QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

THE FACTORS AFFECT USAGE OF E-COMMERCE

IN THE QATARI SMES

BY

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COMMITTEE PAGE

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Abstract

The main aim of conducting this research is to understand the main factors that affect e-commerce usage, also to explore the obstacles that prevent users of Electronic commerce (EC) adoption in the Qatari SMEs.

The Methodology used is the quantitative technique to analyze and test the developed hypotheses. It will firstly highlight the importance of conducting this research and identifying the main factors that relate to e-commerce usage. Supporting ideas to these factors are going to be highlighted in the literature review with addressing missing factors.

The Sample is selected from the commercial sector side focusing on large retail markets. The target sample organization case study used is Al Meera consumer goods and the data collection tool used is the questionnaire that consists of four factors and have been distributed accordingly.

It has been observed that there are major factors are affecting the usage of e-commerce. The highest ranked factor is User's perspective where most of the participants expressed that the computer should be reliable to use and having the necessary skills to be able to operate. The other perceived factor is related to technology and the important role in performing marketing campaigns. Moreover, the effect of using mobile technologies in performing e-commerce activities.

There were no significant differences between genders, marital status, education level, income and job title on the factors that effecting on e-commerce usage in SMEs in Qatar. The advantages of e-commerce to a business focus mostly on customer reliability and increase a business's specific commercial attributes.

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I.   Introduction:

Through the rapid increase demand in using internet and data applicable media in recent days, people are tending to use this interface as a main point of contact when communicating on a daily life basis. The high engagement between the local and international community in having such a medium very commonly used has been spreading across and influencing at the same time (CMO, 2014). The new generation tends to use various kinds of devices and equipment to make life much easier and reach various parts of the world just using portable devices.

The technological innovation has changed modern life in the last five years, the usage of personal computers, mobile/ smart phones and other technological related innovations have created a whole new environment on dealing with people in many different fields of interest: in other words, establishing live interaction with many respondents from any parts in the world (The center of technology, 2014). Nevertheless, as there are tremendous quantity of different related platforms available to perform various kinds of tasks, precautions should be taken when exchanging high sensitive information. This might lead to data being used for different kind of purposes or perhaps losing the privacy and being distributed to unintended recipients. (Federal communication commission, 2014).

The establishment of e-commerce is fairly a wide spread concept in the current market as most traders are using it to conduct daily transaction with wide variety of business for buying and selling of goods. The incorporation of this terminology seems new to some countries but many countries are currently adapting well to e-commerce and using

it either on a personal or commercial basis in order to satisfy the needs and demands (How stuff works, 2014).

The adoption of e-commerce technologies has been growing very steadily in the last period especially in SME. This can be clearly seen in some of the Arab world region such as UAE, KSA, Qatar and Egypt that are considered highly penetrated (Deloitte, 2014). This can lead to one of the main reasons of succeeding is the support of the local authorities to make this a successful initiative going forward or with the expansion and investment plans to be undertaken.

The infrastructure required to support this huge demand is a very important factor to achieve user satisfaction (JLL, 2014). Without considering the needs of what users are actually demanding, then might lead to result in undesirable or unintended outcomes and non-continuous of a service and probably using the manual or traditional techniques.

As it has been discussed, there are various elements that are required to be considered in terms of using a specific technology with related data protection in order to create the confidence and trust to use such kind of system to perform such kind of activities on e-commerce. This has supported as well by Reichheld, F. et al (2000) to have the right trust in place. This will lead to an important factor which is loyalty and customers will be confident in performing online transactions. Through the continuous rapid engagement in using e-commerce along and most of the Arab countries, it is crucial to consider the infrastructure associated to handle these demands and perform the required functions and being capable to handle many requests in a well and effective manner.

The objective of this proposal is to study the main factors that affect e-commerce usage in SME in the State of Qatar. This will focus on understanding the behavior and realizing attitude particularly in the commercial industry (AlMeera consumer goods as a model) where the main focus will be. This has been specifically selected as there is huge demand and trade between various goods in this sector. As the expectation is towards expansion and establishing effective relationship amongst each other, the commercial side is considered as important backbone of any country's economy. Focusing on a segment that is more critical and sensitive to people's daily life will provide a better and efficient understanding of the situation in a good manner.

II.   Problem Statement

The problem that is required to be discovered is the reason why some companies not having e-commerce in business trading activities. Associated factors have been studied in order to discover and determine to the main cause of the problem and related advantages.

III.   Objectives

To attain these purposes, the research objectives focusing on achieving the following:

1. Exploring the main attraction factors of e-commerce usage in SMEs in Qatar.

2. The relationship between the factors that affecting e-commerce usage in SMEs in Qatar.

3. The factors that affect e-commerce usage in SMEs in Qatar differ based on selected demographical data (gender, marital status, education level, and income)

The advantages of e-commerce usage in SMEs (retail markets) in Qatar.

IV. Importance of Study

This study will present factors that have not been studied before in Qatar or probably not been considered. As there are leading countries such as: United Kingdom and United States are well advance in this initiative, several factors are affecting the consideration of e-commerce locally.

As a result of conducting this proposal it could lead to improve the enterprises efficiency, SME managers in Qatar need to know if e-commerce is worth establishing. This explains why some enterprises see the benefits of using e-commerce, while others do not. Another contribution to this study is that this research empirically explores the factors, and obstacles, which has not been explored in previous research in Qatar.

V. Theoretical Background

This section will mainly introduce the identified factors that are mostly related to usage of e-commerce. It has been realized that the following factors seem to affecting the consideration of the mentioned service:

The reliable user experience in using systems: The engagement of users is considered the backbone of making a specific system works properly and being recognized. If people are not aware and their feedback and comment taken to have such kind of system

then this leads to a failure without any benefit to mention in this regard. In addition to that awareness of service availability is an essential part to make it successful. Moreover ensuring this information is well secured to be able to ensure privacy and no leakage of information being distributed to agencies and partners without written permission (UX Lady, 2014). Customer experience will play a major part in order to achieve trust that has been proposed by Reichheld, F. et al (2000). It is very important that the user is able to access relevant and needed products with minimal complication. **Keep informed and updated with changes in technology** to perform the required tasks and duties assigned from one period to another. It is very crucial to have a proper technological innovation to support this initiative with specific design and well defined architecture as there are many forms of technology tools and gadgets that support the high demand from various consumers. This will ensure smooth running and continuous operation and minimize the chance of failure to an acceptable margin and well adapting and accepting of the suggested technology amongst each other (Brandwatch, 2014). On the other hand, Reichheld, F. et al (2000)emphasized that technology will be more rewarding if it has satisfied customers by performing repetitive transactions and getting customers involved.

It is important to consider the **distribution of various types of goods** that are required to be traded off (Conversion scientist, 2014). The focus on setting up the appropriate channels being traded is a main pillar to ensure proper delivery of the requested goods to enhance usability of such kind of system and minimize suck kind of mistakes that may occur. Using such kind of tracking tool to track certain delivery of items will be very essential and will lead to serve the purpose. This will lead to create confidence amongst the community to further support this initiative to a further step. Reichheld, F.

et al (2000) has addressed this matter as a part of loyalty that indicated how well the products reaches the customers on time. This includes as well how reliably the items are going to be delivered that is needed to be taken into consideration.

Another important factor to be considered are **the stakeholders** (trading partners) involved to make this initiative a successful one. This can be divided into customers and the internal organization Net Enhance Organization (NEO) and other stakeholders. Internal stakeholders are considered the various departments such as marketing, IT, sales and other concerned department to work collaboratively together and achieve the required and desired results (Insite Software, 2014). Top managers within these companies are considered the main key driver to encourage employees to change mindset towards using e-commerce to deal using an interactive and well defined electronic trading. (The evolution of e-commerce research, 2014) For the other stakeholders and one of the main partners is the effective play of the government to establish and help NEO to achieve the goals and needs by providing the necessities to minimize obstacles and help individual accordingly. Other stakeholders are the suppliers and investors that are interacting with NEO who are supplying required material and expecting returns of investment consecutively. If all mentioned parties are playing both roles together in using this initiative channel, this will lead to a higher engagement rate in this regard. Lastly the support of all stakeholders is the main component to be considered in order to initiate and establishment of e-commerce activities.

To summarize, four main factors have been discussed that are playing a very important roles in shaping out the usage of e-commerce. Having user's awareness with effective technology in place, plays an important role in making sure the service is up and running

with the help of the integrated tools and features are really key components to build and construct this service. With the help of Internal and External stakeholder's contribution, this will lead to measure the output in terms of the effectiveness and well engagement to achieve the desired goal and target.

VI.   Literature Review

Zhang et al (2013) aimed to determine the uniqueness of market context with features between e-commerce compared to mobile commerce (m-commerce). The concerns that affect information privacy in relation to consumer demographical locations using a sample of 278 mobile users in United States have been considered. The main methodology used is the quantitative method using survey targeting the sample defined which used the **A**ntecedents ➔ **P**rivacy **C**oncerns ➔ **O**utcomes (APCO) model. The marketing and engagement of e-commerce faced a lot of difficulties in terms of having the required and essential technology in place and features that are not directly available. To elaborate more on this, the use of e-commerce is lacking the mobility as it needs to be using a static and fixed location and can be only conducted in a specific timing only. Another lack of advantage is not able and capable to perform certain kind of push marketing which are directly available only in Smartphone and mobility devices. According to the statics published by IBM data, a focus of two domains have been performed to understand mobile sales and site traffic in Black Friday and Cyber Monday between year 2011 and 2010. It has been revealed that there was an increase from 2010 to 2011 specially site traffic percentage from 5.56% to 14.33% in Black Friday and from 3.88% to 10.75% in Cyber Monday. These results are clearly showing that the usability of mobile devices has lead significantly to increase e-commerce and

engage very actively in performing trading that will lead to sales. These forecasts and estimations will increase the usability in performing e-commerce and to result higher spending of goods.

This is to mention that the level of m-commerce activities are based on several factors that are affecting the usage. The different demographical location plays an important part in shaping different kind of contribution towards using the service. The use of e-commerce comparing to m-commerce are quite different in terms of mobility and probably the ease of use between two kinds of tools. Obviously, using e-commerce will involve being in a static location without any movement at all which might restrict the ability to conduct more features and functions. On the other hand, m-commerce will be more reliable with freedom of access the service at any location when needed.

It is very important to take careful attention in dealing with many kind of transaction without making sure that these data are well protected to prevent and protect consumer rights as it is supporting the first factor of enhancing user experience with data protection and lacking focusing on the other factors which are (Technology, goods and stakeholder power).

Zandi (2013) aimed to develop support framework based on country-level decision to determine country's maturity in e-commerce in terms of strengths and weaknesses. The main methodology used is the quantitative method based on cause and effect to construct a decision support framework that has been conducted in United States.

As has been highlighted earlier about the rapid growth in e-commerce with more focus, the need to create and place the right strategy in place is considered an important factor. By considering maturity assessments and performing the required analysis in this regard will allow a specific country to determine the capabilities that are already strong in

additionally will identify the area of improvements that needs more focus. A well-defined framework will lead to establish the required processes which are required to be sit in place for efficient and enhanced working environment. Various kinds of activities are being performed going from the definition of the e-commerce maturity self-assessment by Zandi (2013).

It is very important for a country to be in a well and defined stage of e-commerce effectiveness to realize the importance of conducting such kind of self-assessment activities. This will ensure that all the necessary components and elements are sat in place to be able to perform the required and assigned tasks. This is supporting the first factor of the user experience due to the rapid growth of user as it is essential to make them aware of e-commerce. However, it is lacking focus on the other remaining factors mentioned previously.

Pickernell et al (2013) study pointed to understanding of the behaviors in e-commerce between internal and external entities with different concerns. The study has been conducted in the United Kingdom focusing on SMEs (Small Medium sized Enterprises). A main focus is on the usage of specific kind of technology called Information Communication Technology (ICT) and how it is important to be used in SMEs as it can be used as the backbone to perform the necessary operations for such a business and eventually achieving the desired goals. It has also noticed that there is an increase demand on using the ICT within this sector due to business growth using the internet as many people around the globe are using it with the gradual increase. It has emphasized as well that relatively small SMEs are really competing against large companies in terms of using e-commerce as they can quickly adapt to any sudden changes rather than the large companies. Moreover, SMEs contributed very effectively

in the economic wealth which makes this a very good point for government and agencies to provide necessary support in order for them to continue and be very effective. It is brought into consideration that governments are required to have a reliable communication network and a well-defined regulatory framework to be able to cope with the demand that may be encountered.

Pickernell et al (2013) sample size related focused on the Federation of Small Businesses (FSB) and sent to more than 200,000 plus members companies. The total responses received are 8,742 responses. The main methodology used in this study is the quantitative method which mainly involve using the regression analysis with the questionnaire used to determine the independent and dependent variables which uses several factors to perform the necessary analysis.

The main results derived from this case are based on the outcome from the industrial sector representing population from each category. The three most population distributed are retailing, business service and construction related activates. For owners or managers characteristics, three variables have been associated: Age, gender and education level. It has revealed that education is the main level affecting the outcome (Negative correlation between e-commerce and education attaining). In relation to trading market outcome, it has been revealed that there is significant correlation in trading in wide geographical locations this will lead to a result of trading in non-local market. In regard to innovation and intellectual preparatory, it has been revealed that copy right protection is an important aspect needs to be acquired to be able to trade in e-commerce. In regard to public procurement domain, it has been noticed that local authority are a main driver to success in SME progression and way forward. In has been realized as well that business advice is an important factor to grow and enhance. On the

other hand, Family advise may lead to negative consequences as not having the required experience in this filed. In regard to business finance domain, it has been realized that government finance will be in a good benefit rather than owners them self-do the financing and put their self into risk (Pickernell et al 2013).

From the above case, it is required to understand the different domains affecting the establishment of SMEs and the factors affecting and surrounding. It is mainly supporting the factor of stakeholder power (Government and internal co-workers), the use of technology (Information Communication Technology), and the user experience factors (high awareness) while the other factor which is goods distribution is lacking in this article.

Considering these will lead to a better interaction between self and outsider's world.

Another article to support the discussion is the high effective usage from customers in using technological innovation or similar. This is required to perform the necessary actions such as purchasing of goods and services from the internet (e-commerce) which is considered the main aim of Thakur and Srivastava (2013).

Thakur et al (2013) used the quantitative method and used the questionnaire with online data collection method. The study has been conducted in India with sample size targeting 450 respondents. However, a total of 292 questionnaire have been completed as most of them where professional working customers (Banking customer and lifestyle customers) using the TAM model.

The high level summary of the results indicated and revealed that same outcome from the first article that concerns in regard to privacy considered an important aspect for consumers to perform m-commerce services that includes e-commerce as well. The number of respondents varies among the main purpose of the usage pattern varies

between how long the service is being used, mobile usage purpose and mobile commerce usage purpose. It has been revealed that the highest percentage of respondents concentrated on usage from 5-10 hours per week, looking up stock exchange and utility bill payment respectively. Various variables have been considered using the conformity factor analysis to confirm the fitness of the selected model grouped in technology appetence readiness. (Thakur et al 2013)

Thakur et al (2013) concluded that the customers have a tendency to use mobile commerce if the system is fully protected. Also it is mentioned that the security have been found to be significantly affecting the perception of credibility of mobile payments and hence the adoption intention. This is supporting the factor of user experience of data privacy with protection with the use of specified technology to perform these tasks. The other factors of goods distribution and stakeholders power where not highlighted.

Wen and Buahom (2013) explored the factors that relate to customer behaviors in using the m-commerce to use such kind of service and mainly focusing on improving the customer satisfaction. The most concern of the user in the device that is going to be used and the different features that is going to be offered and the availability of Internet Service that led People become more actively engaged as this service is highly available 24 hours a day.

Several hypothesis where constructed to test and validate using the Technology Acceptance Model (TAM). The main methodology used in this study in the quantitative method using the statistical analysis for a larger sample of study. Using the Partial Least Squares will allow performing analysis based on prediction that will lead to estimate the intention of the consumer in this area.

The sample size considered here is based on the use of bootstrapping to consider large number of respondents of 300 observations. The main methodology used is considering using survey questionnaire as the availability of secondary data where limited.

Yu and Buahom (2013) concluded and presented an integrated technology acceptance model (TAM) model by adding the construct of "Mobility", "Compatibility", "Perceived security", "Perceived enjoyment", "Word of Mouth", and "Perceived cost" to predicting the consumers' intention to use mobile commerce services. Similar to the finding in earlier research (Burton-Jones and Hubona, 2006; Deng et al.,2007; Gefen et al., 2000, 2003; Koufaris and Hampton-; Pavlou, 2003; sosa, 2002), the factors of perceived usefulness (PU) and perceived ease of use (PEOU) were found to be playing significant role in adoption intention (Thakur et al 2013). This is supporting the user awareness (customer intention to use the service), technology related (attitude towards using technology) factors. The stakeholders and goods distribution factors were not focused.

Major benefits have been realized while using the e-commerce service which can be realized in enterprises to reach wide area of coverage (Turban et al., 2004). This has been logically applied by the use of Electronic systems (EC) to expand to wide geographical locations. Quayle (2002) pointed that in order to be competitive and be able to reach completely new markets with different suppliers and form new partners relations, EC system will be the main key component to this task. EC systems are able to perform continuous tasks with no extra effort to be contributed. This will basically lead to improve the current supply chain process of ensuring continuous sales as these systems will support the whole process. Turban et al. (2004) highlighted that due to the collaboration and communication, EC systems successfully reduced the 'time to

Market' due the continuous and work effectiveness of the EC systems. It has established an excellent relationship between customers due to the use of reliable EC systems. These systems are considered cost efficient, ability to introduce new business opportunities and capabilities to undergoing certain customization (Turban et al., 2004; Titi 2005).

Al-Dmour et al (2008) have presented the perception of markets in terms of export barriers. Various applications have been introduced in terms of exporting related matters that mainly concerns the industry where this study have been conducted. The various effects on commerce internationally such as use of information technology and globalization has led to enter a new era of revolutionary activates to deal with. Electronic commerce activities have significantly notices have grew to $11,999 from $5,520 in 2004 as it was in 2001. The main aim of Al-Dmour et al (2008) research is determining the perception of Industrial and services sectors in terms of barriers and benefits and where EC can mainly can be used. In addition to that the success of export marketing due to Internet contribution to specific firms.

This study has been mainly conducted in Jordan and the methodology used to obtain the data based on quantitative technique. A prepared survey based on five-point scaling from 1 to 5 have been used. Prior to the survey preparation, five experts research in the field reviewed the survey and provided opinions. This was part of the preparation to able to have the questions being understood for the participants and making sure it measuring what is supposed to be measured.

Al-Dmour et al (2008) targeted a sample of 112 firms that supposed to respond to the survey however the actual total responses received are 75 but 60 of the responses where be able to be used and analyzed.

The results have revealed that two of the highest EC applications, where a scaling from 1 to 5 (Not at all useful to Very useful), are EC websites and online payments with a mean value of 4.3 and 4.2 respectively in both industrials and services sectors combined. This is surely indicting that both of the identified applications are highly considered to be affecting the targeted sector of study where IT consultation has been considered the least useful application of EC. The other section of the results are focusing on the barriers of exporting using a scaling from 1 to 5 (very minor problem to very major problem). The results perceived are focusing on two high major perceptions in terms of the mean value which are high competition in foreign markets and lack of management time to allocate time for exporting matters (4.3 and 4.2 respectively for both industries). Another important factor considered as well is online payment security in performing transaction. The last section results focused on benefits of EC for exporting using five point scale to determine likeliness. It have been noticed that the top four ranked benefits when considering the mean value are lower cost of export, easy export when using electronic transactions, not need to have foreign branches and establish sales lead (4.4, 4.4, 4.2 and 4.2 respectively in both industries). The study have been focusing on some of the factors intended to study such as internet transactions related to customer experience and user's perspective. Additionally, the importance in having Information Technology for efficient business operation focusing on technology related. In regard to goods distribution, benefits such as being easy to perform exporting, no such agent required to interact have demonstrated an effective

mechanism in this regard. The final factor of stakeholder power was not discussed and highlighted.

The study that has been conducted by Al-Busaidi et al (2009) aimed and focused on the benefits in adoption of e-commerce in Oman and what are the related factors. It is emphasizing the importance of having IT that can drive competitive advantage in businesses and the growth of the economy. Three main benefits have been highlighted which are cost of transaction reduction, the ability to export on large geographical locations, ability of providing more choices and decisions related to purchasing power. The study as well discussed the adoption benefits or concerns in Canada, Australia, USA and Italy.

The sample of the study obtained by random are 31 responses from Agricultural and Food Business (AFB) that has been conducted in Oman. The main methodology used by Al-Busaidi et al (2009) is the quantitative method of using survey that has been focused mainly on SMBs where about 80% are involved in international business.

The results that have been derived, using Regression Analysis, are mainly observing the effect of the dependent variable (firm having a website) and independent variable (Logistics, Information, Promotion, and Negotiation) including size and business scope of the firm. It has been observed that the firm size has relatively effect e-commerce adoption. The bigger the company, the higher the adoption that will lead to adoptability. In the case of Oman, AFB have not managed to acquire the benefits as no encouragement from the government has been made in this regard. There could be more to attract the latest technology that will support the business dramatically.

This study has focused on some of the factors related to the field of research. The high important of technology related factor is considered an important element that is needed to be considered. The stakeholders power factor and the government job in relation of creating e-commerce environment available to businesses. There were some highlights on the geographical expansion that is related to goods distribution. However, no much discussion on user's perspective have been highlighted that addresses the reliability of usage of e-commerce.

VII.   Research Questions

- What are the main attraction factors that affect e-commerce usage in SMEs in Qatar?

- What are the relationship between the factors that affecting e-commerce usage in SMEs in Qatar?

- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on gender?

- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Marital Status?

- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Educational level?

- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on the income?

- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Job title?

- What are the perceptions of the SMEs employees in the commercial sector in Qatar of the advantages of e-commerce usage?

VIII.   Methodology

The main purpose of doing the study is to measure the various factors defined before on consumer behavior from e-commerce service. Therefore, a quantitative method have been used by developing a questionnaire of 14 close questions plus one open ended question to test each factor separately and observe the resulted outcome. Then perform required relationships based of the responses gathered. In addition a qualitative method has been considered as one organization study case model has been chosen to conduct this study (AlMeera as a model).

The main focus of this research is on the commercial sector population especially on the huge retail market side which might assume using e-commerce service. The target organization model that has been considered in this research is AlMeera for selling consumer goods head quarter base. As e-commerce focuses more on commercial perspective, this will provide a very good a response in order to analyze them in an effective and efficient manner. The data that has been gathered from a total respondents of 53 participants only from 150 participants in the defined sample of research:

Table 1. Questionnaire participants

	N
Population	150
Sample	53
Respondents	53
Response rate	100%
Sampling Error	(+-)11.5%

The questionnaire has been designed using a five point scaling from one to five (1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree and 5: Strongly agree) for the 14 closed questions in part one. The additional open question was tending to measure the benefits advantage of using e-commerce. Part two of the questionnaire aimed to collect demographical data which will help in determining and observing the various elements associated from participants. The first activity performed is presenting all the responses received in a table format in excel sheet separating each question with the associated parts in the questionnaire and numbered responses provided based on the defined scaling. For part two of the questionnaire, The numbering have been performed using diagonal approach from left to right indicating the sequences of how the numbers are being presented.

A population of the response percentage have been performed for each of the factors and associated items. A small modification has been performed to the 5 scale response criteria. The scale has been refined to have 3 scale instead of 5. This has been performed as a result to have more reliability of the responses gathered and produce the required results. So both strongly agree and agree have been merged to scale of 3, strongly disagree and disagree to scale of 1 and Neutral to scale of 2. Refer to in Appendix A & B presenting both tables for 5 and 3 scales responses.

Re-categorization have been performed is some elements in part 2 of the questionnaire (Demographical information). For the first three questions in this part, two categories have been performed and specified to have a reliable data. In regard to Age, less than 35 and above 35 have been stated. In regard to education level, less than Bachelor degree and Bachelor degree have been stated. In regard to income, less than QR 70,000 and QR 70,000 and above have been stated. The resulted outcome of this action is presented in Table (2) below:

Table 2. Re-categorization of Demographical Information

	N	%
Total	**53**	**100.0**
Age		
less than 35 years	25	47.2%
Above 35 years	28	52.8%
Educational Level		
Less than Bachelor's degree	14	26.9%
Bachelor's degree	38	73.1%
Income		
Less than QR 70,000	41	78.8%
QR 70,000 and above	11	21.2%
Gender		
Male	26	54.2%
Female	22	45.8%
Marital Status		
Single	19	38.0%
Married	31	62.0%
Job title		
Entry Level	20	37.7
Analyst/ Associate	21	39.6
Manager	12	22.6

Seven hypotheses have been considered in regard to this Proposal which are required to be tested and verified as below (The factors are Independent variables and EC usage and adoption are Dependent Variables):

H1: There are some factors significantly effecting e-commerce usages in SMEs in Qatar.

H2- there are significant correlations between the factors that effecting on e-commerce usage in SMEs in Qatar.

H3: There are significant differences between male and female perspectives on the factors that effecting on e-commerce usage in SMEs in Qatar.

H4: There are significant differences between married and single perspectives on the factors that effecting on e-commerce usage in SMEs in Qatar.

H5: There are significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on Educational levels (Less than Bachelor and Bachelor degree).

H6: There is significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on the income (Less than QR 70,000, and QR 70,000 and above).

H7: There are significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on Job title (Entry Level, Analyst/ Associate and Manager)

The above hypotheses will be tested using Chi square, Pearson correlation, T-test and ANOVA tests in SPSS to measure the required outcome. Collection of primary data has been performed using questionnaire designed to gather responses from the participants and associate them with the literature review facts, which is considered the second stage.

IX.   Data analysis and results

As has been stated above, the factors have been identified within the questionnaire that are (Users perspective, Technology related, Goods distribution and Stakeholders power) will be considered in the analysis with related question for each factor.

A. Content Validity

The questionnaire has been designed by the researcher. It was given to the panel of experts to give specific comments on the content validity of the instrument and to suggest any deletions, additions, or modifications in the tool. Based on the panel comment, modification was done.   A copy of the instrument is listed in in Appendix

B. Constructive Validity

Based on the data collected from the survey, the first step conducted is performing the correlation between each of the items against the whole scale to insure the significant correlations at $p < 0.01$. From Table (3), it was found significant correlations between all items with the whole scale of their factors. The correlations of the items of *Users Perspective factor* with the whole scale are between $0.650 - 0.858$, for *Technology*

Related items with the whole scale is between 0.777 – 0.934, for Goods *Distribution* is between 0.715 – 0.919, for *Stakeholders power* category is between 0.628 - 0.865. These correlation values present that the instrument has good validity.

Table 3. Correlation between items with the total and related factor

	Pearson Correlation	
	Item with Total	Item with related Factors
Users Perspective		
1.1 Computer is very reliable to use	.783**	.830**
1.2 It is important to have computer skills to use e-commerce services	.709**	.760**
1.3 Customers are aware of the importance of using on-line trade	.650**	.776**
1.4 User requirements is a must to build e-commerce platform	.823**	.858**
Technology Related		
2.1 A specific organization uses their technology well for performing marketing campaigns	.782**	.870**
2.2 People are informed on products availability on-line	.777**	.880**
2.3 Using Smart Phone technology leads to increase usage of e-commerce activities	.837**	.934**
Goods Distribution		
3.1 Transportations are well effective in delivering goods	.782**	.919**
3.2 Tracking tool is available to track ordered goods	.855**	.919**
3.3 People can trust the agency to deliver the requested goods	.715**	.757**
Stakeholders Power		
4.1.Managers are considered the main driver of e-commerce education in the organization	.628**	.739**
4.2 Government support is an essential element for successful e-commerce establishment	.784**	.852**
4.3 Collaboration from various departments lead to successful interaction with external customers	.871**	.865**
4.4 Tough regulations will limit the usage of e-commerce services	.755**	.842**

**. Correlation is significant at the 0.01 level (2-tailed).

C. Reliability of the Questionnaire

The next step performed is calculating the reliability of the questionnaire using Cranach's Alpha Coefficient of internal consistency for the questionnaire. Cranach's Alpha Coefficient was calculated for the survey as a whole and separately for four factors: users' perspective, technology related, goods distribution and stakeholder's power. As shown in Table (3), the analyses produced a 0.945 alpha coefficient value for the whole survey, 0.816 value for users' perspective, 0.872 value for technology related; 0.836 value for goods distribution and 0.840 for stakeholder's power. Based on the Cronbach's Alpha Coefficient, the Instrument has very good reliability.

Table 4. Cronbach's Alpha Coefficient for the Questionnaire

Questionnaire factor	Cronbach's Alpha	N of Items
Users perspective	.816	4
Technology related	.872	3
Goods distribution	.836	3
Stakeholders *power*	.840	4
All items of the Questionnaire	.945	14

D. Hypotheses statements

The following steps are focusing and examining each of the defined hypothesis from the research questions and provide the finding and observation as bellow:

Q1- What is the main attraction factors that affecting e-commerce usage in SMEs in Qatar?

H1: There are some items factors significantly effecting e-commerce usages in SMEs in Qatar

The main method used in observing the result is the use of the Mean to articulate the reposes and sort based on the mean value as below:

Mean and standard deviation was calculated. Based on the survey scale, the mean was interpreted according to the following criteria:

Table 5. Weighted Mean and Criteria

Weighted Mean	Criteria
1.00 - 1.80	Strongly Disagree (SD)
1.81-2.60	Disagree (Di)
2.61-3.40	Neutral (Ne)
3.41-4.20	Agree (Ag)
4.21 - 5.00	Strongly Agree(SA)

The responses have been sorted using the weighted mean in Appendix C and represent the various elements associated to the main factors of which this analysis is currently performed. The top three elements with a mean value of over 4 are items (1.1, 1.2 and 2.1 respectively). So it is mainly to say that user perspective factor plays an important role is shaping up e-commerce usage. The reliability of computer usage should be in the level of the user in order to engage into using e-service activities with the highest mean score. In addition to the skills that needs to be known in order to efficiently operate such kind of e-service system with the second highest mean value. Both of the two elements yields to a strongly agree decision that is considered the most effecting items on e-commerce usage. Moreover, Technology factor plays an important role

especially when it is used for marketing campaigns as considered the third most effecting element in e-commerce usage.

The lease two important items are 1.3 and 4.4 respectively that deals with Stakeholders power and Goods distribution factors.

After performing and identifying the important elements relates to e-commerce usage, identification of the important factors have been performed using overall weighted mean in ascending order. It was very supporting that both Users perspective and Technology related were placed first and second respectively. Good distribution and Stakeholders power have been placed third and fourth order respectively as shown in below table (6):

Table 6. Weighted mean and standard deviation for each factor in ascending order

SN	Factors	N	Overall weighted Mean	Std. Deviation	Decision	Order
1	F1_ Users perspective	52	4.04	.783	Ag	1
2	F2_Technology related	53	3.91	.817	Ag	2
3	F3_ Goods distribution	52	3.72	.899	Ag	3
4	F4_Stakeholders power	53	3.69	.798	Ag	4
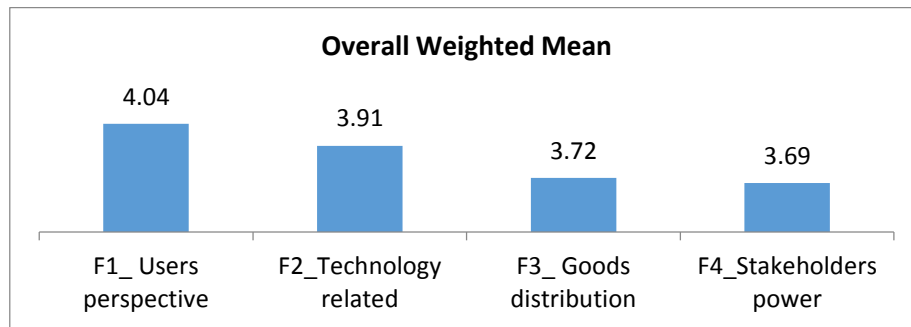
Figure 1. Overall Weighted Mean

Another sort of measurement has been performed using the Chi2 test. As it can be seen in in Appendix D, Chi2 values indicating the higher percentage of highest preferred repeated choices noticed in Factor 1 and 4. However, most of the responses fall in category of Strongly Agree and Agree with very high percentage. Based on previous studies, the researcher considered the percentage of Strongly Agree and Agree that is less than 70% in not achieving the expected level (Based on OIPD reports on Qatar University SharePoint). It is clearly realized that Users perspective and Technology related factors are having the highest response rate with elements 1.1, 1.2 and 2.1 are dominating the responses with more than 84%. Other remaining items such 2.3, 3.2 and 4.3 are also considered important elements for the usage of e-commerce with acceptable percentage level of more than 70% including 1.4 that is considered close to this percentage. However, the highlighted items 1.3, 2.2, 3.1, 3.3, 4.1, 4.2 and 4.4 are considered elements that are required to be improved and focused on.

So H1 is accepted.

Q2- What are the relationship between the factors that effecting that effecting on e-commerce usage in SMEs in Qatar?

H2- There are significant correlations between the factors that effecting on e-commerce usage in SMEs in Qatar

Table 7. Pearson Correlation among all factors

N(52)		F1_ Users perspective	F2_Technology related	F3_ Goods distribution	F4_Stakeholders power
F1_ Users perspective	Pearson Correlation	1	.792**	.722**	.848**
F2_Technology related	Pearson Correlation	.792**	1	.787**	.821**
F3_ Goods distribution	Pearson Correlation	.722**	.787**	1	.823**
F4_Stakeholders power	Pearson Correlation	.848**	.821**	.823**	1

**significant at 0.05

From Table (7) above: the results of the Pearson's correlation between all factors indicated that there are strong significant correlations between the four factors ($r \geq$ 0.72). However the stakeholders Power has the highest correlation with other factors ($r > 0.82$).

This means that Factor 4 has very good relationship with other factors in the questionnaire and strongly correlated.

So H2 is accepted.

Q3- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on gender?

H3: There are significant differences between male and female perspectives on the factors that effecting on e-commerce usage in SMEs in Qatar

To compare the weighted mean for employee views based on gender, T-test was used as shown in the Table (8) below:

Table 8. T-test of weighted mean value for male and female

Group Statistics

Gender		N	Weighted Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
F1_ Users perspective	Male	26	4.04	.706	.138	.261	51	.796
	Female	21	3.98	.932	.203			
F2_Technology related	Male	26	4.03	.686	.135	.778	51	.440
	Female	22	3.83	1.017	.217			
F3_ Goods distribution	Male	26	3.71	.744	.146	-.498	51	.621
	Female	21	3.84	1.124	.245			
F4_Stakeholders power	Male	26	3.71	.537	.105	.435	51	.667
	Female	22	3.60	1.071	.228			

From table (8) above, the below have been observed:

There were no significant differences between male (Weighted Mean = 4.04) and Female (Weight Mean = 3.98) on the factor 1   (t= 0.261, p = 0.796). This mean that all male and female have the same opinion ((agree)).

There were no significant differences between male (Weighted Mean = 4.03) and Female (Weight Mean = 3.83) on the factor 2   (t= 0.778, p = 0.440). This mean that all male and female have the same opinion ((agree)).

There were no significant differences between male (Weighted Mean = 3.71) and Female (Weight Mean = 3.84) on the factor 3 (t= - 0.498, p = 0.621). This mean that all male and female have the same opinion ((agree)).

There were no significant differences between male (Weighted Mean = 3.71) and Female (Weight Mean = 3.60) on the factor 4 (t= 0.435, p = 0.667). This mean that all male and female have the same opinion ((agree)).

There is no difference between males and females in all factors (Sig >0.05)

So H3 is rejected.

Q4- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Marital Status?

H4: There are significant differences between married and single perspectives on the factors that effecting on e-commerce usage in SMEs in Qatar.

To compare the weighted mean for employee views based on Martial Status, T-test was used as shown in the Table (9) below:

Table 9. T-test of weighted mean value for single and married

Group Statistics

Marital Status		N	Weighted Mean	Std. Deviation	Std. Error Mean	t	Df.	Sig. (2-tailed)
F1_ Users perspective	Single	18	4.15	.772	.182	.753	48	.456
	Married	31	3.98	.828	.149			
F2_Technology related	Single	19	3.95	.931	.214	.223	48	.825
	Married	31	3.89	.791	.142			
F3_ Goods distribution	Single	18	3.83	.794	.187	.499	48	.620
	Married	31	3.70	.967	.174			
F4_Stakeholders power	Single	19	3.67	.842	.193	-.161	48	.873
	Married	31	3.71	.812	.146			

From table (9) above, the below have been observed:

There were no significant differences between Single (Weighted Mean = 4.15) and Married (Weight Mean = 3.98) on the factor 1 (t= 0.753, p = 0.456). This mean that all Single and Married have the same opinion ((agree)).

There were no significant differences between Single (Weighted Mean = 3.95) and Married (Weighted Mean = 3.89) on the factor 2 (t= 0.223, p = 0.825). This mean that all Single and Married have the same opinion ((agree)).

There were no significant differences between Single (Weighted Mean = 3.83) and Married (Weighted Mean = 3.70) on the factor 3 (t= 0.499, p = 0.620). This mean that all Single and Married have the same opinion ((agree)).

There were no significant differences between Single (Weighted Mean = 3.67) and Married (Weighted Mean = 3.71) on the factor 4 (t= -0.161, p = 0.873). This mean that all Single and Married have the same opinion ((agree)).

There is no difference between Single and Married in all factors (Sig >0.05)

So H4 is rejected.

Q5- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Educational level?

H5: There are significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on Educational levels (Less than Bachelor and Bachelor degree)

To compare the weighted mean for employee views based on Education Level, T-test was used as shown in the Table (10) below:

Table 10. T-test of weighted mean value for Less than Bachelor's degree and Bachelor's degree

Group Statistics

Educational Level			N	Weighted Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
F1_ Users perspective	Less than Bachelor's degree		13	4.15	.582	.161			
							.603	50	.550
	Bachelor's degree		38	4.00	.852	.138			
F2_Technology related	Less than Bachelor's degree		14	3.90	.831	.222			
							-.063	50	.950
	Bachelor's degree		38	3.92	.833	.135			
F3_ Goods distribution	Less than Bachelor's degree		13	3.87	.800	.222			
							.644	50	.523
	Bachelor's degree		38	3.68	.939	.152			
F4_Stakeholders power	Less than Bachelor's degree		14	3.68	.863	.231			
							-.022	50	.982
	Bachelor's degree		38	3.68	.790	.128			

From table (10) above, the below have been observed:

There were no significant differences between Less than Bachelor's degree (Weighted Mean = 4.15) and Bachelor's degree (Weight Mean = 4.00) on the factor 1 (t= 0.603, p = 0.550). This mean that all Less than Bachelor's degree and Bachelor's degree have the same opinion ((agree)).

There were no significant differences between Less than Bachelor's degree (Weighted Mean = 3.90) and Bachelor's degree (Weight Mean = 3.92) on the factor 2 (t= -0.063,

p = 0.950). This mean that all Less than Bachelor's degree and Bachelor's degree have the same opinion ((agree)).

There were no significant differences between Less than Bachelor's degree (Weighted Mean = 3.87) and Bachelor's degree (Weight Mean = 3.68) on the factor 3 (t= 0.644, p = 0.523). This mean that all Less than Bachelor's degree and Bachelor's degree have the same opinion ((agree)).

There were no significant differences between Less than Bachelor's degree (Weighted Mean = 3.68) and Bachelor's degree (Weight Mean = 3.68) on the factor 4 (t= -0.022, p = 0.982). This mean that all Less than Bachelor's degree and Bachelor's degree have the same opinion ((agree)).

There is no difference between Less than Bachelor's degree and Bachelor's degree in all factors (Sig >0.05)

So H5 is rejected.

Q6- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on the income?

H6: There is significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on the income (Less than QR 70,000, and QR 70,000 and above).

To compare the weighted mean for employee views based on Income, T-test was used as shown in the Table (11) below:

Table 11. T-test of weighted mean value for Less than QR 70,000 and QR 70,000 and above

Group Statistics									Sig. (2-tailed)
Income			N	Weighted Mean	Std. Deviation	Std. Error Mean	t	df	
F1_ Users perspective	Less than QR 70,000		41	3.96	.841	.131			
	QR 70,000 and above		11	4.30	.445	.134	-1.256	50	0.215
F2_Technology related	Less than QR 70,000		41	3.91	.820	.128			
	QR 70,000 and above		11	4.12	.478	.144	-0.812	50	0.421
F3_ Goods distribution	Less than QR 70,000		41	3.64	.947	.148			
	QR 70,000 and above		11	4.00	.650	.196	-1.177	50	0.245
F4_Stakeholders power	Less than QR 70,000		41	3.68	.811	.127			
	QR 70,000 and above		11	3.95	.350	.106	-1.103	50	0.275

From table (11) above, the below have been observed:

There were no significant differences between Less than QR 70,000 (Weighted Mean = 3.96) and QR 70,000 and above (Weight Mean = 4.30) on the factor 1   (t= -1.256, p = 0.215). This mean that all less than QR 70,000 and QR 70,000 and above have the opinions agree and strongly agree respectively.

There were no significant differences between Less than QR 70,000 (Weighted Mean = 3.91) and QR 70,000 and above (Weight Mean = 4.12) on the factor 2   (t= -0.812, p = 0.421). This mean that all less than QR 70,000 and QR 70,000 and above have the same opinion ((agree)).

There were no significant differences between Less than QR 70,000 (Weighted Mean = 3.64) and QR 70,000 and above (Weight Mean = 4.00) on the factor 3   (t= -1.177,

p = 0.245). This mean that all less than QR 70,000 and QR 70,000 and above have the same opinion ((agree)).

There were no significant differences between Less than QR 70,000 (Weighted Mean = 3.68) and QR 70,000 and above (Weight Mean = 3.95) on the factor 4   (t=   -1.103, p = 0.275). This mean that all less than QR 70,000 and QR 70,000 and above have the same opinion ((agree)).

There is no difference between Less than QR 70,000 and QR 70,000 and above in all factors (Sig >0.05)

So H6 is rejected.

Q7- Are the factors that affect e-commerce usage in SMEs in Qatar differ based on Job title?

H7: There are significant differences on the factors that effecting on e-commerce usage in SMEs in Qatar based on Job title (Entry Level, Analyst/ Associate and Manager)

For testing this hypothesis, comparison was made between the selected job titles for all factors using the ANOVA test as per table (12 and 13) below:

Table 12. Means, Standard Deviations for the factors based on Job title.

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
F1_ Users perspective	Entry Level	19	3.83	.965	.221	3.36	4.29
	Analyst/ Associate	21	4.13	.631	.138	3.84	4.42
	Manager	12	4.19	.692	.200	3.75	4.63
	Total	52	4.03	.783	.109	3.82	4.25
F2_Technology related	Entry Level	20	3.65	1.006	.225	3.18	4.12
	Analyst/ Associate	21	4.08	.714	.156	3.75	4.40
	Manager	12	4.06	.529	.153	3.72	4.39
	Total	53	3.91	.817	.112	3.69	4.14
F3_ Goods distribution	Entry Level	19	3.65	1.033	.237	3.15	4.15
	Analyst/ Associate	21	3.94	.793	.173	3.58	4.30
	Manager	12	3.44	.821	.237	2.92	3.97
	Total	52	3.72	.899	.125	3.47	3.97
F4_Stakeholders power	Entry Level	20	3.46	1.040	.232	2.98	3.95
	Analyst/ Associate	21	3.88	.595	.130	3.61	4.15
	Manager	12	3.75	.574	.166	3.39	4.11
	Total	53	3.69	.798	.110	3.47	3.91

Table 13. ANOVA of weighted mean of all factors based on Job titles

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
F1_ Users perspective	Between Groups	1.279	2	.640	1.045	.359
	Within Groups	29.975	49	.612		
	Total	31.254	51			
F2_Technology related	Between Groups	2.208	2	1.104	1.699	.193
	Within Groups	32.492	50	.650		
	Total	34.700	52			
F3_ Goods distribution	Between Groups	1.991	2	.995	1.244	.297
	Within Groups	39.206	49	.800		
	Total	41.197	51			
F4_Stakeholders power	Between Groups	1.843	2	.922	1.475	.238
	Within Groups	31.237	50	.625		
	Total	33.080	52			

From tables (12 and 13) above it has been found that:

The ANOVA results of the factor 1 were not statistically significant, $F_{(2,49)} = 1.045$, p= 0.359. This means that there are no significant differences between Entry Level, Analyst/ Associate and Manager in Users perspective factor.

The ANOVA results of the factor 2 were not statistically significant, $F_{(2,50)} = 1.699$, p= 0.193. This means that there are no significant differences between Entry Level, Analyst/ Associate and Manager in Technology related factor.

The ANOVA results of the factor 3 were not statistically significant, $F_{(2,49)} = 1.244$, p= 0.297. This means that there are no significant differences between Entry Level, Analyst/ Associate and Manager in Goods distribution factor.

The ANOVA results of the factor 4 were not statistically significant, $F(2,50) = 1.475$, $p = 0.238$. This means that there are no significant differences between Entry Level, Analyst/ Associate and Manager in Stakeholders power factor.

In other words, Entry Level, Analyst/ Associate, Manager have the same opinion on all factors with $sig > 0.05$

Thus H7 is rejected.

The final outcome observed is related to the advantages of using e-commerce activities in enhancing business operations. The following table represents the summary responses of the participants:

Table 14. Feedback on advantages of e-commerce in business

How you can utilize the advantages of e-commerce in your business?
Answers
Assurance of the quality and variety of products and services
Attending Training and being aware for the latest technology
Be reliable to your customers
Enough knowledge using the new technology so it can be applied to your business well and also for well trained staff
Ensure the quality and variety of the products
Having e-commerce advantages would definitely help the business to develop the employee's competency, the management, the market & the image of the company to society.
Increase contact and close to customer
Increase revenue. Reduce cost. Efficiency in operations.
It is a very suitable marketing tool to increase the sales
It is easy marketing strategy and to communicate with the users
It will give new customers with search engine visibility. Will totally boost the marketing strategy
Leave customer satisfaction
Need qualified staff knows more I.T.
To make the products known to the customers
To market the products and services ; For the consumers to be aware of it
To Utilize IT, Keep updated. Make Sure that customers will get what they want

Majority of the responses focuses on the great benefits this service will enhance if it has been implemented. It is surely focused on customer's perspective and the importance of having technology in place to perform the required marketing of the products.

X.   Conclusion and Recommendation

Based on previous results tests that have been performed, it has been noticed that specific test to be selected to test several hypotheses based on the requirement and specified measure. There were seven hypotheses have been introduced in order to test them and justify acceptance or rejection. Two of them were accepted and the other five were rejected. The high focus on items related to reliable use of pc and acquiring the necessary skills to use e-commerce services have been found very essential. This is to mention that the availability of such kind of service will be a key beneficial and success to the service as a whole. Nevertheless not underestimate the power of technology that will deliver the service with the required functionalities and capabilities. Having this in mind will lead to a successful initiative going forward. In summary need to mention that focus on the factors that affect e-commerce are required to be highlighted and mentioned in order to sustain and compete in a specific sector of focus. Such as government section considered one of the main sector of the country, enhancing the user experience will be one of the main factors to the successful establishment taking into consideration the enhanced technology infrastructure to support this initiative on the long run.

Based on the finding and the results that have been observed, there have been no significant differences in related to the highlighted demographical data (Gender, Marital Status, Education level, Income and Job title). The participants (AlMeera employees) expressed the high importance of having such a technological innovation to be able to serve the customers much better. Higher reliability, customer satisfaction and being much closer, cost efficiency, operations efficiency, effective marketing tool, boosting marketing strategy, ensuring variety of products and increasing revenues are

the main observations noted form the participants. These have remarkably reflected and engraved the importance of having such a service that will serve the customers in a better and enhanced way.

The recommendation that can be provided to AlMeera is to adopt and use e-commerce service and realize the benefits that will transform the business of the company. Due to the power of using Internet nowadays through various mediums and devices, it is very necessary to have such kind of platform that will serve the high demand and being able to target most of the audience. Considering this service will enhance the relationship between various entities that really interested to deal with Almeera consumer goods and leads to increase loyalty.

A. Study Limitations

This study has encountered many limitations that should be taken into consideration. First in regard to the sample size, the Director of Human Resources has been very specific in terms of the number of participants involved in taking the questionnaire. Even though the population is around 150 employees, restriction has been provided of not to go above 53 participants. This has resulted of sampling error of (-+) 11.5%. Second the collection of the data were time consuming as needed to distribute the questionnaire in hard copy and one person to interact to get all the responses back as some were available while the rest were not. This has resulted in communicating more frequently by e-mail and phone calls to follow up. Third the research study focused exclusively on commercial sector which considered the AlMeera consumer goods as a model and should be extended to all sectors. Fourth the factors that have been used in

this study have resulted in most of the hypotheses to be rejected. Perhaps alternative factors of study might have different observations and result different outcome.

B. Future work

The study has mainly addresses the factors that affect usage of e-commerce in Qatari SMEs. It has revealed clearly that the studied factors have been in direct relation and the tendency effect on e-commerce usage. If the study needs to be conducted in the future, larger scale sample will be preferable to have more validity and reliability. Additionally, as this research have been conducted only in Qatar, it will be of great benefit to conduct this research in the GCC such as Kingdom of Saudi Arabia and United Arab Emirates to observe and realize the outcome. It needs to take into consideration other sectors such as industrial and services sections and other related sections that will mainly be focusing on using e-commerce or planning to use such kind of service. Moreover, considering additional factors that will directly affect e-commerce usage will lead to have better visibility and better focus for consideration.

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PART1: Questions related to field of study										
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%	N	%
1. Users perspective										
1.1 Computer is very reliable to use	33	62.3%	12	22.6%	2	3.8%	1	1.9%	5	9.4%
1.2 It is important to have computer skills to use e-commerce services	24	45.3%	22	41.5%	4	7.5%	1	1.9%	2	3.8%
1.3 Customers are aware of the importance of using on-line trade	10	18.9%	18	34.0%	20	37.7%	4	7.5%	1	1.9%
1.4 User requirements is a must to build e-commerce platform	14	26.9%	22	42.3%	13	25.0%	1	1.9%	2	3.8%
2. Technology related										
2.1 A specific organization uses their technology well for performing marketing campaigns	13	24.5%	32	60.4%	4	7.5%	4	7.5%	0	0.0%
2.2 People are informed on products availability on-line	11	20.8%	22	41.5%	17	32.1%	2	3.8%	1	1.9%
2.3 Using Smart Phone technology leads to increase usage of e-commerce activities	15	28.3%	29	54.7%	5	9.4%	0	0.0%	4	7.5%
3. Goods distribution										
3.1 Transportations are well effective in delivering goods	16	30.2%	19	35.8%	11	20.8%	3	5.7%	4	7.5%
3.2 Tracking tool is available to track ordered goods	17	32.7%	23	44.2%	6	11.5%	4	7.7%	2	3.8%
3.3 People can trust the agency to deliver the requested goods	5	9.4%	18	34.0%	25	47.2%	2	3.8%	3	5.7%
4. Stakeholders power										
4.1.Managers are considered the main driver of e-commerce education in the organization	12	22.6%	22	41.5%	15	28.3%	2	3.8%	2	3.8%
4.2 Government support is an essential element for successful e-commerce establishment	11	20.8%	23	43.4%	12	22.6%	5	9.4%	2	3.8%
4.3 Collaboration from various departments lead to successful interaction with external customers	11	20.8%	27	50.9%	10	18.9%	2	3.8%	3	5.7%
4.4 Tough regulations will limit the usage of e-commerce services	5	9.4%	25	47.2%	20	37.7%	1	1.9%	2	3.8%

Appendix B. 3 Scales responses Questionnaire (Descriptive analysis)

PART1: Questions related to field of study						
	Strongly Agree & Agree		Neutral		Strongly Disagree & Disagree	
	N	%	N	%	N	%
1. Users perspective						
1.1 Computer is very reliable to use	45	84.9%	2	3.8%	6	11.3%
1.2 It is important to have computer skills to use e-commerce services	46	86.8%	4	7.5%	3	5.7%
1.3 Customers are aware of the importance of using on-line trade	28	52.8%	20	37.7%	5	9.4%
1.4 User requirements is a must to build e-commerce platform	36	69.2%	13	25.0%	3	5.8%
2. Technology related						
2.1 A specific organization uses their technology well for performing marketing campaigns	45	84.9%	4	7.5%	4	7.5%
2.2 People are informed on products availability on-line	33	62.3%	17	32.1%	3	5.7%
2.3 Using Smart Phone technology leads to increase usage of e-commerce activities	44	83.0%	5	9.4%	4	7.5%
3. Goods distribution						
3.1 Transportations are well effective in delivering goods	35	66.0%	11	20.8%	7	13.2%
3.2 Tracking tool is available to track ordered goods	40	76.9%	6	11.5%	6	11.5%
3.3 People can trust the agency to deliver the requested goods	23	43.4%	25	47.2%	5	9.4%
4. Stakeholders power						
4.1.Managers are considered the main driver of e-commerce education in the organization	34	64.2%	15	28.3%	4	7.5%
4.2 Government support is an essential element for successful e-commerce establishment	34	64.2%	12	22.6%	7	13.2%
4.3 Collaboration from various departments lead to successful interaction with external customers	38	71.7%	10	18.9%	5	9.4%
4.4 Tough regulations will limit the usage of e-commerce services	30	56.6%	20	37.7%	3	5.7%

SN	Item	N	Weighted Mean	Std. Deviation	decision	Order
1	1.1 Computer is very reliable to use	53	4.26	1.243	SA	1
2	1.2 It is important to have computer skills to use e-commerce services	53	4.23	.954	SA	2
5	2.1 A specific organization uses their technology well for performing marketing campaigns	53	4.02	.796	Ag	3
7	2.3 Using Smart Phone technology leads to increase usage of e-commerce activities	53	3.96	1.037	Ag	4
9	3.2 Tracking tool is available to track ordered goods	52	3.94	1.056	Ag	5
4	1.4 User requirements is a must to build e-commerce platform	52	3.87	.971	Ag	6
13	4.3 Collaboration from various departments lead to successful interaction with external customers	53	3.77	1.012	Ag	7
8	3.1 Transportations are well effective in delivering goods	53	3.75	1.175	Ag	8
6	2.2 People are informed on products availability on-line	53	3.75	.897	Ag	9
11	4.1.Managers are considered the main driver of e-commerce education in the organization	53	3.75	.979	Ag	10
12	4.2 Government support is an essential element for successful e-commerce establishment	53	3.68	1.034	Ag	11
3	1.3 Customers are aware of the importance of using on-line trade	53	3.60	.947	Ag	12
14	4.4 Tough regulations will limit the usage of e-commerce services	53	3.57	.844	Ag	13
10	3.3 People can trust the agency to deliver the requested goods	53	3.38	.925	Neutral	14

XIV.   Appendix D. Chi2 and percentage of choice responses

	Strongly Agree & Agree		Neutral		Strongly Disagree & Disagree		Chi2	Indicator
	N	%	N	%	N	%		
1. Users perspective								
1.1 Computer is very reliable to use	45	84.9%	2	3.8%	6	11.3%	66.151*	**Accepted**
1.2 It is important to have computer skills to use e-commerce services	46	86.8%	4	7.5%	3	5.7%	48.981*	**Accepted**
1.3 Customers are aware of the importance of using on-line trade	28	52.8%	20	37.7%	5	9.4%	26.34*	**Not Accepted**
1.4 User requirements is a must to build e-commerce platform	36	69.2%	13	25.0%	3	5.8%	30.115*	**Accepted**
2. Technology related								
2.1 A specific organization uses their technology well for performing marketing campaigns	45	84.9%	4	7.5%	4	7.5%	39.453*	**Accepted**
2.2 People are informed on products availability on-line	33	62.3%	17	32.1%	3	5.7%	31.811*	**Not Accepted**
2.3 Using Smart Phone technology leads to increase usage of e-commerce activities	44	83.0%	5	9.4%	4	7.5%	30.547*	**Accepted**
3. Goods distribution								
3.1 Transportations are well effective in delivering goods	35	66.0%	11	20.8%	7	13.2%	18.981*	**Not Accepted**
3.2 Tracking tool is available to track ordered goods	40	76.9%	6	11.5%	6	11.5%	32.038*	**Accepted**
3.3 People can trust the agency to deliver the requested goods	23	43.4%	25	47.2%	5	9.4%	40.113*	**Not Accepted**
4. Stakeholders power								
4.1.Managers are considered the main driver of e-commerce education in the organization	34	64.2%	15	28.3%	4	7.5%	28.226*	**Not Accepted**
4.2 Government support is an essential element for successful e-commerce establishment	34	64.2%	12	22.6%	7	13.2%	24.642*	**Not Accepted**
4.3 Collaboration from various departments lead to successful interaction with external customers	38	71.7%	10	18.9%	5	9.4%	37.849*	**Accepted**
4.4 Tough regulations will limit the usage of e-commerce services	30	56.6%	20	37.7%	3	5.7%	46.528*	**Not Accepted**

*Significant at 0.05

Questionnaire

Determine factors on affecting usage of e-commerce in Qatar SMEs

This research aims to understand the different behaviors/ factors that affect the usage of e-commerce and what is has causes this to occur. This will be very important to determine the main causes that will help build the results and perform the required analysis needed.

Why do we request your participation?

You are asked to participate in this questionnaire because you may have used or thinking to uses e-commerce within your organization as you opinion and values will be counted. The collected data will be then analyzed and processed further to develop improvements and suggest possible recommendations.

What is the survey is about?

The completion of the questionnaire is voluntary and you can withdraw at any time. No names of participants will be identified to any particular survey. It will take about 2 – 5 minutes of your time to complete, so please answer each question to the best of your knowledge. The information provided will be treated to the strictest confidence. The survey is divided into two parts:

- Part one contains 15 questions related to the field of research
- Part two contains 7 questions to collect demographical data

Thank you very much in advance for your kind participation in this survey. We do appreciate time and effort.

Questions

If there are any questions concerning the survey or would like to receive more details about the results and conclusions, please find bellow contact details:

Name: Mohammed Al Saffar

E-mail: ma1305840@qu.edu.qa

Mobile: 55840587

Part One: Questions related to field of study

Please choose the applicable answer by selecting one response from the bellow questions:

Responses
1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree

Serial	Question	Responses				
	Users perspective					
1	Computer is very reliable to use	1	2	3	4	5
2	It is important to have computer skills to use e-commerce services	1	2	3	4	5
3	Customers are aware of the importance of using on-line trade	1	2	3	4	5
4	User requirements is a must to build e-commerce platform	1	2	3	4	5
	Technology related					
5	A specific organization uses their technology well for performing marketing campaigns	1	2	3	4	5
6	People are informed on products availability on-line	1	2	3	4	5
7	Using Smart Phone technology leads to increase usage of e-commerce activities	1	2	3	4	5
	Goods distribution					
8	Transportations are well effective in delivering goods	1	2	3	4	5
9	Tracking tool is available to track ordered goods	1	2	3	4	5
10	People can trust the agency to deliver the requested goods	1	2	3	4	5
	Stakeholders power					
11	Managers are considered the main driver of e-commerce education in the organization	1	2	3	4	5
12	Government support is an essential element for successful e-commerce establishment	1	2	3	4	5
13	Collaboration from various departments lead to successful interaction with external customers	1	2	3	4	5
14	Tough regulations will limit the usage of e-commerce services	1	2	3	4	5
15	How you can utilize the advantages of e-commerce in your business?					

Part Two: Demographical Information

1. What is your age?

☐ 18 to 24 years   ☐ 25 to less than 35 years

☐ 35 to less than 45 years   ☐ Above 45 years

2. What is the highest degree or level of education you have completed?

☐ High school graduate   ☐ Some college, no degree

☐ Associate's degree   ☐ Bachelor's degree

3. What is the level of income you earn on yearly basis?

☐ Less than QR 70,000   ☐ QR 70,000 to QR 99,999

☐ QR 100,000 to QR 129,999   ☐ QR 130,000 to QR 159,999

☐ QR 160,000 to QR 199,999   ☐ QR 200,000 to QR 229,000

☐ QR 230,000 to QR 259,999   ☐ QR 260,000 or more

4. What is your marital status?

☐ Single   ☐ Married

5. What is the total number of persons working at the company?

☐ 1-7   ☐ 7-14

☐ 14-25   ☐ 25-49

☐ 50 - 79   ☐ 79 +

6. What is you Gender?

☐ Male   ☐ Female

7. Which of the following matches your job title?

☐ Entry Level   ☐ Analyst/ Associate

☐ Manager   ☐ Senior Manager

☐ Director   ☐ Vice President

☐ Senior Vice President   ☐ C level executives (CIO,CTO,CMO, COO, etc)

☐ President or CEO   ☐ Owner