The Impact of the Emerging Coronavirus (COVID-19) on E-Commerce in the Kingdom of Saudi Arabia

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Abstract: Despite the efforts of some governments to encourage online commerce during the pandemic, they have encountered some obstacles when selling. Additionally, regulations that are not suitable for e-commerce can create barriers for businesses. Although many of these challenges predate the outbreak of the virus, the current crisis and the new role of e-commerce for consumers and businesses heightens the need for public action. This research aimed to study the effects of the coronavirus pandemic on customer orientation in electronic commerce by understanding the influence of precautionary measures (home quarantine, travel limits, anxiety, and psychological anxiety) on electronic commerce (e-commerce). For this purpose, a questionnaire was distributed to a sample size of 492 individuals in the Kingdom of Saudi Arabia. Further, to analyze the study data, the SEM structural equations method was used via the Smart PLS. After analyzing and testing the hypotheses of the study, it was found that there is a direct positive impact of the emerging coronavirus (COVID-19) on customer behavior toward e-commerce in Saudi Arabia. There is a positive, direct effect of home quarantine on the orientation of individuals toward e-commerce. Moreover, there is a positive, direct impact of movement restriction on the orientation of individuals toward e-commerce. Finally, there is a positive, direct effect of psychological anxiety on the attitude of individuals toward e-commerce.

Key-Words: - COVID-19, e-commerce, home quarantine, movement restriction, psychological anxiety, Saudi Arabia

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1 Introduction

Several challenges can be encountered when setting up and implementing an e-commerce platform. When setting up e-commerce portals, one of the main difficulties encountered lies in the process of creating a secure online payment platform. These challenges are often technological "use of advanced encrypted technologies", social "consumer education in the use of online transaction sites" and related to payment "limited number of online credit card users". In addition, the United Nations Conference on Trade and Development "UNCTAD" informs us about all the factors that hinder the development of e-commerce, which are in the form of economic, socio-political and cognitive barriers. For UNCTAD, the spread of the coronavirus is certainly above all a public health emergency, but also a significant economic threat.

The Chinese government soon announced the first case of Coronavirus, this epidemic swept the world in a short period not exceeding days, and it soon turned into a pandemic. Most of the countries in the world have successively announced the discovery of cases among their citizens, which led most of the countries of the world to take precautionary measures at international airports for those coming from China at the beginning. However, after a while, the precautionary measures at these airports became applicable to all air and sea travelers to and from any country around the world by following the mandatory thermal detection procedures for travelers. Consequently, there was a kind of reservation between the countries of the world that led to the closing of the geographical borders between them.

After the pandemic has spread sweeping across the world, in addition to its health effects, it has had an economic impact on growth, as expectations indicate that growth in the Middle East and Central Asia

region will decline from 1.2% in 2019 to 2.8% in 2020 [1]. The Kingdom of Saudi Arabia was also affected by the Covid 19 pandemic, at the beginning of March, attendance at workplaces in all ministries, government and private institutions and institutions was suspended, except in limited numbers and for absolute necessity. All educational and training institutions, including schools, universities, stadiums, and sports centers, in addition to shops and commercial centers, have been closed, with the exception of health institutions, pharmacies and supermarkets. This is part of the Saudi government's efforts to control the spread of the infectious virus, including stopping the export of all medical and laboratory products, supplies, and equipment used to detect or prevent the virus (Covid 19). In addition, state revenues have been severely affected due to the most affected energy sector, as oil prices have fallen to levels not seen in more than 20 years by about 50%, which is considered one of the main sources of fiscal revenues in the state. The financial sector was also affected, as stock markets decreased by 20% to 30%, and expectations indicate the possibility of a contraction in the real GDP in the oil-exporting countries in North Africa, the Middle East and Afghanistan by 4.2% for the year 2020. Also, expectations indicate a 2.7% contraction in growth in the GCC countries for the same year [1].

In light of this current situation, information and communication technology plays the largest role in the modern production process, and with the multiplication of human knowledge, the global economy has turned into a knowledge-based economy [2]. Where the key to this knowledge was the development of technology, which in turn led to the emergence of other methods of trade that differ from traditional trade. E-commerce emerged that was characterized by saving time and effort and easy access to local and foreign markets, and also helped economic growth and improve exports and production.

E-commerce has become among the fastest growing sectors in the global economy, and its role has emerged in recent years [3]. In light of the Corona pandemic, this role has emerged clearly. E-commerce has become an aid to the business sector to mitigate the effects of this pandemic. The restrictions imposed in light of this pandemic have also affected consumer buying behavior, as many consumers have directed to use different e-commerce channels to meet their multiple needs, and it should be noted that government decisions to combat the Corona pandemic have contributed significantly to this trend [4].

The importance of the study stems from the importance of the topic being researched, as this study deals with the impact of the (Covid-19) pandemic on the growth of e-commerce in the Kingdom of Saudi Arabia and its contribution to reducing infection from (Covid-19) by reducing the cases of mixing, which were among the most prominent preventive means to limit the spread of infection among the public. In addition to that, the main role that electronic commerce plays in general in economic growth and limiting the effects of the pandemic through its advantages and its close relationship with the digital economy, which is one of the pillars of the Kingdom's 2030 vision. So the current study seeks to shed light on the extent of the impact of the pandemic (Covid-19) on the growth of e-commerce in the Kingdom, and the role it plays in contributing to mitigating the health and economic effects of the (Covid-19) pandemic. In light of this, the study problem was identified in the following main question.

The rest of the paper is organized as follows. Section 1 provides the literature review. Section 2 presents an overview of the impact of the Corona pandemic on consumer behavior and e-commerce. Section 3 discusses the main models and econometric methodology. Section 4 discusses the empirical results of the estimations. Section 5 concludes with a summary of the findings and policy implications.

2 Problem Formulation

The purpose of this study was to answer the following question: What is the impact of the COVID-19 pandemic on electronic commerce (e-commerce) in the Kingdom of Saudi Arabia?

3 Literature review and Hypothesis Development

In this section, we try to present some previous literature for this research. The impacts of the emerging corona virus (Covid-19) on e-commerce have constituted an important subject for researchers. [5] determined the e-commerce trends in coronavirus predicament as well as how imminent progress in e-commerce that might affect consumer behavior in

future. They examined that e-commerce grew due to coronavirus. E-commerce is become a substitute source and considered top in this condition, and e-retailers provide goods that usually consumers bought in superstore traditionally. [6] study the effect of the coronavirus on e-commerce. Most of the kits are made in China and hence the reliability is remarkable. With the effect of the coronavirus, all shipping processes are increased, which has increased the e-commerce growth of the country and the state. The research paper here describes the impact of the corona virus on India's online commerce. On the analysis, they found that online businesses are increased due to this pandemic disease. [7] indicates that as quarantining considerably restricts recreational opportunities, the importance of hedonic motives for remaining activities, such as online shopping, increases. This appears to reflect changes in the behavior of consumers moving from offline to online shopping. They also show that as people spend more time at home, brands have responded by switching from offline media to online shopping. Thus, we propose the following hypothesis:

HP1: There is a positive relationship between home quarantine on customer behavior toward e-commerce.

[8] investigated the effects of Coronavirus spread on stock markets. Coronavirus spread has been measured by cumulative cases, new cases, cumulative deaths and new deaths. This has been applied on the worst 6 countries (according to number of cumulative cases), on daily basis over the period from March 1, 2020 till April 10, 2020. Coronavirus spread has been measured by numbers per million of population, while stock market return is measured by Δ in stock market index. They results indicate that stock market return seems to be sensitive to Coronavirus cases more than deaths, and to Coronavirus cumulative indicators more than new ones. Besides, robustness check confirms the negative effect of Coronavirus spread on stock market return for China, France, Germany and Spain. However, these effects haven't been confirmed for Italy and United States. [9] studied the impact of the coronavirus on the online business of Malaysia. On analyzing it has found that online businesses are seriously hampered due to this pandemic disease. The results showed that since the maximum number of products comes from China and the maximum industries are closed, which means that there is no import and export of the product. We therefore posit the following hypothesis:

HP2: There is a positive relationship between movement restriction and customer behavior toward e-commerce.

Consumers are very concerned about the impact of COVID-19, both on health and the economy. People react in different ways and have different attitudes, behaviors and buying habits [10]. All over the world, people are afraid as they struggle to adjust to a new normal. Fear rises as people reflect on what this crisis means for them, but more importantly, what it means for their family, friends and society in general.

Consumers are responding to the crisis in various ways. Some people feel anxious and worried, which encourages compulsive purchases of basic and hygiene products. At the other extreme, some consumers remain indifferent to the pandemic and continue to operate as usual, despite recommendations from government and healthcare professionals [11]. Consumer Staples companies will need to understand the reaction of their own consumers and develop personalized marketing strategies accordingly. The days of universal marketing are over. Consumers fear the economic impact of COVID-19 more than their health. Therefore, we hypothesise that:

HP3: There is a positive relationship between psychological anxiety and customer behavior toward e-commerce.

[12] investigated the effects of the spread of COVID-19 on global ecommerce companies, where the five largest e-commerce companies in the world were chosen in terms of revenues and market value, and they were as follows: American Amazon, Chinese Alibaba, Japanese Rakuten, German Zalando, United kingdom ASOS, has been measuring the prevalence of corona virus by "cumulative infections" and "cumulative deaths" on a daily basis. Besides, it is measured through the values of both the "new corona virus cases" and the "new corona virus deaths" daily, the dependent variable reflects the response of the global e-commerce market to the impact of the spread of the corona virus and is measured by the daily returns of the shares of ecommerce companies to the global financial markets. This was applied on a daily basis from 15 March 2020 to 25 May 2020. The results indicates that the percentage of the effect of coronavirus spread varied from one company to another, depending on the country to which it

belonged, where the American company Amazon and the United kingdom company ASOS were the cumulative cases of infection are the most influential and this is consistent with that they are the most affected countries of the coronavirus during the period of research, and the Chinese company Alibaba and Rakuten company Japanese "Corona virus cases" were the most influential in their share price returns, and the German company Zalando was the most influential variable "cumulative deaths".

[13] investigate the factors that affect consumer's online shopping behavior. The study results suggest that consumers' online shopping behavior is being affected by several factors like demographic factors, social factors, consumer online shopping experience, knowledge of using internet and computer, website design, social media, situational factors, facilitating conditions, product characteristics, sales promotional scheme, payment option, delivery of goods and after sales services plays an important role in online shopping. We therefore propose the following hypothesis:

HP4: There is a positive relationship between sample's views regarding COVID-19 preventive measures and demographic variables.

The use of demographics by researchers in the online shopping literature is common, however, they are typically constructed as either moderators or control factors. Little attention has been given to explicitly modelling the predictive utility of demographics. [14] studies the impact of nine demographics, six social connectedness measures and five prior online experience variables on consumers 'actual online purchases. A large and representative data set was used. The results show that a model on the basis demographic data alone explains 22.6% of the variance in the consumers 'overall online shopping behavior. The model's utility increased to 45.4% once social connectedness and prior internet experience were added to the model. Furthermore, analyzing 14 online product categories, we found that the predictive power of demographic variables is product specific. Overall, the results strongly support the use by practitioners of demographics as powerful predictors for direct targeting of online shoppers.

Prior research examining the effect of gender on willingness to shop online revealed that men are more likely to conduct online transactions than women ([15]; [16]; [17]). There are some studies where opposing, or mixed, conclusions were reported; however, these appear to be exceptions to the general pattern, such as the purchase of clothing by women ([18]; [19]). Several explanations have been advanced in the literature for the gender differences including risk perception a general attitude towards technology [20] and differences in role specializations ([21]; [22]). Perhaps, the most widely investigated reason is that women appear to be more concerned with risk associated with e-commerce than their men counterparts ([23]; [24]; [25]). Therefore, we propose the following hypothesis:

HP5: There is a positive relationship between sample's views regarding e-commerce and demographic variables.

4 Methodology

The study sample consists of 492 individuals over the age of 18 years. The research sample was determined based on an objective sampling method, which relied on the testing of individuals who had the information needed by the researcher. An initial questionnaire was prepared for use in the collection of data and information. The questionnaire was submitted to the arbitrators to test its suitability for all data. It was modified at the discretion of the arbitrators.

The questionnaire was divided into three parts:

- The first section consisted of the personal data of the sample population and had six items.
- The second section dealt with variables that express COVID-19 and was divided into three axes:
  - Home quarantine, which consisted of six items.
  - Restriction on movement, which consisted of five items.
  - Psychological anxiety, which consisted of four items.
  - The third section concerned the dependent variable that expresses e-commerce and consisted of six items.

A 5-point Likert scale was used in the questionnaire (5-strongly agree, 4-agree, 3-neutral, 2-disagree, 1-strongly disagree). There is no missing data because all of the questions on the Google form were needed. The A-Priori sample size calculator was used in the analysis for structural equation modeling (SEM) (Soper, 2020). The required information includes 0.5 expected effect sizes (Cohen's d), 95% desired statistical power level, and 0.05 likelihood level. For all effect sizes, the sample size required is 176, 88, 212, and 106, respectively. The study's sample size of

492 met the requirements for adequately representing the total population.

5 Results

5.1 Assessment of Measurements Model Convergent Validity

To analyze the study data and test the validity of the hypotheses, we used one of the most effective statistical tools: PLS-SEM modeling of structural equations [26].

The process of checking the quality and conformity of the measurement model is the first essential step, as the calculation of the following indicators was used: Cronbach's Alpha, composite reliability (CR), and average variance extracted (AVE).

Table 1. Results of Measurements Model: Convergent Validity

Items	Constructs	Loading	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
H1	Home quarantine	0.798	0.884	0.887	0.912	0.634
H2		0.822				
H3		0.853				
H4		0.715				
H5		0.792				
H6		0.791				
M1	Movement restriction	0.788	0.837	0.847	0.884	0.604
M2		0.794				
M3		0.721				
M4		0.831				
M5		0.748				
P1	Psychological anxiety	0.847	0.886	0.888	0.921	0.745
P2		0.882				
P3		0.853				
P4		0.871				
E1	E-commerce	0.736	0.829	0.842	0.874	0.536
E2		0.704				
E3		0.675				
E4		0.727				
E5		0.747				
E6		0.799				

Through Table 1, it is clear that all the outer loadings recorded good one-dimensional indicators so that those latent variables became expressed in measured variables consistent with them. We also note that the values of the Cronbach's Alpha coefficient for all the study variables were greater than 0.6, which is the minimum requirement. Further, the lowest value for Cronbach's Alpha is for the e-commerce variable (0.829). This indicates the validity and reliability of the questionnaire.

Furthermore, the CR value for all variables exceeded 0.7, which is the minimum requirement. The lowest value recorded was for the e-commerce variable (0.874), while the CR value for the rest of the variables exceeded 0.9. The AVE values for all study variables exceeded the required minimum, which is 0.5.

All previous indicators are indicative of the quality and conformity of the measurement model.

5.2 Discriminant Validity Test

In the first step, the one-dimensional evaluation of the latent variables was carried out and the measured

variables were filtered to measure those variables well and honestly.

After assessing the validity of the variables of the measurement model and making the necessary adjustments, the second step was carried out. This step assessed the validity of the differentiation of the path model in which the Fornell–Larcker criterion was analyzed, as shown in the following table.

Table 2. Results of Latent Variable Correlations

Constructs	E-commerce	Home quarantine	Movement restriction	Psychological anxiety
E-commerce	**0.732**			
Home quarantine	0.527	**0.796**		
Movement restriction	0.586	0.739	**0.777**	
Psychological anxiety	0.562	0.707	0.720	**0.863**

According to Table 2, the values of the validity of the differentiation of the study variables indicated their differentiation from each other and there was no intersection between them. Each variable represented itself, meaning that the square root of the AVE for any latent variable was greater than the value of its correlation with other latent variables $\sqrt{AVE(X)} > COV(X,Y)$.

Therefore, it can be said that the model was more valid for differentiation than other possible constructions. Besides, cross-load coefficients were analyzed with external load factors for each latent variable, as shown in the following table.

Table 3. Results of Discriminant Validity: Cross Loadings

Items	Constructs	Home quarantine	Movement restriction	Psychological anxiety	E-commerce
H1	Home quarantine	**(0.798)**	0.531	0.586	0.310
H2		**(0.822)**	0.540	0.554	0.357
H3		**(0.853)**	0.602	0.630	0.265
H4		**(0.715)**	0.577	0.492	0.323
H5		**(0.792)**	0.616	0.546	0.502
H6		**(0.791)**	0.629	0.567	0.476
M1	Movement restriction	0.594	**(0.788)**	0.526	0.410
M2		0.562	**(0.794)**	0.547	0.405
M3		0.474	**(0.721)**	0.492	0.328
M4		0.733	**(0.831)**	0.668	0.356
M5		0.477	**(0.748)**	0.551	0.482
P1	Psychological anxiety	0.580	0.620	**(0.847)**	0.354
P2		0.609	0.610	**(0.882)**	0.488
P3		0.573	0.622	**(0.853)**	0.260
P4		0.678	0.634	**(0.871)**	0.323
E1	E-commerce	0.310	0.410	0.354	**(0.736)**
E2		0.357	0.405	0.488	**(0.704)**
E3		0.265	0.328	0.260	**(0.675)**
E4		0.323	0.356	0.323	**(0.727)**
E5		0.502	0.482	0.474	**(0.747)**
E6		0.476	0.533	0.486	**(0.799)**

Table 3 shows that all the items of the study had a high level of saturation on the underlying variables. Further, the linkage of the items with the latent variables exceeded the minimum, which is the value of 0.7, as some items were excluded due to the low level of their saturation on the underlying variables.

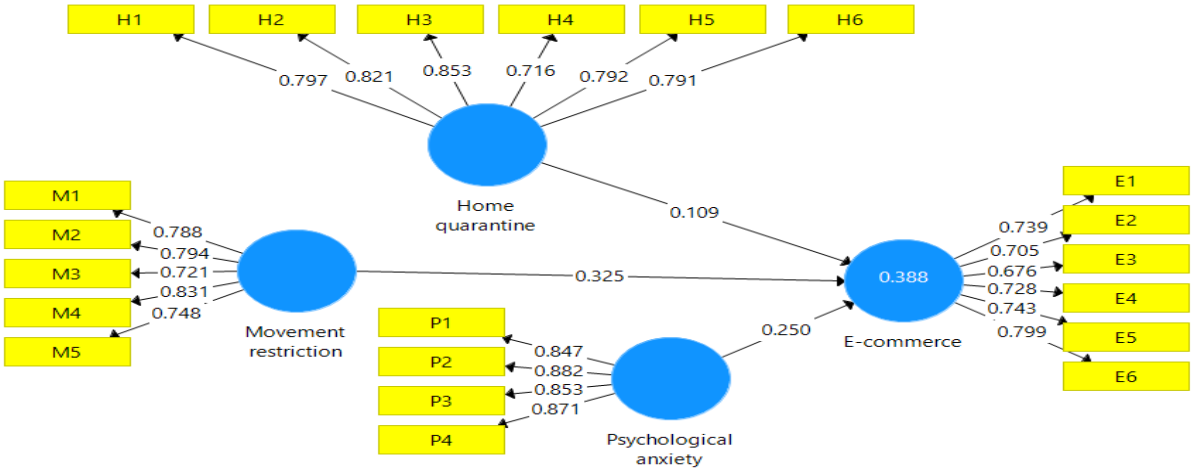

Fig. 1: Research Framework

It is observed in the figure above that the cross-loading coefficients for each latent variable with the same variable were higher than the cross-loading coefficients for the rest of the other latent variables, which, in total, exceeded the value of 0.7. This is an indication of the quality of the structure of the measurement model.

The measurement evaluation takes into account composite reliability, average variance derived (AVE = convergent validity), outer loadings, Cronbach's alpha, and discriminant validity. The internal quality reliability value, Cronbach's alpha, and composite reliability should all be greater than 0.70.

5.3 Assessment of Structural Model

To evaluate the quality of the structural model, we used the R-Squared measure, which shows the predictive strength of the model in the study sample and also explains the interpretation of the external latent constructs for the amount of variance in the dependent variable.

[27] suggested that the value of R^2 that is above 0.67 is considered high, while values ranging between 0.33 to 0.67 are moderate and those between 0.19 to 0.33 are weak. Furthermore, any R2 values of less than 0.19 are unacceptable. [28] proposed an R2 value of 0.10 as the minimum acceptable level.

Furthermore, the F-Squared measure was used to denote the effect of each independent variable on the dependent variable. According to Cohen (1988), if the F2 is above 0.35, the size of the effect is considered to be large.

The Q2 scale, which measures the predictive power of the study model outside of the research sample, was also used. According to [29], this value must be greater than zero. When the model predicts dependent latent variables outside of the study sample, it then has sufficient predictive relevance. [30]. The values of all previous measures are shown in Table 4.

Table 4. R-Squared, F-Squared, and Q² of the Endogenous Latent Variables

Constructs	R-Squared	Q²	F-Squared
E-commerce	0.388	0.195	/
Home quarantine			0.385
Movement restriction	/	/	0.523
Psychological anxiety			0.461

Note. Source: Prepared by researchers using Smart PLS outputs.

Figure 1 and Table 4 represent that the R2 value for the estimated equation is 0.388. This means that all these variables (home quarantine, movement restriction, and psychological anxiety) were able to explain more than 38.8% of the variance in e-commerce.

Further, it was observed that the F-Squared values of all endogenous latent variables were greater than 35%, which is the minimum. The largest was 52.3% for the movement restriction variable and the lowest was 38.5% for the home quarantine variable. This indicates that the variables in question affect the dependent variable.

Concerning the values of Q2, values greater than zero were defined for all endogenous latent variables, indicating the prediction of dependent latent variables outside the research sample.

Table 5. Results of Goodness-of-Fit

	Saturated Model	Estimated Model
SRMR	0.073	0.168
d_ULS	1.244	6.536
d_G	0.398	0.635
Chi-Square	1127.485	1560.076
NFI	0.817	0.747

According to the goodness-of-fit indicators shown in Table 5, the proposed model has a high standard. The goodness-of-fit indicator also recorded a value of 0.4541, which is greater than 0.36 and is the minimum [31].

5.4 Testing Study Hypotheses

Hypotheses HP1, HP2, and HP3 were tested using the SmartPLS program. Hypotheses HP4 and HP5 were tested using the SPSS 23 program, as shown in the Table 6.

Table 6. Path Coefficient of the Research Hypotheses

Hypotheses	Relationship	Std.Beta	Std. Error	T-Values	P-Values	Decision
HP1	Home quarantine -> E-commerce	0.527	0.033	15.876	0.000	Supported**
HP2	Movement restriction -> E-commerce	0.586	0.026	22.057	0.000	Supported**
HP3	Psychological anxiety -> E-commerce	0.562	0.039	15.221	0.000	Supported**

Note. Significant at P** = < 0.01, p* < 0.05. Source: Prepared by researchers using SmartPLS outputs.

It is evident from Table 6 that the first hypothesis was confirmed by the following: (influence coefficient = 0.527, t-values = 15,876, P-values = 0.000). It can, therefore, be said that there was a positive, direct, statistically significant effect of home quarantine on the orientation of individuals toward e-commerce.

The second hypothesis was confirmed by the following: (influence coefficient = 0.586, T-values = 22.057, P-values = 0.000). It can therefore be said that there was a positive, direct, statistically significant impact of movement restriction on the orientation of individuals toward e-commerce.

The third hypothesis was confirmed by the following: (influence coefficient = 0.562, T-values = 15.221, P-values = 0.000). From this, it can be said that there was a positive, direct, statistically significant effect of psychological anxiety on the attitude of individuals toward e-commerce.

To confirm the previous results, the results of the bootstrap shown in the following table can be indicated.

Table 7. Results of Confidence Intervals: Bootstrap

Hypotheses	Relationship	Original Sample (O)	Mean.Boot	2.5%	97.5%
HP1	Home quarantine -> E-commerce	0.527	0.533	0.473	0.594
HP2	Movement restriction -> E-commerce	0.586	0.590	0.538	0.637
HP3	Psychological anxiety -> E-commerce	0.562	0.563	0.479	0.640

Note. Source: Prepared by researchers using SmartPLS outputs.

Table 7 shows that the lower and upper bounds were positive for the bootstrap value for all three hypotheses, which did not contain the effect equal to zero. Therefore, it is confirmed that the research hypotheses are accepted, indicating that there was a positive impact of COVID-19 on e-commerce in Saudi Arabia.

Table 4 represent that the R2 value for the estimated equation is 0.388. This means that all these variables (home quarantine, movement restriction, and psychological anxiety) were able to explain more than 38.8% of the variance in e-commerce.
The variables (home quarantine, movement restriction, and psychological anxiety) have been able to explain more than 38% of the variance in e-commerce.

6 Discussion

The results of the hypothesis test were accepted, and the most important results from Table 6 are as follows:

- There is a positive, direct, statistically significant effect of home quarantine on the orientation of individuals toward e-commerce.
- There is a positive, direct, statistically significant impact of movement restriction on the orientation of individuals toward e-commerce.
- There is a positive, direct, statistically significant effect of psychological anxiety on the attitude of individuals toward e-commerce.

We predict that if COVID-19 persists, and even after its end, electronic trade in Saudi Arabia will rise by more than 50%. As a result, the coronavirus pandemic has positively affected e-commerce by gaining unprecedented government support and consumer orientation, which has led to a significant increase in demand.
Since the movement restriction and home quarantine measures were implemented in March 2020, the use of electronic shopping has become the best option for Saudi Arabian customers to fulfill all their needs. This has contributed to a substantial rise in customer payments in Saudi Arabia, which have risen by 15% in March 2020 relative to February 2020 and by 239% relative to March 2019. This is confirmed by the results of the study.
The psychological anxiety of contracting COVID-19 and the lack of certain products have contributed to the behavior of storing products and purchasing more than the normal need due to a fear of such products not being available at a later date. The Ministry of Commerce has released a study describing the increased demand for nutritional, pharmaceuticals, personal care, sports, and entertainment products.
Our empirical result is in line with 2 for the case of Indian and not compatible with that of 9 for the case of Malysia. However, this work has probably biased results because of the econometric technique used (SPSS). To remedy this shortcoming, we used a more robust technique to study the impact of COVID-19 on e-commerce.

7 Conclusion

In light of these ambiguous conditions that humanity is going through, e-commerce is a glimmer of hope that store owners cling to in their various fields and cultures, and the boom in electronic shopping on the Internet is nothing but an opportunity to obtain a grant from the depths of ordeal. Although no medicament has been discovered to recover from infection with the Coronavirus (Covid 19) until now, where the electronic stores may be considered as a medicament that will save millions of markets and shops from loss and bankruptcy. This paper attempts to investigate the impact of Coronavirus spread on E-Commerce in the Kingdom of Saudi Arabia. Using a survey, the results prove that the spread of the Corona virus has resulted in a boom in remote work in general, and electronic commerce in particular, after logging out from the typical method adopted in the labor market (attendance at the

workplace), so everyone has resorted to electronic services and new tools that allow them to adapt to The exceptional circumstances prevailing today, which made technology and internet sector companies the biggest beneficiaries of this pandemic, not to mention the emergence of a real revolution around remote work.

E-commerce has become a tangible reality in the world, and this supports the information and communication technology revolution that has resonated in all aspects of life. The following are some of the proposals directed at developing and increasing the volume of e-commerce in the Kingdom of Saudi Arabia, whether during the crisis or even after the end of the crisis, so that this becomes an approach that the state adopts to compensate for part of the negative effects of the Corona virus on the Saudi economy on the one hand and to develop and raise e-commerce revenues and their contribution to national income from, on the other hand. The following are the most important proposed actions and measures: (i) Developing the national strategy for e-commerce and emphasizing its concept and adopting its activities and pillars at the Kingdom's level; (ii) Adopting the national digital identity and smart card for every citizen; (iii) Encouraging all banks to establish a sophisticated banking system that accepts electronic commercial transactions and adopting electronic payment systems; (iv) Developing information security software and enhancing the protection of bank data and protecting electronic transactions between all electronic transactions; and (v) Developing stores and stores websites and establishing a simplified policy for refunding or exchanging products.

The world is changing, and a person must change with it in order to survive. According to some forecasts, the future of e-commerce will develop. It is expected that in the next few years, e-commerce investors will acquire more customers, and the market will impose more modern and sophisticated mechanisms and methods, and everyone who wants to stay in the market will have to keep pace with modern trends to meet not only the requirements of the market but the requirements of the entire era.

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