The findings revealed that the offline channel is somewhat more supportive of impulsive purchases than internet shopping; factors that boost online impulse purchases explained this behavior more than discouraging factors and social networks can significantly influence impulse purchases. Sayyida et al.(2021) analyzed that consumers' desire to immediately view, touch, and feel a product is only available in physical locations. According to their findings, webrooming and pure online purchasing were prevalent during the COVID-19 epidemic. Moon et al.(2021) studied the characteristics of individuals who purchased offline during the pandemic. Their findings helped to improve understanding of consumer purchasing habits (online vs. offline) during times of severe external effects, such as a pandemic. Schulze (2021) examined in-store and online customer purchasing behavior and emerging trends, the consequences of digitalization, and the impact of COVID-19. The findings revealed that, while there were no differences between sociodemographic characteristics such as age and gender and shopping behavior, COVID-19 significantly affected customers' purchasing behavior, particularly online purchase frequency. In general, the average user's dependence on online shopping platforms has risen, and they increasingly prefer to shop using both online and physical platforms interchangeably rather than just one.

This study aims to examine the pandemic impact on buying behavioral intentions of consumers in online and offline buying. To assess the impact, a conceptual framework of CT, ATO, PU, PEC, TR has been developed to measure the pandemic impact on buying behavioral intention towards online and offline buying. The theoretical structure contains two dependent variables (i.e. online and offline buying), one mediating variable (i.e., Pandemic impact on buying behavioral intention), and five independent variables: CT, ATO, PU, PEC, and TR.

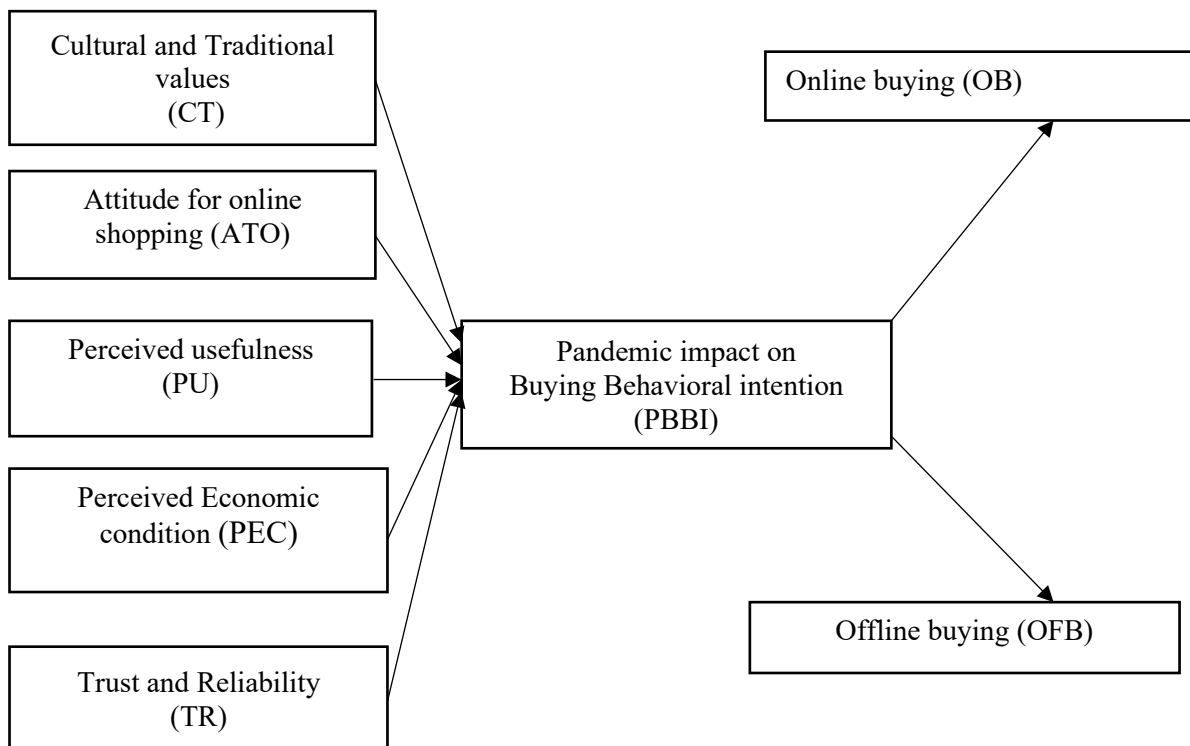


Fig. 1: Conceptual model to assess consumer buying behavioral intention due to pandemic impact in online and offline buying.

### 3. Research Methododology

### 3.1. Data collection

The research is both empirical and descriptive. To acquire primary data, an online self-administered survey was undertaken from 320 respondents from Oman through convenience sampling. The survey included questions on the online buying behavior intention of consumers of Oman due to the impact of the pandemic. The components of this study model were evaluated using prior research standard scales. A pilot survey of 45 people with e-commerce and information system expertise was conducted. To improve the measurement's validity and accuracy, the pilot test findings were incorporated into the final structured questionnaire. An online survey was used to collect responses from a well-structured questionnaire with a five-point Likert scale. The degrees of reaction are coded as 5 = strongly agree and 1 = strongly disagree. The survey also included descriptive questions to assess general online buying behavioral intention related to the epidemic and demographic questions about the respondents. Participants, who were online consumers, received invitations through online marketplaces. Invitations were extended to individuals who added at least one product to their shopping carts for potential purchase. Those who agreed to partake in the survey were directed to Google Forms. The surveys were created on Google Forms and delivered randomly to 385 people in Oman. 385 valid replies were sorted during data collecting. However, after cleansing the database for missing or incorrect data, 320 responses were relevant for this study. The required sample size can be calculated using the following formula or by finding a sample size calculator online:

$$n = z^2 pq N / \delta^2 N + Z^2 pq$$

where:  $n$  is the required sample size;  $N$  is the general population;  $Z$  is the coefficient chosen based on the confidence level used (for CI 95%,  $z = 1.96$ );  $p$  is the proportion of respondents with the studied characteristic (typically, 50%);  $q = 1 - p$  is the proportion of respondents without the studied characteristic;  $\delta$  is the margin of error (typically, 5%).

According to a descriptive analysis of the respondents in this survey, 42.19% were men and 57.81% were females. All of the responders are Omani. The respondents' ages were assessed using a ratio scale and ranged from 17 to 35, with a mean of 23.52 and a standard deviation of 2.37.

### 3.2. Data analysis

Initially, an Exploratory Factor Analysis (EFA) was created to determine the structure of the latent variables. The extraction technique for this Principal Component Analysis was used in the EFA investigation in SPSS 24.0, and the rotation technique was Varimax with Kaiser Normalization. Multivariate statistical analysis can be utilized with SEM to assess the structural connection between the direct and latent observable variables (Chin, 1998). Because the constructs in this study are unobservable and cannot be tested directly, SEM analysis was used to depict, estimate, and evaluate the link between latent variables. PLS-SEM, which includes both measurement and structural models, is ideal for dealing with tiny sample quantities and sophisticated model structures (Leak & Finken, 2011), and it requires essentially no data distribution assumptions about the underlying data (F. Hair Jr et al., 2014). It can also effortlessly handle both reflecting and formative measuring paradigms. Furthermore, single-item constructs can be readily run with no identification issues. Another advantage of PLS-SEM over covariance-based SEM is that it reports a specific association as significant when it is significant in the population, which is why PLS was chosen over covariance-based SEM (CB-SEM) for this investigation (Fan et al., 2016). Given all of the benefits of the software, the researcher has opted to adopt SmartPLS for the desired purposes (van Riel et al., 2017). Following that, empirical investigation dives into the causal relationships between latent variables, including hypothesis testing and model acceptance.

## 4. Results and Discussions

#### 4.1. Demographic classification

The respondents' demographic profile was divided into income, gender, and degree of education. According to a descriptive analysis of the respondents in this survey, 42.19 percent were men and 57.81 percent were females. All of the responders are Omani. The respondents' ages were assessed using a ratio scale ranging from 17 to 35, with a mean of 23.52 and a standard deviation of 2.37.

Table 1. Demographic profile and the purchasing intention of the respondents

Variables	Classifications	Frequency	Percent
Gender	Male	135	42.19
	Female	185	57.81
Age	17-30 years	210	65.63
	31-35 Years	80	25.00
	>35 years	30	9.38
Educational Level	Without a bachelor's degree	210	65.63
	Graduate	80	25.00
	Post-graduate	30	9.38
Daily time spent using the internet	Low < 2 hours	53	16.56
	Middle (2 hour- 5 hour)	75	23.44
	High (> 5 hour)	192	60.00
Monthly household income before the COVID-19 pandemic	Low (less than 500 omr/month)	185	57.81
	Middle-low:(500 - 800 omr/month)	76	23.75
	Middle - high:( 800 omr - 1000 omr/month)	55	17.19
	High:( >1000 omr/month)	4	1.25
Did COVID 19 affect your level of purchases?	Yes	297	92.81
	No	23	7.19
Did your purchases increase during COVID 19?	Yes	223	69.69
	No	97	30.31

Descriptive statistics of the samples (N=320)

#### 4.2. Exploratory Factor Analysis

Initially, an Exploratory Factor Analysis (EFA) was created to determine the structure of the latent variables. The extraction technique for this EFA study in SPSS 24 was Principal Component Analysis, while the rotation method was Varimax with Kaiser Normalization.

The test findings indicated that a single construct explains 28.80% of the total variation, which is less than the 50% suggested by Podsakoff et al.( 2012).

Table 2. EFA results



Construct No.	Construct	Eigenvalue	Variance explained	Cumulative variance explained	Eigenvalue	Variance explained	Cumulative variance explained
1	CT	3.734	27.232%	27.232%	6.268	28.789%	28.789%
2	ATO	2.849	30.125%	57.357%			
3	PEC	3.236	15.176%	72.533%			
4	TR	3.335	7.192%	79.725%			
5	PBBI	2.857	6.231%	85.956%			
6	OBB	2.201	4.934%	90.890%			
7	OFBB	1.502	2.678%	93.568%			

### 4.3. Reliability and Validity

The potential of repeating the results of a study, according to Bell et al. (2019), indicates that when the results of a study are reproduced using the same metrics, the study is deemed credible. Composite dependability, measured using partial least squares structural equation modeling (PLS-SEM), is a stronger indicator for calculating internal consistency than Cronbach's (Taber, 2018). Table 3 shows the composite reliability of the constructs, with scores ranging from 0.72 to 0.93, above the required threshold of 0.7 (Hair et al., 2010), and therefore recognizing the measurement's reliability.

Table 3. Standardize each construct's loadings and reliability coefficients.

Construct	Construct itmes	Source	Survey items	Item loading	Cronbach's $\alpha$
Cultural and Traditional values (CT)	CT1	(Durmaz, 2014); (Nastasi et al., 2017); (Kacen & Lee, 2002);	We always buy products made in Arab countries instead of imports	0.86	0.82
	CT2		We buy only those foreign products that are not available in Arab countries	0.88	
	CT3		Buying foreign items is wrong because it puts Omani citizens out of work.	0.82	
	CT4		It may cost me in the long term, but I prefer to support the products of Oman	0.89	
Attitude for online shopping (ATO)	ATO1	(Chetioui et al., 2021); (Al-Debei et al., 2015);(Tran & Nguyen, 2022)	I enjoy online shopping and it is positive part of my family after pandemic	0.87	0.86
	ATO2		Online shopping saves my time and energy	0.91	

	ATO3		I was too busy before the epidemic to buy as regularly as I wanted.	0.86	
	ATO4		It is challenging for me to shop during the social distance time since stores close.	0.72	
	ATO5		Before the pandemic ,in-store shopping made me relax	0.82	
	ATO6		I like to purchase in Physical shop since I can directly compare things.	0.87	
	ATO7		I buy in physical stores because they provide excellent customer service.	0.85	
Perceived usefulness(PU)	PU1	(Renny et al., 2013);(Ventre & Kolbe, 2020)	In the event of a pandemic, I would discover that things acquired online would be beneficial in my life.	0.87	0.85
	PU2		Using online products which I bought during pandemic can increase my productivity	0.82	
	PU3		Online shopping improves my work performance impacted by pandemic	0.88	
	PU4		Online shopping enhances my effectiveness in my work impacted by pandemic	0.87	
Perceived Economic condition (PEC)	PEC1	(Vázquez-Martínez et al., 2021); (Valaskova et al., 2021)	Nothing changed ,I am an online purchaser even before pandemic	0.85	0.88
	PEC2		Yes, because of the pandemic, I am more inclined to purchase online now.	0.88	
	PEC3		No, prior to the pandemic, I mostly bought from physical stores, and I still do.	0.87	

	PEC4		No, prior to the outbreak, I primarily purchased from internet retailers, but now I mostly purchase from physical shop.	0.86	
Trust and Reliability	TR1	(Lee & Turban, 2001); (Urban et al., 2009)	Transactions in online shopping are safe	0.92	0.81
(TR)	TR2		Privacy of online shopping users is well protected	0.82	
	TR3		Online shopping transactions are reliable	0.87	
	TR4		Security measures in online shopping are adequate	0.85	
Pandemic impact on buying behavioral intention (PBI)	PBB11	(Toska et al., 2022); (Soares et al., 2022)	Even after the epidemic is over, I will continue to purchase online.	0.87	0.87
	PBB12		Even after the epidemic, I will continue to utilize apps that supply items to my home.	0.89	
	PBB13		After pandemic I resume my outings to shop offline than online	0.91	
Online buying (OB)	OB1	(Candrawati & Nuvriasari, 2021); (Sorrentino et al., 2022); (Gu et al., 2021)	I frequently shop online after pandemic	0.82	0.86
	OB2		I recommend other for online shopping after pandemic	0.88	
	OB3		Online shopping saves my time and effort	0.86	
	OB4		A wide variety of products and options are available	0.85	
	OB5		In online shopping, product searching and comparing is easy.	0.79	
Offline buying (OFB)	OFB1	(Sayyida et al., 2021); (Moon et al.,	Offline shopping gives me more satisfaction than online shopping	0.76	0.87

	OFB2	2021); (Schulze, 2021)	Offline shopping is an entertainment and socializing activity for me with friends and relatives	0.81	
	OFB3		In offline shopping, I can experience, feel and see the product.	0.88	
	OFB4		Through offline shopping, I can get immediate and urgent needs of buying a product	0.84	

Validity defines the indications that are used to describe and measure a thought. To assess convergent validity, all items must be analyzed by their factor loadings on respective constructs, followed by a test to see if all constructs' average variance extracted (AVE) values are more than the suggested cut-off values of 0.55 (Wilkins and Hillers, 1994) and 0.5 (Hair et al., 2010), as shown in Table 3.

Following the EFA analysis, the report examines the measuring model using research criteria. The authors used the PLS-SEM approach to investigate the standardized path coefficient. Table 4 displays the standardized path coefficient values of the sub-constructs and the constructs' path coefficients. The construct correlations were examined to confirm discriminant validity, and the correlation values did not exceed the 0.85 threshold given by Bagozzi and Yi, 1988. All these results are presented in Table 4 and Table 5.

Table 4. Discriminant analysis, convergent validity, and reliability

	<b>Cronbach's alpha</b>	<b>Composite reliability (CR)</b>	<b>Average Variance Extracted (AVE)</b>	<b>CT</b>	<b>ATO</b>	<b>PU</b>	<b>PEC</b>	<b>TR</b>	<b>PBBI</b>	<b>OB</b>	<b>OFB</b>
CT	0.82	0.83	0.796	<b>0.883</b>							
ATO	0.86	0.87	0.708	0.149	<b>0.843</b>						
PU	0.85	0.86	0.692	0.624	0.157	<b>0.832</b>					
PEC	0.88	0.89	0.752	0.712	0.269	0.827	<b>0.866</b>				
TR	0.81	0.82	0.612	0.715	0.312	0.414	0.586	<b>0.783</b>			
PBBI	0.87	0.88	0.596	0.574	0.221	0.391	0.414	0.587	<b>0.772</b>		
OB	0.86	0.87	0.765	0.702	0.322	0.434	0.567	0.657	0.445	<b>0.794</b>	
OFB	0.87	0.88	0.792	0.758	0.568	0.679	0.584	0.716	0.419	0.367	<b>0.870</b>

Table 5. Reliability of construct items and CFA results

<b>Construct</b>	<b>Construct items</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Standard Loading</b>	<b>Squared Multiple Correlations (SMC)</b>
Cultural and Traditional values (CT)	CT1	4.32	0.876	0.684	0.468
	CT2	4.24	0.865	0.824	0.679
	CT3	4.09	0.894	0.854	0.729
	CT4	4.26	0.962	0.872	0.760
Attitude for online shopping (ATO)	ATO1	4.28	0.891	0.842	0.709
	ATO2	4.20	0.867	0.859	0.738
	ATO3	4.08	0.845	0.850	0.723
	ATO4	4.26	0.934	0.860	0.740
	ATO5	4.21	0.876	0.853	0.728
	ATO6	4.32	0.875	0.862	0.743
	ATO7	4.25	0.860	0.832	0.692
Perceived usefulness(PU)	PU1	4.36	1.053	0.786	0.618
	PU2	3.34	1.126	0.766	0.587
	PU3	3.27	1.078	0.823	0.677
	PU4	4.67	1.037	0.783	0.613
Perceived Economic condition (PEC)	PEC1	3.26	1.023	0.764	0.584
	PEC2	3.24	1.186	0.725	0.526
	PEC3	3.08	1.304	0.733	0.537
	PEC4	3.05	1.173	0.789	0.623
Trust and Reliability (TR)	TR1	3.89	1.032	0.734	0.539
	TR2	3.46	1.056	0.862	0.743
	TR3	2.87	1.302	0.879	0.773
	TR4	3.97	1.189	0.748	0.560
Pandemic impact on buying behavioral intention(PBBI)	PBBI1	3.98	1.021	0.896	0.803
	PBBI2	3.69	1.187	0.775	0.601
	PBBI3	4.45	1.067	0.791	0.626
Online buying (OB)	OB1	4.36	1.022	0.878	0.771
	OB2	4.57	1.161	0.756	0.572
	OB3	3.26	1.304	0.864	0.746
	OB4	3.78	1.023	0.853	0.728

	OB5	4.34	1.179	0.776	0.602
Offline buying (OFB)	OFB1	3.75	1.071	0.867	0.752
	OFB2	4.87	1.055	0.866	0.750
	OFB3	4.20	1.167	0.765	0.585
	OFB4	4.08	1.133	0.723	0.523

The conceptual model and assumptions were evaluated using structural equation modeling (SEM) with maximum likelihood estimation using PLS-SEM (Table 6). Hu and Bentler (1999) and Steenkamp and Baumgartner (1998) suggested:  $\chi^2/df \leq 3.0$ , comparative fit indices (CFI), goodness of fit index (GFI), and Tucker-Lewis index (TLI)  $\geq 0.90$ , and root mean square error of approximation (RMSEA)  $\leq 0.80$ . These values suggest a good fit. However, the overall model fitness indices:  $\chi^2/df = 1.427$ , CFI = 0.967, GFI = 0.982, TLI = 0.972, RMR = 0.063 and RMSEA = 0.057.

All of the model's proposed hypotheses were validated and supported as the SEM analysis progressed. The first hypothesis examined at the positive effects of cultural and traditional values on pandemic impact on buying behavioral intention after the COVID-19 subsidies, leading to a significant result of  $\beta = 0.467$  ( $p < 0.001$ ). The second hypothesis investigated the influence of online shopping attitudes on the pandemic impact on purchasing behavioral intention. H2 produced a standardized regression weight of  $\beta = 0.413$  ( $p = 0.039$ ); therefore, H2 is supported. The third hypothesis was to examine the link between perceived utility and pandemic influence on purchasing behavior. H3 produced a standardized regression weight of  $\beta = 0.435$  ( $p < 0.001$ ); therefore, H3 is supported. The fourth hypothesis aimed to investigate the relationship between perceived economic conditions and pandemic impact on buying behavioral intention. H4 produced a standardized regression weight of  $\beta = 0.001$  ( $p = 0.985$ ) therefore, H4 is not supported. The fifth hypothesis aimed to investigate the relationship between trust and reliability on the pandemic impact on buying behavioral intention. H5 produced a standardized regression weight of  $\beta = 0.290$  ( $p < 0.001$ ); therefore, H5 is supported. The sixth hypothesis was to evaluate the link between the pandemic influence on purchasing behavior and online purchasing intention. H6 produced a standardized regression weight of  $\beta = 0.487$  ( $p < 0.001$ ); therefore, H6 is supported. The seventh hypothesis aimed to investigate the relationship between the pandemic impact on buying behavioral intention toward offline buying. H7 produced a standardized regression weight of  $\beta = 0.436$  ( $p < 0.001$ ); therefore, H7 is supported.

Table 6. SEM results

Hypothesis	Standardized coefficient ( $\beta$ )	t-Value	Sig. (p-value)	Hypotheses	Result
CT $\rightarrow$ PBI	0.467	4.567	0.006***	H1	Supported
ATO $\rightarrow$ PBI	0.413	4.213	0.039**	H2	Supported
PU $\rightarrow$ PBI	0.435	2.067	0.00***	H3	Supported
PEC $\rightarrow$ PBI	0.001	0.016	0.985**	H4	Not Supported
TR $\rightarrow$ PBI	0.290	3.892	0.006***	H5	Supported
PBI $\rightarrow$ OB	0.487	3.286	0.00***	H6	Supported
PBI $\rightarrow$ OFB	0.436	2.902	0.006***	H7	Supported

Note(s): \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ (one-tailed test)

PLS-SEM describes the overall goodness-of-fit score and investigates  $R^2$  and the structural relationship with the regression model to explain its validity (Chin, 1998). The analysis outcomes demonstrate the supporting evidence for the model's hypothesis, shown in Figure 2. The analysis indicates that the pandemic impact on buying behavioral intention has a considerable favorable impact on online purchases by customers., with a significance level at the  $p < 0.05$  level. About 79% of the variance justified the attitude, where  $R^2 = 0.793$  is derived from CT, ATO, PU, PEC, and TR.

The standardized path coefficient accounted for 0.487 of the dependent variable pandemic buying behavior intention toward online buying where  $R^2$  is accounted for 67.2% and toward offline buying where  $R^2$  is accounted for 64.3% respectively in the model, greater than the acceptable standard significance threshold of 0.20 (Yang and Peterson, 2004). As a result, the overall model's fitness is good.

The projected hypothesis's final decision is displayed in Table 6. The values of the t-statistics of the path of H1 (4.567), H2 (4.213), H3 (2.067), H5 (3.892), H6 (3.826) and H7(2.902) were greater than the standard value. Thus, the study's findings support the hypothesis that CT, ATO, PU, and TR. positively influence the buying behavior intention.

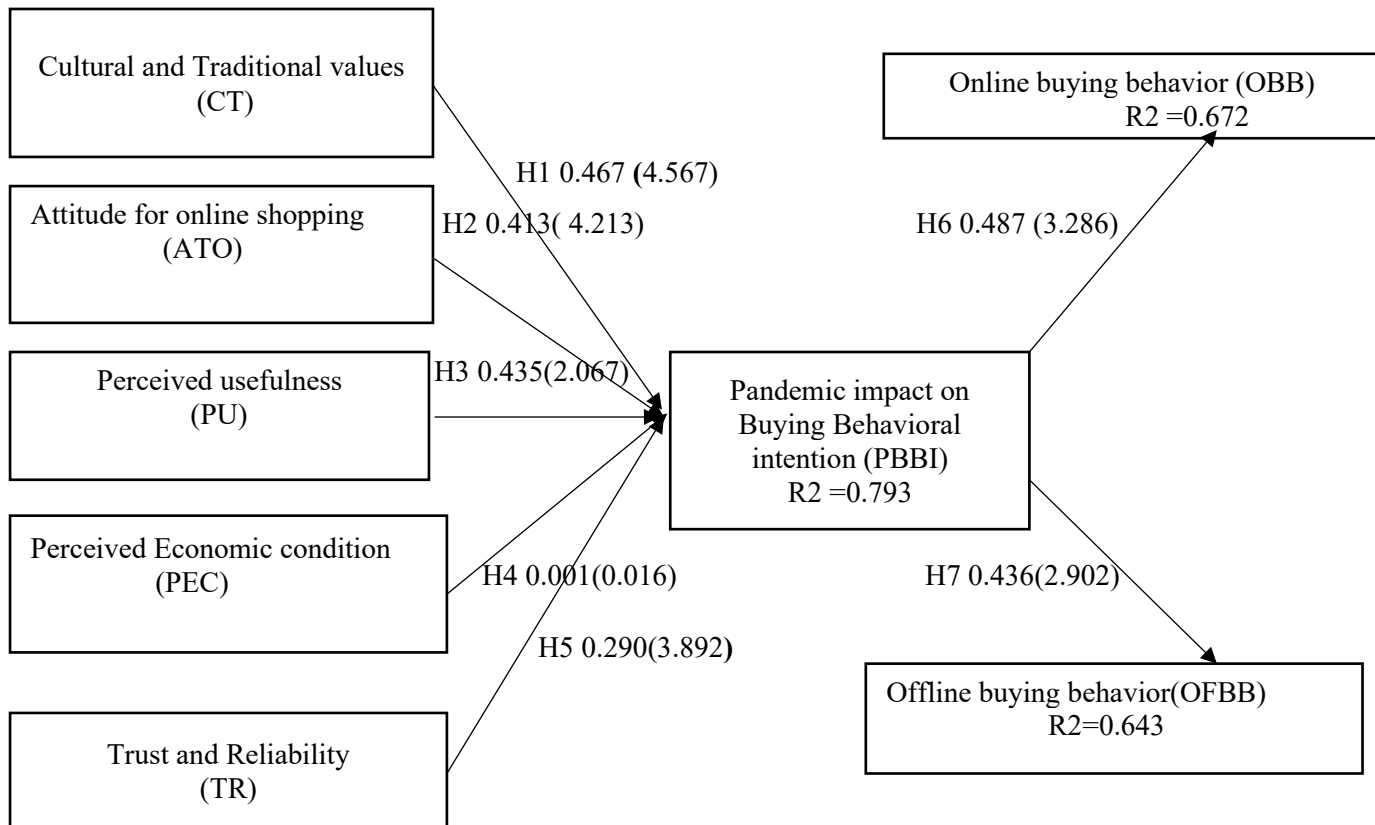


Fig. 2: The overall impact of the proposed theoretical framework

Three hundred twenty consumers participated in the survey, as shown in Table 1. All respondents are from Oman. According to the statistics, female respondents predominate (57.81%) compared to male respondents( 42.19%), meaning that those segments are more active in online shopping due to the pandemic effect. The respondents' ages were assessed using a ratio scale and ranged from 17 to 35, with a mean of 23.52 and a standard deviation of 2.37. It implies that the lockout and curfew regulation has compelled certain consumer groups to engage in increased online buying. According to Accenture research (2020), people live differently, purchase differently, and think differently in various ways. The results show that Cultural and Traditional values (CT)and Perceived usefulness(PU) are the two major determinants affecting the consumers' pandemic impact on buying behavioral intention. Consumers view the functions and activities of online purchasing to be extremely simple and uncomplicated, which

results in a good attitude toward this platform as it fits the model. Following the epidemic, Oman's customers are getting more interested in online buying since it provides convenient and pleasant shopping from home. Not only are consumers embracing new technology that improves work, research, and leisure activities, but they are also adopting new and acceptable patterns of consumption. Perceived economic conditions and attitude toward online shopping are the essential attributes that have been analyzed in this study and found that they significantly influence online buying behavior after the pandemic. This study demonstrates a substantial association between Cultural and Traditional values and customers' behavioral intention to continue to follow the same online buying habit learned during the epidemic.

According to the proposal, as the lockdown and social distance have altered the full range of consumer behavior, it has provided various new study possibilities grounded in reality. This is an exploratory and constructive study since the goal is to give a thorough picture of the change in customer purchasing behavior caused by the COVID-19 epidemic. However, the study explored several new behavioral traits that would broaden the theoretical understanding of current customer purchasing habits. These novel behavioral tendencies have been discovered and validated due to this investigation. In addition, the article developed a conceptual model addressing the factors influencing client purchase behavior while deciding between online and physical shops. All parts of the suggested idea were verified and confirmed during this investigation. According to the study results, there is a significant shift in client purchasing behavior toward online stores following the outbreak of COVID-19. These insights will be helpful for Oman enterprises and retailers in anticipating predicted demand on their channels.

Furthermore, the insights will aid businesses in allocating resources across various online/offline media. Before investing time and effort, managers must investigate consumers' purchasing habits, the impact of variables on shifting behavioral patterns, and the effect of determinants on changing behavioral patterns. This will help them gain competitive advantages by allowing retailers to respond to market changes wisely

## **5. Conclusion**

This study provides useful insights into post-pandemic consumer behavior in Oman by highlighting the factors shaping online and offline buying decisions. The results empirically demonstrate the significant effects of cultural values, attitude, perceived usefulness and trust in driving online buying intention, while economic conditions had no impact. A survey of Oman consumer shopping behavior before and during the COVID-19 epidemic found that the crisis impacted purchasing behavior, with consumers dramatically increasing their online purchases. The current study evaluated these improvements. Using correlation analysis, the presence of correlations between the researched elements and the complex indicator of activation of online consumer activity was discovered, and the direction of their changes was investigated in the context of the pandemic. The conceptual model's determinants and sub-determinants have supported the measures' reliability and validity. The fruitful results of this study are: (1) There is a significant shift in customer preference toward internet retailers. (2) New behavioral patterns associated with COVID-19 are impacting client purchasing behavior. Finally, this study adds to our understanding of how the pandemic influenced Omani consumers' purchasing behavior toward online and offline businesses.

Despite the valuable insights gained from this study, there are certain limitations that warrant consideration. Firstly, it's important to acknowledge the scope of generalization, as the findings are specifically tailored to post-pandemic consumer behavior in Oman. Moreover, examining the potential influence of government policies or interventions on consumer behavior during and after the pandemic could provide valuable insights with practical implications.

Looking ahead, there are several promising avenues for future research. A longitudinal analysis could provide a more comprehensive understanding of how post-pandemic consumer trends evolve over



time. Additionally, broadening the research scope to include cross-cultural comparative studies might unveil unique factors shaping buying decisions in diverse cultural settings.

## References

- Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: an online-offline comparative and the impact of social media. *Spanish Journal of Marketing - ESIC*, 22(1), 42–62. <https://doi.org/10.1108/SJME-03-2018-007>
- Avcılar, M., & Özsoy, T. (2015). Determining the Effects of Perceived Utilitarian and Hedonic Value on Online Shopping Intentions. *International Journal of Marketing Studies*, 7, 27–49. <https://doi.org/10.5539/ijms.v7n6p27>
- Bell, A., Fairbrother, M., & Jones, K. (2019). Fixed and random effects models: making an informed choice. *Quality & Quantity*, 53(2), 1051–1074. <https://doi.org/10.1007/s11135-018-0802-x>
- Candrawati, K., & Nuvriasari, A. (2021). Meta Analysis of Consumer Behavior Changes During The Covid-19 Pandemic Research. *Jurnal Sains Pemasaran Indonesia (Indonesian Journal of Marketing Science)*, 20, 152–162. <https://doi.org/10.14710/jspi.v20i2.152-162>
- Chin, W. W. (1998). Issues and opinion on structural equation modeling. *MIS Quarterly*, 22(1), VII–XVI. <https://www.proquest.com/scholarly-journals/issues-opinion-on-structural-equation-modeling/docview/218118553/se-2?accountid=136209>
- Davis, F., & Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13, 319. <https://doi.org/10.2307/249008>
- Díaz, A., Gómez, M., & Molina, A. (2017). A comparison of online and offline consumer behaviour: An empirical study on a cinema shopping context. *Journal of Retailing and Consumer Services*, 38, 44–50. <https://doi.org/https://doi.org/10.1016/j.jretconser.2017.05.003>
- Du, S. (2023). Digital Transformation and Innovation Strategies for Traditional Retail Stores. *Advances in Economics, Management and Political Sciences*, 18, 314–319. <https://doi.org/10.54254/2754-1169/18/20230090>
- F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Fan, Y., Chen, J., Shirkey, G., John, R., Wu, S. R., Park, H., & Shao, C. (2016). Applications of structural equation modeling (SEM) in ecological studies: an updated review. *Ecological Processes*, 5(1), 19. <https://doi.org/10.1186/s13717-016-0063-3>
- Febrilia, I., & Warokka, A. (2021). Consumer traits and situational factors: Exploring the consumer's online impulse buying in the pandemic time. *Social Sciences & Humanities Open*, 4(1), 100182. <https://doi.org/https://doi.org/10.1016/j.ssaho.2021.100182>
- Grashuis, J., Skevas, T., & Segovia, M. S. (2020). Grocery Shopping Preferences during the COVID-19 Pandemic. In *Sustainability* (Vol. 12, Issue 13). <https://doi.org/10.3390/su12135369>
- Gu, S., Ślusarczyk, B., Hajizada, S., Kovalyova, I., & Sakhbieva, A. (2021). Impact of the COVID-19 Pandemic on Online Consumer Purchasing Behavior. *Journal of Theoretical and Applied Electronic Commerce Research*, 16, 2263–2281. <https://doi.org/10.3390/jtaer16060125>

- IULIANA, C., Vinerean, S., Opreana, A., Radulescu, V., DUMITRU, G., & ANDREEA, R. (2022). The Impact of the Covid-19 Pandemic on Consumers' Online Shopping Behaviour – An Empirical Model. *ECONOMIC COMPUTATION AND ECONOMIC CYBERNETICS STUDIES AND RESEARCH*, 56, 41–56. <https://doi.org/10.24818/18423264/56.1.22.03>
- Leak, G. K., & Finken, L. L. (2011). The Relationship Between the Constructs of Religiousness and Prejudice: A Structural Equation Model Analysis. *The International Journal for the Psychology of Religion*, 21(1), 43–62. <https://doi.org/10.1080/10508619.2011.532448>
- Lee, M. K. O., & Turban, E. (2001). A Trust Model for Consumer Internet Shopping. *International Journal of Electronic Commerce*, 6(1), 75–91. <https://doi.org/10.1080/10864415.2001.11044227>
- Moon, J., Choe, Y., & Song, H. (2021). Determinants of Consumers' Online/Offline Shopping Behaviours during the COVID-19 Pandemic. In *International Journal of Environmental Research and Public Health* (Vol. 18, Issue 4). <https://doi.org/10.3390/ijerph18041593>
- Mukit, M. M. H., Nabila, N. J., Abdel-Razzaq, A. I., & Shaznin, K. F. (2021). The Economic Influence on Consumers Buying Behavior in Islamic Countries: Evidence from the COVID-19 Economic Crisis. *ECONOMICS*, 9(1), 179–203. <https://doi.org/doi:10.2478/eoik-2021-0003>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Renny, Guritno, S., & Siringoringo, H. (2013). Perceived Usefulness, Ease of Use, and Attitude Towards Online Shopping Usefulness Towards Online Airlines Ticket Purchase. *Procedia - Social and Behavioral Sciences*, 81, 212–216. <https://doi.org/https://doi.org/10.1016/j.sbspro.2013.06.415>
- Sayyida, S., Hartini, S., Gunawan, S., & Husin, S. (2021). The Impact of the Covid-19 Pandemic on Retail Consumer Behavior. *Aptisi Transactions on Management (ATM)*, 5, 79–88. <https://doi.org/10.33050/atm.v5i1.1497>
- Schulze, J. (2021). *Online and Offline Shopping in the UK: The Impact of COVID-19 on Consumer Buying Behaviour and the Digitalization Process*.
- Soares, J. C., Limongi, R., De Sousa Júnior, J. H., Santos, W. S., Raasch, M., & Hoeckesfeld, L. (2022). Assessing the effects of COVID-19-related risk on online shopping behavior. *Journal of Marketing Analytics*. <https://doi.org/10.1057/s41270-022-00156-9>
- Sorrentino, A., Leone, D., & Caporuscio, A. (2022). Changes in the post-covid-19 consumers' behaviors and lifestyle in italy. A disaster management perspective. *Italian Journal of Marketing*, 2022(1), 87–106. <https://doi.org/10.1007/s43039-021-00043-8>
- Sumi, R. S., & Ahmed, M. (2022). Investigating young consumers' online buying behavior in COVID-19 pandemic: perspective of Bangladesh. *IIM Ranchi Journal of Management Studies*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/IRJMS-09-2021-0127>
- Taber, K. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48, 1–24. <https://doi.org/10.1007/s11165-016-9602-2>
- Tao, H., Sun, X., Liu, X., Tian, J., & Zhang, D. (2022). The Impact of Consumer Purchase Behavior Changes on the Business Model Design of Consumer Services Companies Over the Course of COVID-19. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.818845>
- Toska, A., Zeqiri, J., Ramadani, V., & Ribeiro-Navarrete, S. (2022). Covid-19 and consumers' online purchase intention among an older-aged group of Kosovo. *International Journal of Emerging Markets*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/IJOEM-12-2021-1875>

Tran, V. D., & Nguyen, T. D. (2022). The impact of security, individuality, reputation, and consumer attitudes on purchase intention of online shopping: The evidence in Vietnam. *Cogent Psychology*, 9(1), 2035530. <https://doi.org/10.1080/23311908.2022.2035530>

Urban, G. L., Amyx, C., & Lorenzon, A. (2009). Online Trust: State of the Art, New Frontiers, and Research Potential. *Journal of Interactive Marketing*, 23(2), 179–190. <https://doi.org/https://doi.org/10.1016/j.intmar.2009.03.001>

Valaskova, K., Durana, P., & Adamko, P. (2021). Changes in Consumers' Purchase Patterns as a Consequence of the COVID-19 Pandemic. In *Mathematics* (Vol. 9, Issue 15). <https://doi.org/10.3390/math9151788>

van Riel, A. C. R., Henseler, J., Kemény, I., & Sasovova, Z. (2017). Estimating hierarchical constructs using consistent partial least squares. *Industrial Management & Data Systems*, 117(3), 459–477. <https://doi.org/10.1108/IMDS-07-2016-0286>

Vázquez-Martínez, U. J., Morales-Mediano, J., & Leal-Rodríguez, A. L. (2021). The impact of the COVID-19 crisis on consumer purchasing motivation and behavior. *European Research on Management and Business Economics*, 27(3), 100166. <https://doi.org/https://doi.org/10.1016/j.iedeen.2021.100166>