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## Factors affecting on the use of E-Commerce from the Perspective of Saudi Consumers (\*)

By

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**Abstract**

The study aimed to identify the factors affecting the practice of e-commerce from the perspective of Saudi consumer, and the impact (technical infrastructure, and environmental legislation, culture, and skills of human resources) on the use of e-commerce. The study adopted the descriptive survey methodology in order to describe these factors. The target population of this research is Al-Baha Region at kingdom of Saudi Arabia. The researcher designed and distributed 320 questionnaire forms and excluded 70 forms due to the lack of information which means overall sample is 250. The data for the study was collected at 2017-2018. The data collected were edited, coded and processed with the Statistical Package for Science Solutions (SPSS), and discussed in narrative style for clarity and better understanding.

The arithmetic mean general of the level of availability of the factors affecting combined was average, amounting to (3.25), and the results showed the presence of significant effect of the variables of independent factors (environmental (legislation), environmental (culture), and factors related to the skills of human resources) in the use of e-commerce with Saudi companies from the viewpoint of Saudi consumer. Based on the results of the study recommended the study: the development and drafting of legislation and appropriate laws, develop the technical infrastructure, developing the skills of human resources, increasing the information awareness of Saudi society.

**Finally**, E-commerce practices at kingdom of Saudi Arabia is good, however the continuous improvement for all factors affecting on e-commerce practices is required to activate its practices in an effective way.

**Keywords:** E-Commerce, Technical Infrastructure factors, Environmental Legislation factors, Environmental Cultural factors, Human Resources Skills factors.

## 1- Introduction

E-Commerce has become increasingly widespread in our everyday business and people lives. The Saudi Arabian economy has sophisticated unparalleled development over the past several years. The National Transformation Program (NTP) and Vision 2030 created a professional plans in order to enable economic diversification, driving growth of the small and medium-sized enterprise (SME) segment, and fostering innovation and entrepreneurship are at the core of these objectives, and developing the e-commerce sector as part of the NTP will add further fuel to these economic development plans. ([www.citc.gov.sa](http://www.citc.gov.sa))

This study will provide an insight about factors which led to the adoption of e-commerce at kingdom of Saudi Arabia. (Scupola ,2003)

## 2- Research Problem

E-commerce has now become a key player of many organizations in the daily running of their business. Several governmental agencies have launched an effective development programs to improve the local e-commerce industry in Saudi Arabia. (Guzzo, Ferri, & Grifoni 2014) For example, the Ministry of Commerce and Investment (MCI) and its associated agencies are working to create good environment for e-commerce by updating regulatory policies and frameworks, increase customer satisfaction in e-commerce transactions, and enhance SMEs, however the researcher has found through reviewing the previous studies related to study topic and other periodical and reports that Saudi consumer still has a lack of confidence in E-commerce practices due to several reasons like lack of laws and legislation which protect him from using the electronic technology along with other factors may be also effect on e-commerce practices at kingdom of Saudi Arabia (Abed, S., Dwivedi, Y. & Williams, M. 2015).

*The main research problem has been formulated in:*

*(What are the factors affecting the practice of e-commerce from the perspective of Saudi consumer?).*

## 3- Research objectives

This present study aimed to identify the factors affecting the practices of e-commerce from the perspective of Saudi consumer, and the impact of (technical infrastructure, and environmental legislation, culture, and skills of human resources) on the use of e-commerce.

## 4- Research Importance

The researcher has divided the study importance in to (Scientific and Practical) importance as below:

### Scientific importance:

- The study focus on the effect of commerce in recent years.

- The study will determine the factors influencing electronic commerce (EC) at Saudi Arabia.
- Lack of studies on e-commerce in Saudi Arabia which enhance the researcher to investigate the reality of e-commerce practices at Kingdom of Saudi Arabia

### Practical importance

- Developing e-commerce in the Kingdom of Saudi Arabia through the results of the study.
- Enable the Saudi consumer to use this technology
- Increase security and privacy of e-commerce.
- Provide sufficient information for other researchers to use the study results and recommendations in their studies.

### 5- Research Questions

**A-** What is the availability level of e-commerce factors at Saudi companies from Saudi consumers' point of view for the (technical infrastructure factors, environment factors, human resources factors)?

**B-** What are the practices level of e-commerce at Saudi companies from Saudi consumers' point of view?

**C-** Is there a significant relationship between the factors affecting on e-commerce (technical, environmental, human resources skills) and levels of e-commerce practices in Saudi companies' from Saudi consumer point of view?

### 6- Research hypotheses

The following hypotheses are tested as below:

#### ▪ The Main Hypothesis

There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for all e-commerce factors (technical, environmental, human resource skills) on e-commerce practices at Saudi companies from Saudi consumers' point of views.

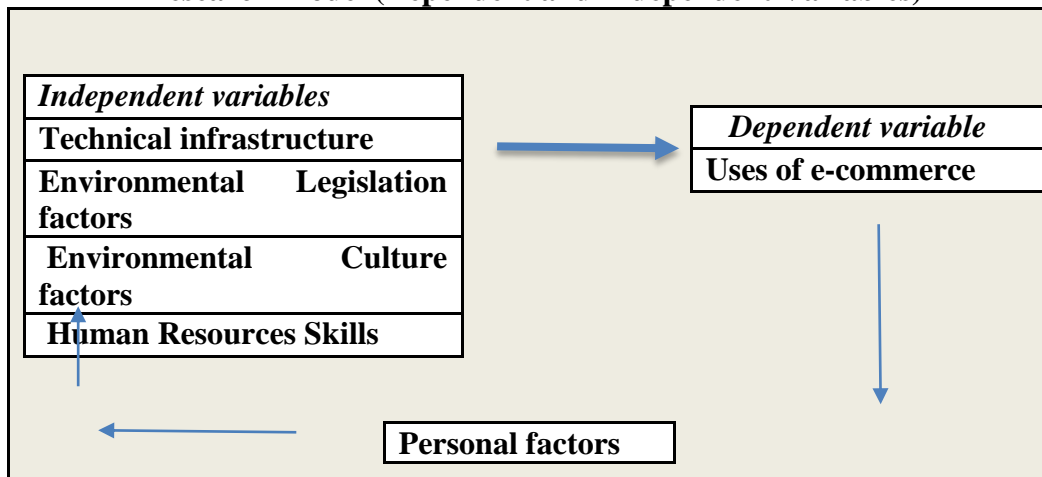
#### Sub-Hypothesis

▪ **Sub-hypothesis One:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for technical infrastructure factor on e-commerce practices from Saudi consumers' point of views.

▪ **Sub-hypothesis Two:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for environmental factors (legislation and culture) on e-commerce practices from Saudi consumers' point of views.

▪ **Sub-hypothesis Three:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for human resource skills factors on e-commerce practices from Saudi consumers' point of views.

## 7- Research Model (Dependent and Independent Variables)



Source: "Made by author"

## 5- Research Methodology

The descriptive survey research method was adopted. This design was adopted because it is most appropriate and helpful in determining and describing the factors affecting the use of e-commerce from Saudi consumers' point of view (Gay, 1992; Newman, 2003).

## 6- Samples and target population Design

The target population of this research is Al-Baha Region at kingdom of Saudi Arabia. The researcher designed and distributed **320** questionnaire forms and excluded 70 forms due to the lack of information which means overall sample is 250. The data for the study was collected at 2017-2018. The data collected were edited, coded and processed with the Statistical Package for Science Solutions (SPSS), and discussed in narrative style for clarity and better understanding.

## 7- Data Collection Method

- **Preliminary data:** The researcher has developed questionnaire which consists of two-part, the first part has covered demographic information, while the Second part consists of 35 items divided as below:
  - **25 items** related to independent variables (factors affecting the use of e-commerce),
  - **10 items** related to study dependent variable (e-commerce). All the items were measured using five-point Likert scale, five points for "Strongly agree", four points for "Agree", three points for "Neutral", two points for "Disagree", and one point for "Strongly disagree".
- **Secondary data:** previous studies, books, periodicals and magazines related to study topics.

## 8- Data Analysis Methods:

Descriptive statistical techniques has been used to describe the characteristics of the study sample as below:

- Percentages , frequencies , Mean and standard deviation
- "Five - Point-Likert Scale".
- The statistical package (SPSS) is used for analyzing data and general information.
- Regression analysis
- Correlation coefficient (Cronbach's alpha- Pearson correlation coefficient) and interpretation of results.

## 9- Literature review

### 9.1– Definition of E-Commerce

There are several definition of ecommerce. E-commerce can be defined from five perspectives. First, business process. E-commerce is doing business electronically by completing business process over electronic network, thereby substituting information for physical business process. Second, services. It is an effective tool that reflect the desire of governments, firms, consumers, and management to cut service costs while improving the quality of customer service and increasing the speed of service delivery. Third, learning. It enables online training and education schools to the customers. Fourth is collaborative which is framework for inter- and intra-organizational collaboration. Final is community, which provides a place for community members to learn, transact, and collaborate. (Chavan, 2013).

### 9.2– Types of E-commerce

There are 4 major types of e-commerce:

- A. Business-to-Business (B2B)
- B. Business-to-Consumer (B2C)
- C. Consumer-to-Consumer (C2C)
- D. Consumer-to-Business (C2B)

#### A. Business-to-Business (B2B)

Business-to-Business (B2B) is a business transaction or exchanging goods or services to some other business. Businesses adapt e-commerce methods to minimize transaction costs in order to save time and effort when running business.

### **B. Business-to-Consumer (B2C)**

Business-to-Consumer is a methods of trading or exchanging a good or service to an individual consumer. This type of e-commerce can be distinguished by the installation of electronic business connections between businesses and consumers. Example: firms selling software and hardware through the internet, by collecting customers' requests for products that will be delivered to them later. (Al-Maghrabi & Dennis, 2011).

### **C. Consumer-to-Consumer (C2C)**

Consumer-to- Consumer (individuals' interactions) is a exchanging for goods or services between consumers. This type of e-commerce includes all electronic intercourses of goods or services operated between consumers. Generally, these transactions are controlled by a third party who manage and control on theses interactions properly.

### **D. Consumer-to-Business (C2B)**

A large number of people started making their own products available to be purchased by organizations looking for specific types of services or products. Researcher J. Ohene-Djan (2008), summarized different e-commerce categories in below table:

Category	Description	Example
Business-to-business (B2B)	Businesses sell products or services to other businesses.	Grainger.com sells industrial supplies to large and small businesses through its website.
Business-to-consumer (B2C)	Businesses sell products or services to individual consumers.	Tesco.com sells merchandise to consumers through its website.
Business processes that support buying and selling activities	Businesses and other organizations maintain and use information to identify and evaluate consumers, suppliers, and employees. Increasingly, businesses share this information in carefully managed ways with their consumers, suppliers, employees, and business partners.	Dell Computer uses secure internet connections to share current sales and sales forecast information with suppliers. The suppliers can use this information to plan their own production and can thus deliver component parts to Dell in the right quantities at the right time.
Consumer-to-consumer (C2C)	Participants in an online marketplace can buy and sell goods to each other. As businesses also utilise this type, it can be considered a type of B2C e-commerce.	e-Bay is an online commercial marketplace, often using an auction system.
Business-to-government (B2G)	Businesses sell goods or services to governments and government agencies. Can also be considered as part of B2C e-commerce.	CAL-Buy portal for businesses that want to sell online to the State of California.

Source: J. Ohene-Djan, (2008), *Electronic commerce*, University of London, [www.londoninternational.ac.uk](http://www.londoninternational.ac.uk).

### 9.3 Advantages of e-commerce

The essential pros of e-commerce is to access for global market, without essentially a vast budgetary venture. The breaking points of this type of commerce are not determined geographically, which enables customer to settle on a worldwide decision, acquire the vital data and look at offers from every potential provider, regardless of their real location. (Makki & Chang, 2014). Organizations use e-commerce to encourage their businesses for some reasons for example: e-commerce allows businesses to growth on a worldwide level and to approach the global market meeting



the needs for both the national and international market. E-commerce enables the business to work 24 hours a day even on holidays, consequently increasing the sales' percentages and profit. Because companies hire less employees, businesses minimize the prices of goods and services by adapting e-commerce concept. (Zettelmeyer & other 2005) Moreover, E-commerce gains the customers' loyalty. Companies always work to fulfill the customers' needs with fast and reasonable price through e-commerce (Baye& Other 2004). Customers feel satisfaction with the service of the company, so that will increase the sales and profit. (Chang, 2003).

#### 9.4 Disadvantages of e-commerce

The main disadvantages associated with e-commerce are the following:

- E-commerce is always depending on information and communication technologies (ICT). (Javalgi & Scherer 2005).
- Both nationally and internationally, there is a Lack of regulation that decently controls and operates all the recent e-commerce activities
- The market's nature is usually opposing e-commerce due to customers could not touch the products
- Privacy issues when customers using e-commerce transaction which mean there is no security in doing business online
- The worst disadvantages of e-commerce is that no one can buy from your store if an error happens to the program or site. It is therefore necessary to ensure that the website is represented on the correct podium.
- Another bad disadvantage of e-commerce is that customers can not try product before purchasing it. Actually, this is a problem for many retailers today, but it won't last long because retailers are trying to improve, many stores to allow customers for trying or testing goods before being purchased by them. (Rajasekaran & Sudarshan, 2018)

#### 9.5 Barriers for E-commerce adoption

Companies must measure the potential risks and potential benefits of e-commerce carefully, but their new strategy needs extensive changes in all aspects of the organization's business. If the plan does not match the overall mission of the company, the result may turn out negatively such as poor customer background of a product or a service and reduced investment returns. There are also many problems with security, order and

delay orders. However, the obstacles to the adoption of e-commerce are numerous but depend on the state of institutions and preparations.

## 9.6 The reality of e-commerce in Saudi Arabia

Based on the report published by Communications and Information Technology Commission, (2017) at kingdom of Saudi Arabia, they concluded that over the past recent years Business-to-consumer e-commerce exceeded SAR 29.7 billion in 2016. The number of young people in Saudi Arabia, increasing penetration rates of broadband and smartphones, and the increasing government focus on e-commerce are key factors driving this shift towards Buy online in the country. Many national and international players are emerging their physical presence in KSA in addition to local online vendors, start-ups and home businesses. Moreover, long-established businesses ranging from consumer goods to banks are increasingly witnessing e-commerce as a fast-growing complementary channel for their products and services. (AlGhamdi & other 2011)

Switching to online purchasing is gaining strength, although Saudi shoppers prefer to buy through traditional channels is still high. Supported by home delivery facilities, time-saving e-commerce benefits, attractive Internet offers and a wide range of products to choose from, the online shopper in Saudi Arabia can shop online at least once every three months, averaging approximately SAR 4,000 Saudi in online shopping yearly. Although the e-commerce practices have been increased at kingdom of Saudi Arabia (Simsim, 2011), however still the Saudi consumers afraid of using e-commerce transactions due to several reasons like privacy, security and how can reach to sellers easily in case of unappropriated products or service. (Makki& Ching 2015)

## 9.6 Previous Studies related to study topics

In this part, the researcher will demonstrate the advanced studies related to study topic

- (*Abdullah & Other 2018*) examined the influence of several cultural factors in Saudi Arabia related to age, gender, and computer proficiency. Finally they highlighted on potential solutions for the improvement of ecommerce in Saudi Arabia. (*Alkhlaifat & Abdul & Ahmad, 2017*) investigated the factors affecting consumers' trust towards e-commerce, from students in Jordanian university at the end they emphasized on the role of culture awareness and security issues in order to activate e-commerce transactions. (*Lee and Chen, 2010*).The pace of e-

commerce growth in Saudi Arabia is predictable to be increased, if the right combination of factors affecting on ecommerce practices has been considered. (Al-Hudhaif and Alkubeyyer 2011) investigated both the level of e-commerce adoption in Saudi Arabia and tried to clarify factors that affected the adoption of e-commerce in the kingdom. (Abdul Gaffar Khan, 2016) E-commerce has a lot of advantages which increase customer's satisfaction in terms of customer convenience in any place and enables the company to acquire more competitive advantage over than other competitors.

- The researcher got benefits from above mentioned researches however the current research has wide approach through identifying the factors affecting the practice of e-commerce from the perspective of Saudi consumer, and the impact (technical infrastructure, and environmental legislation, culture, and skills of human resources) on the use of e-commerce.

## 10- Questionnaire Analysis

### A- Demographic Variables Analysis

**Table 1: All demographic variable**

Demographic Variables	Statement	Frequency	Percent
Age	From 20 to 29 years	37	%20.80
	From 30 to 39 years	87	%48.90
	From 40 to 49 years	54	%30.30
	From 50 and above	0	%0
Gender	Male	138	%77.50
	Female	40	%22.50
Qualification	Diploma and below	60	%33.70
	Bachelor	90	%50.60
	Postgraduate	28	%15.70
Experience	5 years and below	64	%36
	6 - 10 years	48	%27
	11 years and above	66	%37
Reason for using the Internet	Purchase of goods	14	%7.90
	Purchase of services	67	%37.60
	Purchase of goods and services	97	%54.50

Source: "Made by author"

The results in Table (1) indicated that (20.8%) of the respondents between (20-29 years) while (48.9%) of the respondents between (30-39 years) while (30.3%) of the respondents between (40-49 years) there were

not any respondents over than (50 years).The results also indicated that (77.5%) of the respondents (males), while (female percentage was (22.5%).

The statistical results indicated that (33.7%) of the respondents hold diploma degree and 50.6% of the respondents hold bachelor's degree (15.7%).

The results shown that (7.9%) of the respondents prefer to purchase goods while (37.60%) of the respondents prefer to purchase services, however (54%) of the respondents purchase both of goods and services.

## B-Validity and Reliability Analysis

**Table 2: Pearson correlation**

<i>(Independent Variables)</i>	<b>** Correlation is significant</b>
Technical infrastructure	** Correlation is significant
Environmental Legislation factors	** Correlation is significant
Environmental Culture factors	** Correlation is significant
Human Resources Skills	** Correlation is significant

*Source: "Made by author"*

- A questionnaire was tested before using to ensure the validity for measuring the objectives of the study.
- Pearson's correlation coefficient is the test statistics that measures the statistical relationship, or association, between two continuous variables. It is known as the best method of measuring the association between variables of interest because it is based on the method of covariance.
- **Based on SPSS result shown** in table (2), correlation is significant at the (0.05) for independent variables (Technical infrastructure – Environmental Legislation factors – Environmental Culture factors – Human Resources Skills).

## C-Cronbach's alpha for Reliability

**Table 3: Cronbach's alpha**

<b>Variables ( Dependent &amp; Independents)</b>	<b>Items (35)</b>	<b>Cronbach's Alpha</b>
Technical infrastructure	I- 6	65%
Environmental factors (Legislation- Culture)	7-17	64.%
Human Resources Skills	18-22	71%
E-Commerce	23-35	86.9%

*Source: "Made by author"-SPSS results*

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. Based on SPSS result shown in table (4), Cronbach's alpha determines the internal consistency or average correlation of items in a survey instrument to gauge its reliability, table (4) alpha coefficient greater than the minimum acceptable 60%.

## D- Analyzing research questions

### 11.1 Research Question One:

A- “What is the availability level of e- commerce factors at Saudi companies from Saudi consumers' point of view for the (technical infrastructure factors, environment factors, human resources factors)”?

In order to answer above question, mean, standard deviations has been calculated for each statement in order to extract statistical information by using likert scale classification as below:

- 1.00-1.80 Strongly Disagree
- 1.81-2.60 Disagree
- 2.61-3.40 Neutral
- 3.41-4.20 Agree
- 4.21-5.00 Strongly Agree

**Table 4: Technical infrastructure Factors**

NO	Items	Mean	Standard Deviations	Relative importance
1	A technical infrastructure is available at the Kingdom of Saudi Arabia	2.46	1.125	5
2	A cost of implementing networks systems is high at Kingdom of Saudi Arabia	3.59	0.989	2
3	Telecommunication networks has high quality	2.40	1.20	6
4	Electronic data transfer is efficient	2.69	1.036	3
5	The information has privacy and secure	2.63	1.292	4
6	The availability of credit cards enhance for electronic transactions	3.65	1.294	1
-	ALL Items	2.90	0.705	-

Source: “Made by author”-SPSS results

The results in Table (4) indicated that the total averages of respondents' were (2.90), while the average for other items between (2.40 -3.65). The highest averages score has been assigned to item number six from respondents points of view which mean the majority of the respondent agree on the availability of credit cards enhance for electronic transactions, however the lowest average score from respondents points of view were 2.40 for telecommunication networks has high quality which

mean quality in telecommunication require more attentions and improvement.

**Table 5: Environmental (legislation) Factors**

NO	Items	Mean	Standard Deviations	Relative importance
7	E-Commerce laws and legislation are available at Kingdom of Saudi Arabia	2.32	1.161	3
8	There are legal guarantees in E-Commerce transactions at Kingdom of Saudi Arabia	2.08	1.052	5
9	There are controlling entities in charge of controlling e-Commerce transactions	2.22	1.186	4
10	E-Commerce data has Credibility at Kingdom of Saudi Arabia	2.49	1.059	2
11	Electronic information at Kingdom of Saudi Arabia is confidential.	2.56	1.164	1
-	ALL Items	2.34	0.953	-

Source: "Made by author"-SPSS results

The results in Table (5) indicated that the total averages of respondents' were (2.34), while the average for other items between (2.08 -2.56) which is low .The highest score has been assigned to electronic information at Kingdom of Saudi Arabia is confidential, however the lowest average score from respondents points of view were (2.08) for legal guarantees in e-commerce transactions at Kingdom of Saudi Arabia which require more attentions to develop set of legal guarantees in e-Commerce transactions.

**Table 6: Environmental (Culture) Factors**

NO	Items	Mean	Standard Deviations	Relative importance
12	Electronic transaction minimize effort and money	4.3	0.862	2
13	Arab websites facilitate e-commerce transactions	3.83	1.097	5
14	Ecommerce customers Feel unsafe	3.61	0.969	6
15	Ecommerce customers prefer to deal with reputable websites	4.26	0.796	3
16	E-commerce Facilitates the dissemination of information	4.31	0.665	1
17	Information Technology enable e-commerce to be more successful	4.25	0.829	4
-	ALL Items	4.10	0.594	-

Source: "Made by author"-SPSS results

The results shown in Table (6) indicated that the total averages of respondents' were (4.10), while the average for other items between (3.61 - 4.31) which is high .The highest score has been assigned to e-commerce facilitates the dissemination of information dissemination, however the lowest average score from respondents points of view were 3.61 for e-commerce customers Feel unsafe, which require providing more attentions to keep customers satisfied and interact with e-commerce without any doubt.

**Table7: Human Resources Skills Factors**

NO	Items	Mean	Standard Deviations	Relative importance
18	Computers and other training programs are available at schools & universities	2.51	1.299	5
19	Email is an easy way to reach customers and handle e-commerce requirement	4.29	0.707	1
20	Technical and technological skills are particularly important with e-commerce	4.19	0.742	3
21	sources of goods and services enhance e-commerce interactions	4.24	0.879	2
22	There were a guarantees for refunding the prices for goods and services if there were no conformances	2.66	1.503	4
-	ALL Items	3.58	0.495	-

Source: "Made by author"-SPSS results

The results shown in Table (7) indicated that the total averages of respondents' were (3.58), while the average for other items between (2.51 - 4.29) which is high .The highest score has been assigned to email is an easy way to reach customers and handle e-commerce requirement, however the lowest average score from respondents points of view were 2.51 for Computers and other training programs are available at schools & universities, which require more attentions to provide training programs with other facilities to enhance e-commerce customers to use it effectively.

## 11.2 Research Question Two:

*B- What are the practices level of e-commerce at Saudi companies from Saudi consumers' point of view?*

In order to answer above question, mean, standard deviations has been calculated for each statement in order to extract statistical information by using likert scale classification as below:

- 1.00-1.80 Strongly Disagree

- 1.81-2.60 Disagree
- 2.61-3.40 Neutral
- 3.41-4.20 Agree
- 4.21-5.00 Strongly Agree

**Table 8: practices level of e-commerce at Saudi companies from Saudi Consumer Point of view**

NO	Items	Mean	Standard Deviations	Relative importance
23	Delivering outstanding online customer services facilitate e-commerce transactions	4	0.951	12
24	Online customer service is the backbone of your e-commerce business.	4.21	0.721	6
25	E-commerce is expanding tremendously in the market	4.18	0.665	7
26	E-commerce help customer to spending their money wisely	4.07	0.824	9
27	E-commerce reduces retailing costs and shopping cost compared to physical shops	4	0.729	11
28	E-commerce guarantees provides many benefits to develop e-commerce transactions	4.43	0.645	1
29	Delivering the right products at right place is an essential part for encouraging e-commerce customers to buy products and services	4.35	0.761	3
30	On-time delivery guarantees for products and services is an essential part for encouraging customers to buy products and services	4.4	0.659	2
31	Effective advertisements through internet enhance e-commerce transactions	4.26	0.689	4
32	E-commerce enables to quick interaction between buyers & sellers	4.26	0.707	5
33	E-commerce enables to ongoing updates for products & services	4.04	0.735	10
34	The availability of e-commerce virtual sites enhance e-commerce transactions	4.08	0.696	8
35	E-commerce processes may affect on the quality of goods and services	3.85	0.831	13
	<b>TOTAL</b>	<b>4.17</b>	<b>0.463</b>	<b>-</b>

*Source: "Made by author"-SPSS results*

The results shown in Table (8) indicated that the total averages of respondents' were (4.17 ), while the average for other items between (3.58



- 4.43) which is high .The highest score has been assigned to e-commerce guarantees provides many benefits to develop e-commerce transactions, however the lowest average score from respondents points of view were 3.85 for e-commerce processes may affect on the quality of goods and services which require continue improvement for e-commerce processes to keep conformance with quality standard.

### 11.3 Research Question Three:

*C -Is there a significant relationship between the factors affecting on e-commerce (technical, environmental, human resources skills) and levels of e-commerce practices in Saudi companies' from Saudi consumer point of view?*

**Table 9: Pearson correlation matrix**

Influences Factors	levels of e-commerce practices	
Technical infrastructure Factors	Pearson coefficient	0.163 -
	Level of significance	*0.030
Environmental (legislation) Factors	Pearson coefficient	0.288 -
	Level of significance	*0.000
Environmental (Cultural) Factors	Pearson coefficient	0.607
	Level of significance	*0.000
Human Resources Skills Factors	Pearson coefficient	0.015
	Level of significance	**0.844
ALL FACTORS	Pearson coefficient	0.015
	Level of significance	**0.847

Source: "Made by author"-SPSS results

The results shown in Table (9) indicated that there is no significant relationship between all independents variables and dependent variable (e-commerce). The value was (0.015) at the level of  $\alpha$  (0.05), however the environment factor (culture) score is high (0.607) which mean Saudi consumers usually follow up the modern issues in Saudi society.

The weakest score has been assigned to environment legislation factor (0.288) due to lack of legislation and government practices in e-commerce at kingdom of Saudi Arabia.

## 12- Hypothesis Analysis

### A- First: Ensure the validity of the study model for testing study hypotheses

- In order to investigate the validity of the study model, the researcher has calculated regression analysis for main hypothesis and sub-hypothesis

**Table 10: Regression Analysis for main hypothesis and sub-hypothesis**

	variance rate	degree s of freedom	Total sum of squares	Mean squares	F-value	Level of significance	R2 Value	R value
E-Commerce factors	Regression	3	3.819					
	Error	174	34.174	1.273	**6.482	*0.000	10.1	0.317
	Total	177	37.994	0.196				

\* Level significance ( $\alpha \leq 0.05$ )

\*\* F Value (table) at the level of significance ( $\alpha \leq 0.05$ ) and degrees of freedom (5, 172) = 2.21

The results shown in Table (10) indicated high validity of the model to test the study hypotheses (main hypothesis and sub-hypotheses). The calculated F-Value has scored more than the F-value on the table. The results also indicated that all independent variables results were (10.1%) which reflect a high effect on dependent variable.

## B- Secondly : Testing the hypotheses

**1- Main Hypothesis:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for all e-commerce factors (technical, environmental, human resource skills) on e-commerce practices at Saudi companies from Saudi consumers' point of views.

In order to test the main hypothesis of this study, the researcher has conducted a regression analysis as below:

**Table 11: Results of multiple regression analysis tests**

Factors	B	Standard error	Beta	T- Value	Level of significance (T)
Technical infrastructure Factors	0.002	0.052	0.003	**0.035	**0.972
Environmental (legislation) Factors	0.090	0.040	0.185	*2.241	*0.026
Environmental (Cultural) Factors	0.438	0.048	0.561	*9.097	*0.000
Human Resources Skills Factors	0.106	0.062	0.113	*1.701	*0.041

\* Level significance ( $\alpha \leq 0.05$ )

\*\* Not significance.

The Beta results indicated that ( legislation Factors, Cultural Factors and Human Resources Factors) scored (0.185 -0.561- 0.113) which reflect a real effect of these factors on e-commerce practices also the calculated (T) got score more than (T-table) which also emphasize on the effect of

(legislation, Cultural and Human Resources Factors) on e-commerce practices.

The results also indicated that (Technical Factors) has no significant relationship on e-commerce practices because BETA value was low along with the calculated (T) value was less than (T-table).

Based on above statistical analysis, we concluded the following:

- **The main hypothesis will be accepted** for the relationship between infrastructure factors and e-commerce practices because there is no significant relationship between both of them from the Saudi consumers' points of view.
- **The main hypothesis will be rejected** for the other dimensions (legislation Factors, Cultural Factors and Human Resources Factors) due to significant relationship between these factors and on e-commerce practices

## 2- The analysis of sub-hypothesis One:

- **Sub-hypothesis One:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for technical infrastructure factor on e-commerce practices from Saudi consumers' point of views.

In order to investigate and testing the sub-hypothesis one, the regression analysis has been calculated as below:

**Table 12: The regression analysis for sub-hypothesis one**

Factors	B	Standard error	Beta	T- Value	Level of significance (T)
Technical infrastructure Factors	0.107 -	0.047	0.163 -	**2.193-	**0.30

\* Level significance ( $\alpha \leq 0.05$ )

\*\* Not significance.

(T-table)= 1.645

- The above results indicated that there is no significant relationship between infrastructures factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was low along with the calculated (T) value was less than (T-table).

- Based on above statistical analysis, we concluded that the sub-hypothesis one will be accepted.

## 3-The analysis of sub-hypothesis Two:

- **Sub-hypothesis Two:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for environmental factors (legislation and culture) on e-commerce practices from Saudi consumers' point of views.

- In order to investigate and testing the sub-hypothesis one, the regression analysis has been calculated as below:

**Table 13: The regression analysis for sub-hypothesis Two**

Factors	B	Standard error	Beta	T- Value	Level of significance (T)
legislation and culture Factors	0.154	0.074	0.155	*2.075	*0.039

\* Level significance ( $\alpha \leq 0.05$ )

\*\* Not significance.

- The results indicated that there is a significant relationship between legislation and culture factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was high (0.155) along with the calculated (T) value was more than (T-table).
- Based on above statistical analysis, we concluded that the sub-hypothesis two will be rejected.

#### 4-The analysis of sub-hypothesis Three:

- **Sub-hypothesis Three:** There is no statistically significant difference at the level ( $\alpha \leq 0.05$ ) for human resource skills factors on e-commerce practices from Saudi consumers' point of views.
- In order to investigate and testing the sub-hypothesis one, the regression analysis has been calculated as below:

**Table 14: The regression analysis for sub-hypothesis Three**

Factors	B	Standard error	Beta	T- Value	Level of significance (T)
HR Factors	0.014	0.071	0.015	** 0.197	**0.844

\* Level significance ( $\alpha \leq 0.05$ )

\*\* Not significance.

- The results indicated that there is no significant relationship between human resource skills factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was low (0.015) along with the calculated (T) value was more than (T-table).
- Based on above statistical analysis, we concluded that the sub-hypothesis three will be accepted.

#### Conclusion:

- 1- This study aimed to identify the factors affecting the practices of e-commerce from the perspective of Saudi consumer, and determining the impact of (technical infrastructure, and environmental legislation, culture, and skills of human resources) on the use of e-commerce.

- 2- The target population of t this research is Al-Baha Region at kingdom of Saudi Arabia. The researcher designed and distributed 320 questionnaire forms and excluded 70 forms due to the lack of information which means overall sample is 250. The data for the study was collected at 2017-2018. The data collected were edited, coded and processed with the Statistical Package for Science Solutions (SPSS), and discussed in narrative style for clarity and better understanding.
- 3- The researcher has created research questions to investigate the availability level of the electronic commerce factors at Saudi companies along with investigated the practices level of e-commerce at Saudi companies from Saudi consumer point of view.
- 4- The results indicated that the mean of all factors for (Technical infrastructure, legislation & Cultural, Human Resources Factors) was (3.25) which mean the effect of these factors were not at the same level so the researcher organized them from lowest up to highest as below
  - Environmental (legislation) Factors
  - Technical infrastructure Factors
  - Human Resources Skills Factors
  - Environmental (Cultural) Factors
- 5- The researcher has created main hypothesis and divided to three sub-hypothesis.
- 6- The Beta results indicated that ( legislation Factors, Cultural Factors and Human Resources Factors) scored (0.185 -0.561- 0.113) which reflect a real effect of these factors on e-commerce practices also the calculated (T) got score more than (T-table) which also emphasize on the effect of ( legislation, Cultural and Human Resources Factors) on e-commerce practices.
- 7- The results also indicated that (Technical Factors) has no significant relationship on e-commerce practices because BETA value was low along with the calculated (T) value was less than (T-table).
- 8- The main hypothesis will be accepted for the relationship between infrastructure factors and e-commerce practices because there is no significant relationship between both of them from the Saudi consumers' points of view.
- 9- The main hypothesis will be rejected for the other dimensions (legislation Factors, Cultural Factors and Human Resources Factors)

due to significant relationship between these factors and on e-commerce practices.

10- The results indicated that there is no significant relationship between infrastructures factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was low along with the calculated (T) value was less than (T-table). (*the sub-hypothesis one will be accepted*)

11- The results indicated that there is a significant relationship between legislation and culture factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was high (0.155) along with the calculated (T) value was more than (T-table). (*Sub-hypothesis two will be rejected*).

12- The results indicated that there is no significant relationship between human resource skills factors on e-commerce practices from the Saudi Consumers' points of view because BETA value was low (0.015) along with the calculated (T) value was more than (T-table). (*Sub-hypothesis three will be accepted*).

*Finally, e-commerce practices at kingdom of Saudi Arabia is good, however the continuous improvement for all factors affecting on e-commerce practices is required to activate its practices in an effective way.*

### Recommendation

Based on study result, the researcher has developed some important issues to improve the effectiveness of the factor affecting on e-commerce practices as below:

- 1- Based on study result, the researcher has developed some important issues to improve the effectiveness of e-commerce practices as below :
- 2- - Develop and formulate appropriate legislation and laws
- 3- - Develop technical and infrastructure
- 4- - Developing human resources skills
- 5- E-commerce awareness Raising awareness is an important factor in ecommerce adoption because the awareness is the first stage towards trust
- 6- Expansion of telecommunications networks and their processing with the latest technologies,

- 7- Increasing the security of information by Saudi Telecom Company (STC).
- 8- Providing training programs in schools, universities and social centers
- 9- Establishing workshops in organizations to raise awareness of the benefits of electronic commerce. (Ahmad & Agrawal, 2012)

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