Examining the factors that affect the Utilization of Information Technology (IT) among Hotels in Ghana

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Abstract

In recent times, many organizations have diffuse IT in their business activities and are widely acknowledged as improving performance in many ways. Despite the significant role IT plays in firm's competitiveness and growth, diffusion within the hospitality industry of Ghana is low compared to other industries. This research, therefore, examines factors that affect IT utilization among hotels with an exploratory study focused on Kumasi the second largest commercial city in Ghana. The study identified some barriers for the non-use of IT with frequent electricity outage and a high cost of maintenance and setups as the most prevalent factors. The study also identified some motivating factors behind IT usage among hotels in Ghana. Also, the study also reveals that there were some IT applications used in hotels

such as telephones, fax machines, printers, computers, photocopier machines and so on. The results led to the development of recommendation strategies and a framework for enhancing IT usage towards sustainable growth of hotels in Ghana. Since this research did not test any hypothesis, the framework was validated and analyzed using survey from hotels experts and SPSS Software version 16 which turned out to be a positive framework. The research made some recommendations to hotel Stakeholders and Shareholders in designing strategies to help enhance the development and sustainability of hotels in Ghana.

Keywords: Information Technology (IT), Diffusion, Hotels, Hospitality, and, Utilization

1. INTRODUCTION

Over the past decades, information technologies (IT) have offered various societies with a great number of current communication opportunities. Such as people communicating with others from different countries in real time through the use of technologies such as instant messaging, voice over IP (VOIP), video conference calls, and also social networking sites like Yahoo messenger, Facebook, Twitter, Skype enables the regular basis of communication worldwide. Social networking rings are usually created by related interests, as a result, sending of marketing messages or advertisements through social media to social circles made up of representatives of the target customer segment in the hospitality industry can help increase the numbers of clients and revenue (Thomas, 2013). IT can also be defined as any product that can store, retrieve, manipulate, transmit, or receive information electronically in digital form (World Bank, 2002b). we adopt the definition- IT as a technology that comprise of hardware, software, network, storage, and media for collection, that process, transmits, and presents information in the form of text, voice, data or image. In recent times, information technologies (ICT) have helped create a "global village," which has made communication easier for people around the globe.

Growth in IT is significant in job creation and economic growth in a country. Information Technologies (ICTs) have shaped

many parts of the global economies, societies, and government. In developing countries, Governments, businesses, and individuals are utilizing the transformative power of ITs to enable efficiency in public services, economies growth and reinforce social networks. Olsen and Connolly (2000) in their study mentioned that the diffusion of information technology in the hospitality industry can help employ knowledge and information at its core to become more competitive. In the hospitality industry, IT can transform the nature of products, processes, companies, industries, and competitions (Cho & Olsen, 1998). This corresponds to Frew (2000a,b) research that stated that technology will bring about significant transformation in the hospitality industry.

Hotels in Ghana can improve their customer services, increase their market share, reduce marketing expenses and distribution cost by means effective IT utilization. However, major constraints mentioned in this study has deterred most hotels in Ghana from adopting and effectively utilizing IT in their business operations. Therefore, this paper underlines the major grounds of non-utilization of IT amongst hotels in Ghana.

2. LITERATURE REVIEW

2.1 Contributions of Hotels to the Tourism sector in Ghana

The tourism industry of Ghana in recent times has developed due to the improvement in the number of hotel facilities since the year 1999. The number of hotels in Ghana increased from 273 in 1989 to 767 in 1999. From 2000 to 2010, the number of hotels increased significantly from 992 to 1,797. Similarly, the number of rooms and beds in hotels and guest houses also increased due to the discovered oil in the western region. Furthermore, the year 2009 the number of 3-star hotels dropped from 30 in 2006 to 17 in 2009, which represents a decline of 43%. Also, in 2009, there was a reduction in the number of 1-star hotels and guest houses from 188 in 2008 to 184 in the year 2009, a decrease of 2%. This was due to requirements from the Ghana Tourist Board that most hotels and guest houses could not meet up during the reappraisal of all hotels in 2009 resulting in the closure of most hotels and guesthouses.

2.2 Benefits of IT to hospitality Development

IT utilization provides some significant benefits for hotels such as an increased productivity, enhancing the effectiveness of internal business set-ups, also making hotels connection to global and domestic markets more affordable and easy. They also enable the immersion of tourist investment at the local and national level (Buhalis & Main, 1998). Furthermore, IT helps hotels to improve on inventory management systems, effective inter-departmental communication, reduce the cost of communication, helps improves firms financial practices, expanding clients and customers through e-commerce, leading to domestic and global supply chain and outsourcing advantages. Besides, hotels can share and learn new business techniques through the use of IT and can contribute to the digital economy (Golding et al., 2008). Information Technology (IT) also makes the management of a firm's resources more organized through specialized software such as Enterprise Resource Planning (ERP) System and others. IT helps the smooth transfer of information by increasing the efficiency of business processes, for instance, data processing, documentation, and other back-office functions (Ayeh, 2008). Integrating technological and human factors can improve the quality of goods and services within the tourism sector (Avcikurt & Koroglu, 2000). Commonly, hotels are benefiting from ICTs in rapid communication, customers satisfaction, increase incomes and reducing cost as well as service improvement, (Aksu & Tarcan, 2002; Siguaw et al., 2000).

Gradually modern IT applications such as CRM (Customer Relationship Management) and KMS (Knowledge Management System) allows firms to retain, share and make use of their secured information, knowledge and know-how that leads to time-saving, enhance efficiency and reduce duplication of work.

IT investment is very crucial in the economic growth of developing and developed markets, its help in the increase of a nation's GDP growth by 0.6-0.7 % on average, with the annual basis for each increase by 10% in household penetration on average, as revealed in several studies (Beardsley, et al. 2010). According to the European Commission (2008) usage of IT by the business will ensure growth and productive innovativeness, therefore recommending the use of IT within organizations. Through the use of IT, data and

information resources can be exploited using Centralized Reservation Systems (CRS). The link to a centralized reservation system (CRS) is known to be one of the most significant means of connecting any franchise hotels, (Knowles, 1998). Central reservation systems networking helps to improve cost-effectiveness, rapid communications, and effective availability and sharing of information and data management (Lucey, 2005). Klein and Quelch (1996) argued that CRS enables the hospitality industry to manage its inventory and enhance accessibility of information among its partners.

The use of Property Management System (PMS) in hotels addresses different back and front office functions that have a significant influence on overall hotels' operation (Collins & Cobanoglu, 2008). The front office is a term consisting of the back of house responsibilities, such as accounts, cashiers, switchboard, night audit, front desk, guest service and concierge (Edexcel Limited, 2010). The front office department performs functions such as reservations, check-in and check-out, registration, information access, bill settlement, uniformed service, and baggage handling, telephone calls and messages, guest accounts and other guest transactions (Baker et al., 2000). Back of the house technologies includes important processes and operations that deal with hotels internal communication that does not involve hotel guests (Kasavana & Brooks, 1995). Packages of the back office include several applications such as accounts payroll, payable/receivable, purchasing accounting, inventory and reports module that differs depending on the operations of the type performed (Kasavana & Cahill, 2003).

Information Technology enables Human Resources Managers(HRM) organize databases, develop reward programs, training, communication and handle employees' inquiries, (Rutherford & O'Fallon, 2007). The web-based tool can also help to estimate the overall cost of employee turnover and establish organization norms for turnover-related factors, such as training duration, orientation programs, wages, drug testing, recruiting practices, as well as several other human-resources practices" (Hinkin & Tracey 2006). The role of Information Technology in the hospitality industry can never be underestimated regarding revenue management activities (Squires, 2008). Efficient handling of reservations is a crucial issue for the operational success of hotels, (Kasavana & Cahill, 2003).

Furthermore, a reservation module is one of the key applications of Property Management Systems (PMS) that helps managers in checking room availability, booking of individual and group reservations, receiving confirmations and handling several other functions (Collins & Cobanoglu, 2008). Increased in the complexity of IT has enabled captured additional information to assist management of revenue rather than solely per room yield, (Vinod, 2004). The use of Electronic Fund Transfer (EFT) enables quick updates of hotel and guests' accounts immediately after reservation. IT tools such as Computer Managed Instruction (CMI) and Computer Managed Learning (CML) are used in administrative resources for organizing guest data, occupancies and vacant rooms (Ansah et. al., 2012)

In addition, IT is believed to have made a significant impact on communication practices (William & Curtis, 2008), sales facilitation, (Schneider, 2010), organizational culture, marketing practices, (Moutinho, 2010) reduction of operational costs, (Parsons & Oja, 2013) in the hospitality industry. Using IT at hotels creates more form of convenience and rapid transactions for guests such as communicating with the front office staff through telephone or the Internet, as well as to make a request or confirm reservations. Also, guests can make payment for their online booking to facilitate their reservation; this means that guest saves time and don't have to queue at the front offices. While some hospitality industries are effectively utilizing IT for their business to the source of competitive advantage, the significance of IT is yet to be used by others (Mihalic & Buhalis 2013).

3. RESEARCH METHODOLOGY

The questionnaire was randomly distributed through field survey among hotel owner/managers in Kumasi the second largest commercial city in Ghana. Due to the still developing postal system in Ghana, the self-administered approach was chosen as an appropriate method of data gathering. Also, we located the hotel owner/managers and employees in person to avoid delay since there are unclear and insufficient addresses of hotels from the various government agencies. Out the 100 questionnaires distributed 81 questionnaires were returned, in which 64 were correctly completed. Since this research did not test any hypothesis, a framework was developed which was

later validated and analyzed using survey from hotel owner/managers and SPSS Software version 16. Table 1 below illustrates the demographics of respondents.

Table 1 Demographic of Respondents

Respondents	Frequency	Percentage %
Position in Hotel		
Owner/Managers	12	18.8
Accountants	7	10.9
HRM	9	14.1
Receptionist	13	20.3
Secretaries	16	25.0
IT Managers	7	10.9
Level of Education		
University Degree	29	45.3
Professional Certificates	10	15.6
Higher National Diploma (HND)	22	34.4
Vocational/Technical Training	3	4.7
Years of Working Experience		
Less than 1 Year	5	7.8
1-5 years	10	15.6
5- 10 years	18	28.1
10 - above	31	48.4

4. RESULTS AND DISCUSSIONS

4.1 Hotel Categorization

Selections of hotels were done randomly from the area of field survey. From analysis shows that 16 (25 %) were one-star hotels, 8 (12.5 %) of the respondents from two-star hotels and 10 (15.6 %) from a three-star hotel. 6 (9.4 %) of the total respondents belonged to a four-star hotel, 11 (17.2%) were classified as five-star hotels and 13 (20.3%) fell under unrated hotels Below indicates a graph illustrating the various sectors of SMEs that were sampled.
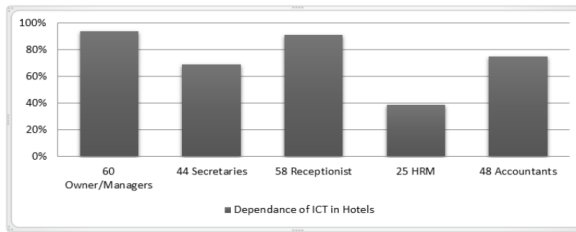
Eric Ohemeng Sarpong, Shao Yun-Fei, Andy Ohemeng Asare, Gideon Boafo Junior,
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Figure 1 Categories of Hotels

4.2 Types of IT Tools used among Hotels

The type of IT tools used among Ghanaian hotels was investigated to have a deep insight into IT tools used for global and domestic communication among their customers and suppliers. As indicated in figure 1 below, preferable tools utilized by the hotels were Computers, Telephones, Fax Machines, The Internet, Photocopier machines, printers, scanners and among others. Figure 1 illustrates in percentages the type of IT tools used by the various hotels.
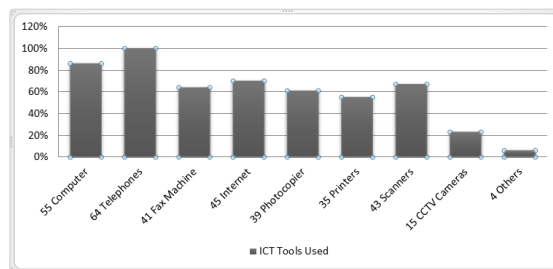

Figure 2 Types of IT hardware Tools used in hotels

4.3 Types of IT Software Tools used in Hotels

Out of the 64 hotels surveyed 52 respondents representing 81% use software application whiles 12 respondents representing 19 % did not use any form of software application in their businesses. Also, 47 respondents representing 73% indicated that they utilize both IT software and hardware tools in place. The majority of them used basic office applications in their daily activities. Some of the software applications or tools utilized by these hotels are peachtree accounting software, Enterprise Resource Planning (ERP). Also, Data Management Software (DMS), Microsoft Package, business soft, AutoCAD, anti-viruses, DVD, CD burners and calendars among

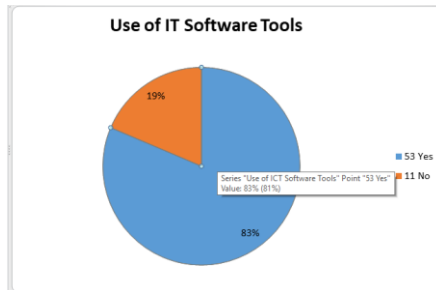others are all ICT software tools used by these hotels. The chart below represents the results of the respondents.

Figure 3 Use of ICT Software tools in hotels

Dependence of IT in Hotels

The study revealed that those that commonly used IT tools were Owner/Managers, Secretaries, Receptionist, and human resource management and accountants. All these hotels that used computers indicated that they use their computers for the multipurpose task in their various organizations. The bar graph shows the number of IT dependence among these hotels.
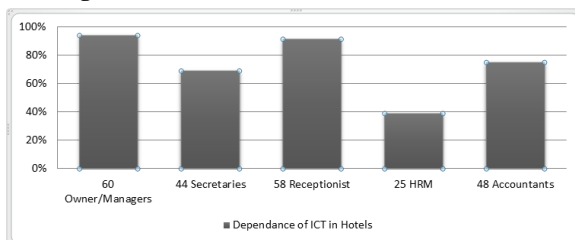

Figure 4 Dependence of IT in hotels

4.4 Reasons for Adoption and Non- adoption of IT by Hotels

To understand the connection between IT usage and the value added among the hotels under study, the researcher asked the question "At what extent do you think IT has improved to the features of your business? The two main significance reasons were, improving operational efficiency and customer service. In order of importance, the following was seen as the most critical value additions made by the use of IT in the business by the hotels under the study. Below is a graph that illustrates the reasons behind IT usage among the four SMEs in the case study. To identify the primary cause behind hotels, non-utilization of IT responds indicated from the questionnaire was

the high cost of setup and maintenance, frequent electricity outage, lack of Skilled and trained personnel, IT unsuitable for business, lack of financial support from banks. There were several reasons given as illustrated in the table below with the most pertaining being frequent electricity outage and high cost of setup and maintenance.

Table 2 Reasons for Utilization and Non-Utilization of IT

| Reasons for IT Utilization	Frequency	Percentage (%)
Speedy Communication	56	88
Increase Customer Satisfaction	51	80
Competitive advantage	44	69
Increase in Sales	32	50
Information availability	27	42
The exploitation of Network Opportunities	15	23
Reasons for Non-Utilization of IT	**Frequency**	**Percentage (%)**
Frequent Electricity Outage	60	94
High Cost of Setups and maintenance	36	56
Lack of Knowledge and Training	41	64
Lack of Financial Support from Bank	59	92
Lack of Government Support	48	75
Poor ISP services	21	33

5. Framework Development

Based on the literature review and analysis of the study, the recommendation framework was developed to enhance IT utilization among hotels in Ghana. The frameworks demonstrate that employees training on the use of IT, creating owner/managers awareness of the significance of the use of IT and improving the current condition of electricity in the country will go a long way in improving IT utilization among hotels in Ghana. Also, the study recommended that the government, internet service providers (ISP) and financial institutions should come together in supporting hotels and the hospitality industry in Ghana.
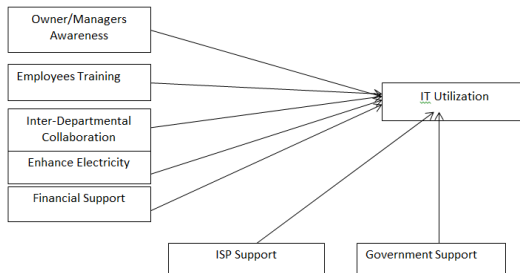
Figure 5 Research Framework

5.1 Validation of Framework

There were a total of 100 questionnaires sent out for the validation process in which 64 questionnaires returned were correctly filled. All respondents were made up of hotel owner/managers and employees with years of experience in their related field that partook in the initial survey and interview. The respondents were asked in a structured, semi-closed questionnaire to comment on the framework. All the responses received were positive to a large extent. The majority of the participants were in favor of the result, implying that the framework is a positive contribution to the enhancement of IT utilization among hotels in Ghana. In analyzing the data, SPSS 16.0 was used to establish the frequency and percentage to which respondents, at least, agree on the research outcome.
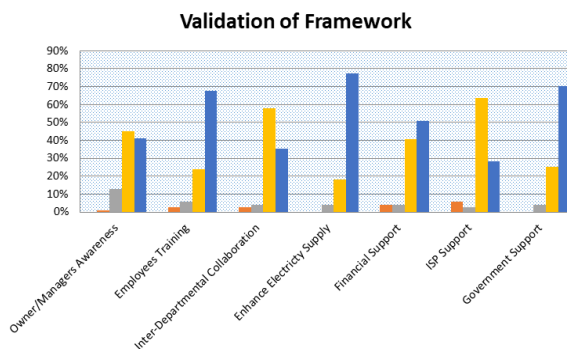
Figure 6 Validation of Research Framework

6. CONCLUSION AND RECOMMENDATION

The result of this study indicates that lack of electricity is the most hindrance factor behind the non-adoption of IT by most Ghanaian hotels. Therefore, policies and measures need to be put in place by the government in addressing the current power situation in the country with regards to power generation and distribution for effective and efficient electricity. The findings also revealed that high cost of IT setups and maintenance contribute to poor utilization of IT by hotels which relates to the inadequate financial support from banks with regards to providing insufficient funds and unfavorable loan conditions to help improve on IT usage among Hotels. This corresponds to a study by Wong and Kwan (2005) which revealed that the vast amount of investment required in an information technology system deters owner/managers in adopting and utilizing IT. With adequate funds and favorable loans conditions from banks, hotels would be able to expand and effectively use IT.

In addition, the findings indicated some other hindrances such as lack of IT knowledge and training as well as lack of IT awareness on the side of owner/managers, (Nanji et al., 2009) stated that to overcome barriers of ICT; there is the need for adequate training, continuous improvement, and adaptation of workflow. He further suggested the need to increase employees training opportunities to promote efficient utilization of IT by hotels. The government and other private bodies should also, urge hotel owner/managers to work in partnership with Universities, higher institutions and accredited IT training agencies in the country as well as educating hotels owner/managers to create their awareness on the significance of IT utilization in the current business world.

Interdepartmental Collaboration and teamwork make significant contributions to the success of business initiatives such as IT development, product development, quality improvement, or customer service. For hotels in Ghana to have effective teamwork, there is the need to break down all administrative barriers to collaboration to be able to draw the best employees. Hotel owners/managers need to establish clear objectives and define working relationships for employees to work as a cohesive team, and also provide IT tools that support efficient and innovative

collaboration. This can help in assessing and development of workers' skills and strength, faster innovation, work efficiency, job satisfaction, and employees retention.

Furthermore, ISP providers need to improve their internet connectivity and lower their tariffs to enable hotels to subscribe to the internet with higher connectivity. They should also assist hotels regarding ICT setups, maintenance, and training of employees.

Finally, there is the need for the government to develop policies and measures to tackle the barriers affecting hotels and other firms in the hospitality industry from effectively utilizing IT to be able to experience the significance of ICT utilization.

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