

# The Impact of Top Management Support and Technology Turbulence on E-commerce Usage on Hospitality Industry: A Case of Libyan Hotels

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**Abstract—** Hospitality industry is the main service sector in most developed countries and developing countries in the global economy. At present many of the hotels have implemented e-commerce to their business models and gained great advantages and increased profitability. This study aims to examine the impact of top management support and e-commerce usage on business performance of the hospitality industry in general and hotels in Libya in particular. A wide range of approaches have been applied in the hotel industry in Libya, especially those hotels that have the practices and experiences with previous e-commerce. The results shows that small and medium size firms in hospitality industry in Libya are confronting similar challenges and obstacles to other small businesses when utilizing e-commerce. The sample was drawn by using stratified random sampling. Key informant discussions and focus group discussions were conducted to gain further insight into the findings. Descriptive and inferential (Frequencies, Means, Standard Deviation, and Correlation Matrix) statistical analysis were done by using the SPSS software.

**Keywords—** E-commerce usage, Technology turbulence, Hospitality Industry

## 1. INTRODUCTION

Implementation of e-commerce means the business that involves the exchange of information, products and services as well as payment using existing technologies on the E-Online(Tapscott, Lowy et al. 1998; Mohamed Ahmed A.Said 2013)and saw that the adoption of e-commerce in the hotel industry can reduce costs, increase market potential and enjoy new job opportunities for the hotel. This assertion is also endorsed by many other studies(Alshare, Grandon et al. 2004), which pointed out that it may have an impact on the growing business in the whole world. In 2001, the overall records of business of E-commerce were \$474 billion which was estimated to increase to a number of \$2400 billion by the year of 2004. The author also reported that in 2002 the revenue generated from B2B E-commerce globally was \$823 billion, which increased to \$1400 billion by the year of 2003. This continually increasing figure indicates that nowadays no businesses, whether multinational hotels or small and medium hotels, are able to survive without an E-commerce adoption, (Mohamed Ahmed A.Said 2013)

Since the Internet has strengthened itself to be an extraordinarily strong platform that is changing the way of communication between buyers and sellers and the method of doing business over the past decade, the number of the population of Internet users has increased rapidly. E-

commerce mainly helps in generating leads, providing information about the product's tourism customers, and facilitating the process of transactions electronically using mainly the World Wide Web. Thus hotels around the world are expected to achieve significant benefits and higher profits through increased use of the Internet technology for their business. The hospitality industry is always among the first to benefit from new technologies, as customers can constantly find new sources of information to help them make decisions before booking accommodation and hospitality services. With the application of e-commerce for the hotel industry, is a change of scenery hospitality industry forever. Today online sales are an important part of the hospitality industry that cannot be ignored in the current fiercely competitive market due to globalization. In addition, the growing importance of e-commerce in the modern hospitality industry has created an urgent need to assess the key factors that affect the existence of companies on the Internet, which is pushing smart hoteliers to keep a sharp focus on the radical shift in the ways customers are looking for information and channels that drive maximum return on investment. (Mohamed Ahmed A.Said 2014)

## 2. TOP MANAGEMENT SUPPORT

According to (Tolbert and Zucker 1983; Tushman and Romanelli 2008) innovation of IT would be more likely if the political environment within an organization has norms favoring the change. Thus, adopting ecommerce will depend on whether support from the top management is available. Top management support has been identified as crucial and decisive in the acquisition and diffusion of innovation (Orlikowski 1993; Myers 2013). Top management consists of individuals with power and authority to make strategic decisions; thus they can develop a clear-cut ecommerce vision and strategy while at the same time sending signals to different parts of the organization about the importance of ecommerce. Given the limited nature of organizational resources and the many competing projects, top management support ensures that an ecommerce innovation project will get the required resources and capabilities. There is a positive effect of leadership support on innovation adoption; (Orlikowski 1993; Venkatesh and Bala 2008) found that top management support had a positive effect on CASE tools adoption behavior in IS departments.

Since ecommerce can potentially influence the organization's competitive capability as well as its business relationships, it is vital for the top management to be involved in order to obtain a good understanding of the issues surrounding ecommerce and to mobilize organizational stakeholders (Epstein 2004; Huang, Jiang et al. 2009). (Mohamed Ahmed A.Said 2013)

## 3. TECHNOLOGY TURBULENCE ON E-COMMERCE IMPLEMENTATION IN THE HOTEL INDUSTRY

The complexity in the current business transaction is confronted with a number of weaknesses and conditions that requires the collaboration of information technology system to improve the quality of business transactions on a profitable scale with lesser risk (Kaur, Kapoor et al. 2005). Information technology-based transaction otherwise known as e-commerce enables instant access across the globe. However, the success of e-commerce lies much on the effective functioning of telecommunication infrastructure (Lee, Ho et al. 2006)

Integration of e-commerce into a functioning organization leads to the restructuring of the entire business setting. Other barriers such as payment method, deliveries of finished goods, insecure credit cards billing and insufficient knowledge of the service cost contends with the technological advances in e-commerce adoption (Mohamed

Ahmed A.Said 2013). Besides, insecurity over online transaction undermines the level of e-commerce acceptance and has a direct impact on the customer. Although those vary between individuals and organizations, e-commerce has been widely recognized as an ideal tool for transforming business operation. Its adoption has been constrained by numerous challenges coupled with insufficient research on the possibilities of integrating it into trade system. Among these challenges include lack of trust on online services, insecurity of personal information, lack of infrastructure and poor knowledge of its operation has contributed to its stunted growth over the past decade.

Other limiting factors that hinders e-commerce implementation in Libya includes high illiteracy rates, low income per capita and the lack of reliable payment systems to support online business transactions coupled with cultural influence to online transaction. These barriers collectively impede wider acceptance of e-commerce adoption among many organizations. So it is essential that these barriers are to be tackled to enable a successful adoption of e-commerce by means of a good study of the evaluation and assessing of the basic components that can reveal their weaknesses and strengths.

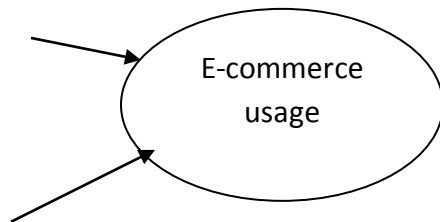
With the identification of the weaknesses and strengths, the possibilities for better planning and implementation of e-commerce to reap its numerous benefits are visible [Habibu, S et al 2010]. Based on the needs to overcome the barriers associated with ecommerce adoption, this research work investigates eighteen (Mohamed Ahmed A.Said 2013) commonly noted potential barriers from previous literature, especially for economic environment similar to Libya.

## 4. THE METHODOLOGY

The study applied a quantitative approach, and was conducted through a questionnaire survey on hotel industry in Libya, in particular those hotels that have previous practices and experience with e-commerce. The target population for this study consists of hotels in Libyan tourism sector. The sampling frame for this study will be drawn from the list of hotels companies registered with the ministry of tourism in Libya. The number of distributed questionnaires is equal to 200, including a cover letter submitted to the participants. The questionnaires were directed to the sales or marketing managers, who are

involved in the process relating to e-commerce operation and usage.

#### 4.1 Theoretical Framework



#### 4.2 Hypotheses

H1 Top management support has positive influences on ecommerce usage.

H2 Technology turbulence has positive influences on ecommerce usage.

### 5. DISCUSSION AND ANALYSIS

In the following section, the study analyzes the primary data collected from the participants in the survey made for evaluating the impact of firm size and e-commerce usage on business performance. The target population for this analysis consists of hotels in Libyan tourism sector. The participants represent the employees in the hotel industry and applies a structural equation modeling (SEM) as a primary data analysis technique. The sampling frame for this study has been drawn from the list of hotels companies registered with the ministry of tourism in Libya. The number of participants is 80 from overall 200 questionnaire distributed. (Mohamed Ahmed A. Said 2014)

#### 5.1 Top management support

Top management support refers to the extent to which top management is actively involved in the management initiatives IOS (Liang et al., 2007) Top-management support is very significant to ensure the effective implementation of electronic commerce. Top-management support has been empirically suggested as an important prerequisite for the adoption and implementation of a technology (Chwelos et al., 2001; Liang et al., 2007). The significant role of top

management comes from, that managers are responsible for making the decision on the transfer of technology and supports IT investments on the assumption that the decision will have an effect on the whole hotel (Thiesse et al., 2011) .

H1 Top management support has positive influences on ecommerce usage.

##### 5.1.1 My top management is likely to invest funds in e-commerce

The results showed the (15 strongly agree, 49 agree, 11 neutral, 1 Disagree, 0 strongly disagree). Mean 3.9750

Std. Deviation 0.65555, the results statistics is shown in Figure-1 below

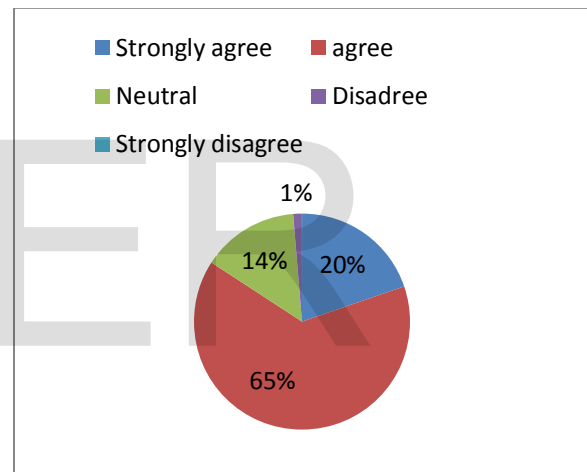


Figure - 1 shows the result of first question

The result shows a significant agreement about the support from the top management to invest in e-commerce. The majority of participants either agree (61.3%) or strongly agree (18.8%), whereas combining both groups equal (80.1%), while only (1.3%) undecided, and almost 1.3% disagree to this question. We conclude from that the top management in Libyan hotels invest in e-commerce and this is an encouraging result. The mean value is 3.97 and small standard deviation 0.6555 identical with our conclusion.

##### 5.1.2 My top management is willing to take risks involved in the adoption of the e-commerce.

We asked the study population of this study about their perspective to the adoption of e-commerce as a strategic decision. The results showed that (14 strongly agree, 45

disagree, 21 neutral, 0 Disagree, 0 strongly disagree), as shown in the Figure-2 below:

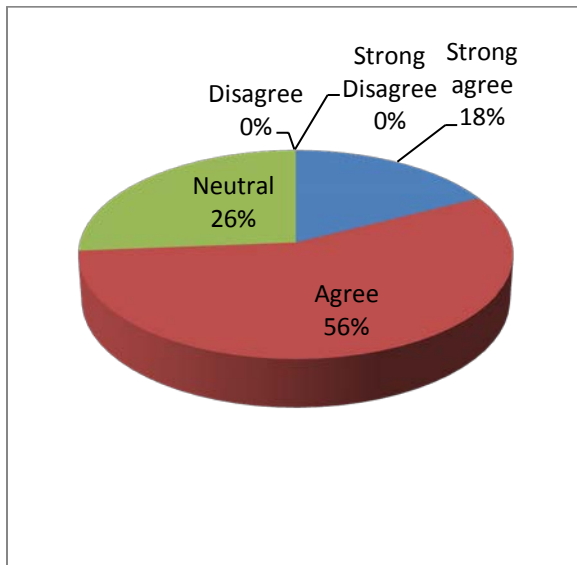


Figure - 2 shows the result of second question

The chart above shows the significance importance of e-commerce and the strategic advantage of e-commerce technology to hospitality business. The study population agree with 56% and 18% strongly agree that managers in Libyan hotel consider the adoption of the e-commerce applications as strategically important and one of the main requirements to success in business nowadays. Whereas the mean equals 3.9125, and standard deviation small 0.659, this shows that the opinions of study population is close and near to agreement, and confirm the hypothesis of our study.

#### 5.1.3 My top management is likely to be interested in adopting the e-commerce applications in order to gain competitive advantage.

The results show that (15 strongly agree, 46 agree, 18 neutral, 1 Disagree, 0 strongly disagree), as shown in Figure-3 below:

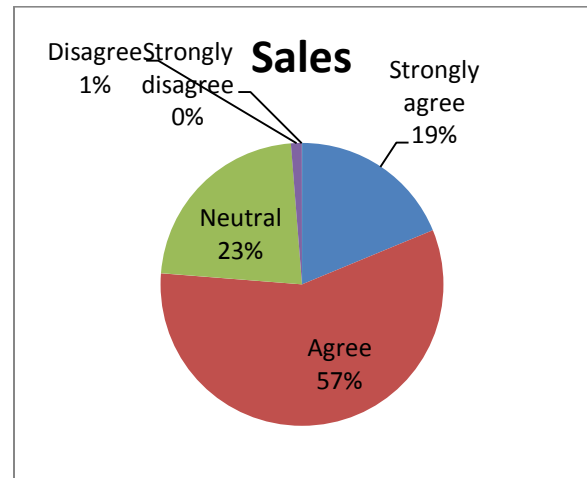


Figure - 3 shows the result of second question

The chart above shows the significance importance of e-commerce and the strategic advantage of e-commerce technology to hospitality business. The study population agree with 57% and 19% strongly agree that managers in Libyan hotel consider the adoption of the e-commerce applications as strategically important and one of the main requirements to success in business nowadays. Whereas the mean equals 3.9375, and standard deviation small 0.8147, this shows that the opinions of study population is close and near to agreement, and confirm the hypothesis of our study.

### 5.2 Technological turbulence

Technological capability refers to the hotel's ability to develop and use technological resources are great for new product development and new technology, and manufacturing processes for, and to predict the technological changes in the industry. However, strong technological capabilities and the simple act of holding may not be enough to get superior performance (Su, Xie et al. 2010). Thus, the issue is serious research highlights: Why can some companies be aware of the effects of the successful performance of the technological capabilities and marketing, while others cannot? Resource management model suggests that even when the company has strong capabilities with the ability to create value, and the company is likely to realize value creation unless enhance the effectiveness of those capabilities. Thus, the influence of technology capabilities requires investigation. Unrest is a technological variable that suggested the presence of moderation between the use of technology affect the performance of companies (Wang and Strong 1996; Lee, Strong et al. 2002)

### 5.2.1 Technological changes provide big opportunities in our industry.

The study investigated this question with the participants', and their answers show that (19 strongly agree, 55 agree, 5 neutral, 1 disagree, 0 strongly disagree), and represented in Figure 4 below:

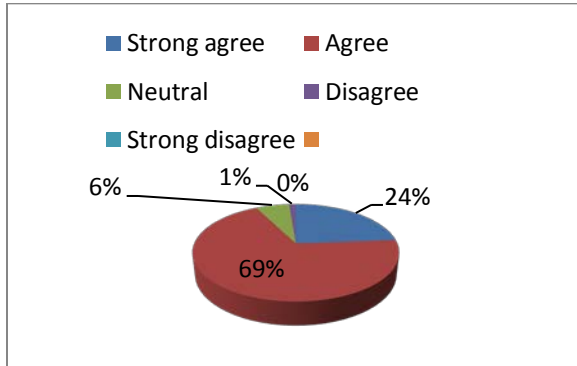


Figure 4: The opportunity of technological change

As shown in the chart above, the vast majority of participants agree (69%) to this phrase, while (24%) strongly agree, the total percentages of two groups equal (93%). This result shows that the study sample agree that the technological changes provide new business opportunities to hotels in particular to extend their business online without the need for big amount for the extension in business. The mean equal to 4.15 and a small standard deviation 0.57, means the certainty and assurance of participants is high and confirm the conclusion of the study.

### 5.2.2. A large number of new product ideas have been made possible through technological breakthroughs in our industry.

The study investigated this question with the participants', and their answers show that (22 strongly agree, 50 agree, 8 neutral, 0 disagree, 0 strongly disagree), and represented in Figure 5 below:

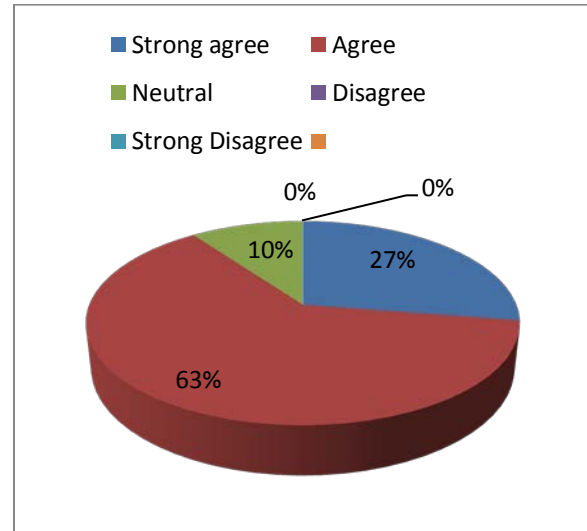


Figure 5: New ideas and products of technological breakthroughs

As shown in the chart above, the vast majority of participants agree (63%) to this phrase, while (27%) strongly agree, the total percentages of two groups equal (90%). This result confirms the conclusion of the study that the technological factors affect the business performance and e-commerce usage of hotels in Libya. The mean equal to 4.17 and a small standard deviation 0.59, means the certainty and assurance of participants is high and confirm the conclusion of the study

### 5.2.3. Technological developments in our industry are rather minor

The participants' answers show that (5 strongly agree, 10 agree, 20 neutral, 34 disagree, 11 strongly disagree), and represented in Figure 6 below:

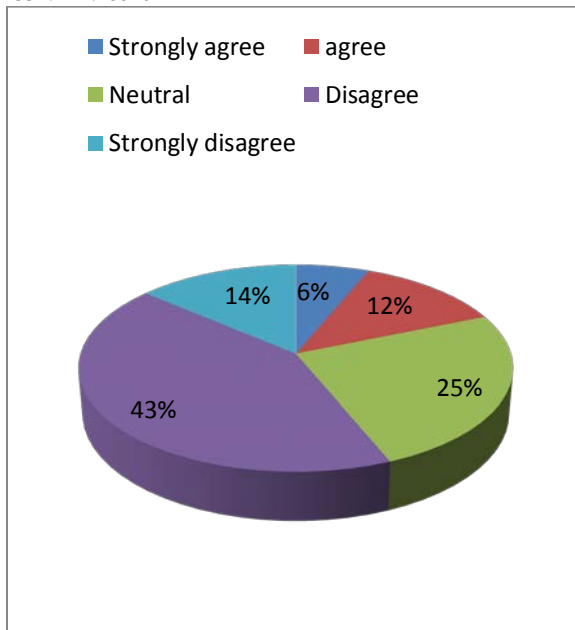


Figure 6: Technological developments in hospitality industry

The chart above shows that the majority of participants disagree (43%) to this phrase, while (14%) strongly disagree, the total percentages of two groups equal (57%), which is around half of study sample. While the participants those agree to this phrase equal to (12%) agree and (6%) strongly agree, and (25%) have not decided about this phrase. Therefore, the study concludes there is weak agreement on technological development of e-commerce in Libya, while the uncertainty about this phrase is high. The mean equal to 2.55 and a small standard deviation 1.07, means the other opinions cluster away from the mean, and thus the uncertainty of participants is high. Therefore, the study could confirm the conclusion about this phrase.

### 5.3 E-commerce Usage

E-commerce applications enable firms from different types of industry to establish their presence in the market at national level and also to extend their economic activities beyond national borders in order to pursue opportunities elsewhere. The usage of e-commerce has the potential to reshape the performance of firms working in the hospitality industry, and effective e-commerce usage enabling price and service-related comparisons in a borderless market environment (Mohamed Ahmed A.Said 2014)

#### 5.3.1 Percentage of sales to businesses conducted online We asked the participants

about their opinion with regard to the percentage of sales in their business place. The results showed that (0 strongly disagree, 0 disagree, 6 neutral, 46 agree, 28 strongly agree). (Mohamed Ahmed A.Said 2014) The results statistics is shown in Figure-7 below:

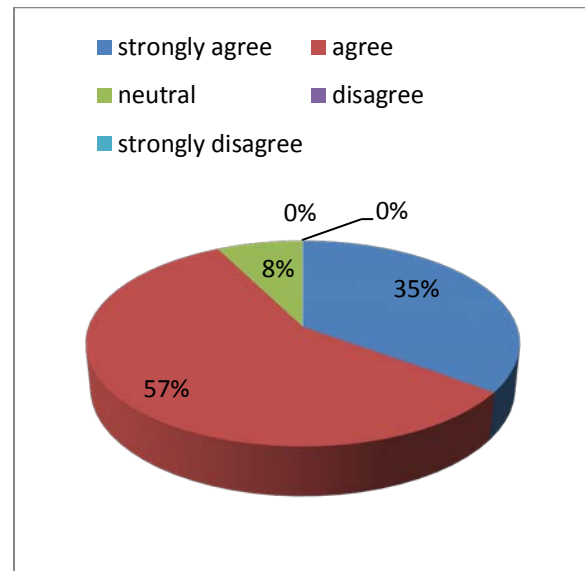


Figure-7: The Percentage of sales to businesses conducted online

Figure-7above shows that the vast majorities (92.50%) of participants agree and strongly agree that adopting e-commerce by their hotels will increase the percentage of sales. The mean (4.2750>4) shows that the study population is highly agree and emphasize on the importance of e-commerce to increase the sales volume of hospitality industry. In addition to that, standard deviation value (0.59481) is small, which means that the opinions of participants cluster very close near to the mean value.

#### 5.3.2 Percentage of sales to consumers conducted online

We asked the participants about their opinion with regard to the percentage of consumer's usage to e-commerce website of hotels, and its impact on sales volume. The results showed that (0 strongly disagree, 0 disagree, 7 neutral, 44 agree, 29 strongly agree). The results statistics is shown in Figure-8 below:

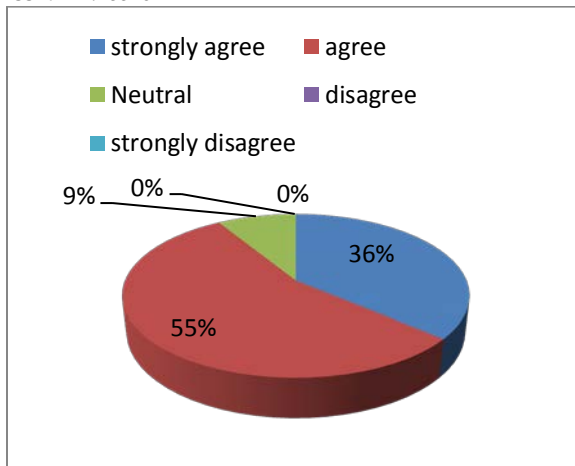


Figure-8: Percentage of sales to consumers conducted online

The result shown in Figure-8 above is identical with the previous question and indicates that both user seller and buyer in e-commerce contribute to increase the sales volume through effective usage to e-commerce.

### 5.3.3 Percentage of customer services conducted online

We asked the participants about their view with regard to the percentage of customer services online and its impact on e-commerce usage by the consumers. The results showed that (0 strongly disagree, 0 disagree, 7 neutral, 46 agree, 27 strongly agree). The results statistics is shown in Figure-6 below :(Mohamed Ahmed A.Said 2014).

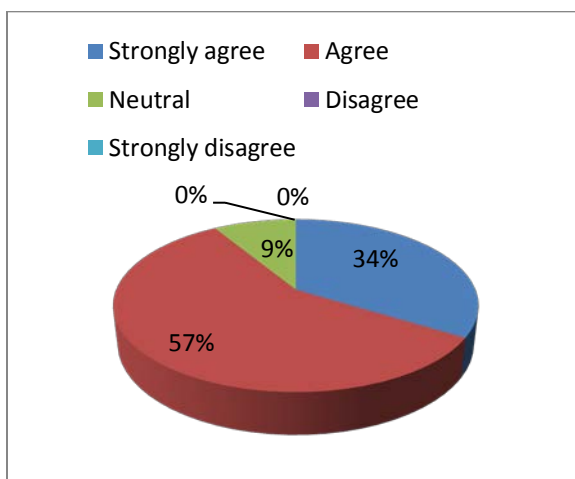


Figure-9: Percentage of customer services conducted online

The result shows that the majorities of participants agree and strongly agree that good customer service increase the usage of e-commerce. The mean value equal to (4.2500) which means that the majority of opinions (57%) confirms

the importance of customer service on the number of visits and usage of e-commerce, while standard deviation very small (0.60588), and this means that the study population cluster very close to the mean value (strongly agree). Companies that sell goods and services online need to make an effort to build value-laden relationships with customers. In other words, a company must look at what customers need and value, and provide it accordingly. Companies that do not provide this expected value will likely lose their customers to a competitor (Kaylene et al., 2008). In addition to that the tourism industry expands globally, hotels expanding their business online need for expanding their communication networks and customer service as well (Mohamed Ahmed A.Said 2014) and the improvements in customer service can have a significant impact on customer loyalty. In groceries, a one point improvement in customer service satisfaction yielding a significant increase in implied retention rates.

## 6. CONCLUSION

E-commerce in the development of technology has grown most rapidly at the present time with the high rate of adoption of firms of each type of business all over the world. Hospitality sector among the most important industries has earned interest and dividends from a large e-commerce application and has changed their business strategies to the business model online. Therefore, from a scientific perspective, the results of this study will help the Libyan hotel sector in the formulation of new strategies and take advantage of the benefits of the use of promising technologies to manage their businesses effectively.

Results show that small and medium-sized businesses in the hospitality sector in Libya is facing challenges and obstacles similar to other companies small when creating a site on the Internet for e-commerce or attempt to make online booking, and they require assistance in basic planning and management support for the implementation and maintenance of the site, considering the internal resources and external, and the development of online marketing strategy and evaluating the success of website's. In addition, the study shows a strong correlation between the use of e-commerce and business performance, and when hotels implementation of e-commerce and start making your reservation online, and the annual sales and profits increased significantly. Finally, it should be senior managers of hotels in Libya realize the importance of a large e-commerce for their business should consider that

the only way to expand their business globally with a high level of profitability and quality performance.

## 7. REFERENCES

- Alshare, K., E. Grandon, et al. (2004). "Antecedents of computer technology usage: considerations of the technology acceptance model in the academic environment." *Journal of Computing Sciences in Colleges* 19(4): 164-180.
- Epstein, M. J. (2004). *Implementing e-commerce strategies: a guide to corporate success after the dot. com bust*, Greenwood Publishing Group.
- Huang, J., X. Jiang, et al. (2009). "An e-commerce performance assessment model: Its development and an initial test on e-commerce applications in the retail sector of China." *Information & Management* 46(2): 100-108.
- Kaur, K., K. K. Kapoor, et al. (2005). "Impact of organic manures with and without mineral fertilizers on soil chemical and biological properties under tropical conditions." *Journal of Plant Nutrition and Soil Science* 168(1):117-122.
- Lee, C.-F., P. T. Ho, et al. (2006). "Infall and outflow around the HH 212 protostellar system." *The Astrophysical Journal* 639(1): 292.
- Lee, Y. W., D. M. Strong, et al. (2002). "AIMQ: a methodology for information quality assessment." *Information & Management* 40(2): 133-146.
- Mohamed Ahmed A.Said , N. A. A. (2013). "FACTORS AFFECTING ECOMMERCE ADOPTION AMONG HOTEL INDUSTRY IN LIBYA." *Proceeding of the International Conference on Social Science Research, ICSSR 2013* ICSSR 2013 (e-ISBN 978-967-11768-1-8),( 4-5 June 2013, Penang, MALAYSIA. Organized by WorldConferences.net ): 10.
- Mohamed Ahmed A.Said , N. A. A. (2014). "The Impact of Firm Size and E-commerce Usage on Business Performance on Hospitality Industry: A case of Libya." *INTERNATIONAL JOURNAL OF COMPUTERS & TECHNOLOGY* 13, No. 3(April 10, 2014): 4275
- Myers, M. D. (2013). *Qualitative research in business and management*, Sage.
- Orlikowski, W. J. (1993). "CASE tools as organizational change: Investigating incremental and radical changes in systems development." *MIS quarterly*: 309-340.
- Su, Z., E. Xie, et al. (2010). "Impacts of environmental uncertainty and firm's capabilities on R&D investment: Evidence from China." *Innovation: Management, Policy & Practice* 12(3):269-282.
- Tapscott, D., A. Lowy, et al. (1998). *Blueprint to the Digital Economy: Creating Wealth in the Era of E-business*, McGraw-Hill Professional.
- Tolbert, P. S. and L. G. Zucker (1983). "Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform, 1880-1935." *Administrative science quarterly*: 22-39.
- Tushman, M. L. and E. Romanelli (2008). "Organizational evolution." *Organization change: A comprehensive reader* 155: 2008174.
- Venkatesh, V. and H. Bala (2008). "Technology acceptance model 3 and a research agenda on interventions." *Decision sciences* 39(2): 273-315.
- Wang, R. Y. and D. M. Strong (1996). "Beyond accuracy: What data quality means to data consumers." *Journal of Management Information Systems*: 5-33.