

**STATE OF AFFAIRS IN ICT USAGE IN THE HOSPITALITY INDUSTRY: A CASE OF HOTELS IN
ABEOKUTA, OGUN STATE, NIGERIA.**

Lawal Olanrewaju O.
Department of Computer Engineering,
Moshood Abiola Polytechnic Abeokuta, Ogun State,
Nigeria.

Logunleko Kolawole B
System Analyst Units,
DS Adegbenro ICT Polytechnic, Itori, Ogun
State, Nigeria.

Logunleko Abolore M.
Department of Computer Science,
Moshood Abiola Polytechnic, Abeokuta, Ogun State,
Nigeria.

Olaitan Omotayo T.
Department of Computer Science,
Moshood Abiola Polytechnic, Abeokuta, Ogun State,
Nigeria.

Abstracts

Every modern society is characterized by growth and development of Information Communication Technology (ICTs). The expansion of the internet has entered into all aspects of human endeavors. Tourism and hospitality industry as one of the currently fast growing industries across the world cannot go further without ICT support and diffusion into their business methods and processes. The industry has become very competitive; hence it is imperative for the investors to work up new ways to increase their guest patronage as well as their service delivery. This study tried to investigate the state of affairs in ICT usage in hotels in Abeokuta, Ogun State, Nigeria. A survey was carried out to find out the level of ICT usage, nature of the ICTs infrastructures, its impact in business processes and the challenges of ICT usage. It was revealed that most of the hotels surveyed have different ICT infrastructures on ground but not fully integrated and utilized despite the fact that our research showed that the usage of ICT infrastructure has positive impact on their business processes and service delivery. There are still low levels of utilization, procurement and usage of ICT infrastructure and these are attributed to some challenges as well as the grade of the hotel. It is of our opinion that government should provide enabling infrastructures and policy in which

the hospitality industry can move with technology pace.

Introduction

Rapid and meaningful development of Information Communication Technology (ICTs) is everywhere in this day and age. Its emergence has entered into all aspects of human endeavor. The possibility of how it can be used is endless. Information Communication Technology (ICTs) involves the use of computer hardware, software, and telecommunication devices to store, manipulate, convert, protect, send and receive data [1]. In today's world, the use of ICT is no more a distinctive characteristic in itself, only an effective usage can assist in obtaining a competitive advantage [2]. Hospitality as one of the currently fast growing industries across the globe cannot go further without ICT support because the way hotel companies sell to consumers is changing dramatically over the years. International tourist arrivals grew by 4.4% in 2015 to reach a total of 1,184million in 2015, according to the latest UNWTO (World Tourism Organization) World Tourism barometer, a remarkable point. Its revenue supports a significant proportion of the economies of many nations and it is one of the largest employers worldwide. Hotels in Abeokuta are important sources of employment as well as creation of new interrelated business opportunities to increase the stream of

revenue to the government in terms of tax and improving innovations. Similar views were supported by the fact [3] that tourism positively contributed to the socio economic improvement and that there are significant increases in the values of prices of goods and services and transportation cost in the ancient city of Abeokuta.

Although the tourism sector is reported to have economic and cultural benefits [4], the drivers of the sector's competitiveness have not received rigorous academic attention for a reliable and valid competitiveness framework. In the context of tourist hotels, [5] suggested that hotels as service providers cannot gain competitiveness to deliver superior value to their customers without the appropriate usage of ICT. The exchange of information is vital and necessary at every stage in the sales cycle of the tourism product or service. There must be free-flow of information at a remarkable speed and accurately between the guests and the hotel staff.

ICT makes new tools for dissemination of information and shifts from physical to virtual service-environment and extinction of some conventional information services and emergence of new and innovational web-based systems. As submitted by [6], ICT serves information from the buyers to sellers and forth. Through ICT especially the internet, the world has become more transparent and interconnected.

Statement of the Problem

Hospitality industry is one of the fastest growing businesses in Abeokuta. Some literature argues that tourism cannot go further without a support of ICT application [7][8]. Although ICT is an important component in the competitiveness of hotels in the tourism sector [9], little has been studied in developing cities, such as Abeokuta about it. This study is therefore instituted to establish the level of ICT usage, the nature of the ICT tools used, its impact

in business processes and the challenges that come with its usage in the hospitality industry.

Literature Review

Information Communication Technology (ICT)

Information Communication Technology (ICT) has no universal definition, as "the concepts, methods and applications involved in ICT are constantly evolving on almost daily basis". [10] defines ICT as a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information. The Information Technology Association of America (ITAA) defines ICT as the study, design, development, implementation, support, and management of computer-based information systems, particularly software applications and computer hardware.

The broadness of ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form, e.g. personal computers, digital television, email, etc. ICT devices can be embedded in other machines and appliances to increase their functionality.

ICT and Hotel Management

The hospitality industry is a major service sector in the world economy. The industry encompasses an extensive variety of service that includes food service, tourism and hotels. Hotel is an establishment that renders lodging in lieu of payment. This lodging is usually given in exchange for a specified predetermined amount of money. According to [11], tourism involves activities of travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes.

Nowadays, hotels are built to serve the hospitality industry. There are more and more hotels built up and it makes the market become more difficult. More competitors make it difficult to increase profits and

income for the hotels. The hotel in the past tried to provide excellent customer services in order to gain competitive advantage but now due to the advancement in technology, hotels now focus on the use of ICT so as to gain competitive advantage.

ICT in conjunction with globalization and the information revolution has reshaped the hospitality industry; ICT helps the hotel work more efficiently and effectively. ICT is simply the use of applications to manage information for human benefits. The application of ICT in hospitality industry has led to continuous development and it has become an indispensable tool in the hands of the operators. In the past, most tasks in the hotel were dependent on paper and needed a lot of time to finish but now, most tasks are accomplished within the shortest possible time with little or no need of papers [12].

Through ICT, sales in the hospitality industry have changed dramatically over the past years. An application called Centralized Reservation System (CRS) could be used to exploit data and information resources. The link to a centralized reservation system is considered one of the most important benefits of joining any hotel franchise [12]. Networking the centralized reservation system enhances cost effectiveness, faster communications, and effective exchange of information and efficient management of data [13].

In addition, ICT has brought people around the world together in spite of language and cultural differences. Customers sit in the comfort of their homes and easily find all necessary information about their destination by surfing the internet, pick a hotel of their choice, make bookings and settle all necessary bills. The old-fashioned method is replaced by the usage of ICT in order to save time, cost, and serve people better and faster.

Hospitality and the Economy of Abeokuta

Abeokuta is the capital and largest city of Ogun State, a vibrant city merged with cosmopolitan vibes. At the present, the city is more urbanized compare to the ancient Abeokuta that was struggling to adapt to modernization. The economic situation of Abeokuta is reasonably alright, the city has no shortage of opportunities, the number of companies and businesses has boosted over the years, it is becoming increasingly affluent with many records breaking educational institutions, and the city has undergone various developmental efforts and has become a more livable city for entrepreneurs and investors. The city offers low cost of living, cheap housing, quality educational facilities, modern facilities and well developed road networks. Hospitality industry is one of the top businesses that are thriving in Abeokuta, thanks to the economic prospects and the ongoing infrastructure face-lift in the city. Its proximity to other parts of the state and to other states like Lagos and Oyo ensures maximum economic gains for investors. The cultural heritage, tourism attractions, among others make the hotel industry to thrive in the state capital. The hotels ranges from one star to four star with state of the art facilities. The increasing number of hotels in Abeokuta offers tremendous advantages to the government through tax and employment opportunities to school leavers and graduates.

Research Study Area

Abeokuta is the capital of Ogun state in southwestern Nigeria created in 1976; it borders Lagos state to the south, Oyo and Osun states to the north, Ondo state to the east and the republic of Benin to the west. Abeokuta is the capital and the largest city in the state. The 2006 census recorded a total population of 3,751,140 residents. The ancient and mythical historical background of Abeokuta revolves around the

Olumo Rock. The Olumo Rock is a monument of the belief in tribal unity for the native tribes, and also a symbol of potency and shelter [14]. The study area consists of hotels ranging from 1 star – 5 star, 10 rooms -200 rooms above, the hotels considered are located within Abeokuta metropolis, some of which are located around commercial nerve centers of the city while few others are cited in popular destinations.

Table 1: Hotels considered in various location

Location	Number of Hotels for Study
Abiola way/Leme	5
Adigbe	3
Asero	3
Elega	4
Ibara-G.R.A	8
Ibara/Oke-Ilewo	4
Kuto	3
Onikolobo/G.R.A	6
Olomore	2
Panseke/Quarry Road	6
Total	44

Source: Field work (2016)

Table 1: Shows the location of the hotels considered in this study.

Methodology

Data was collected from different locations in Abeokuta which is the capital of Ogun State, Nigeria. Questionnaire, which included both open-ended and close-ended questions were developed and administered directly to the general Managers/Supervisors, ICT heads and Receptionists. Respondents were expected to tick the appropriate check box and supply answers where check box is not provided. Unstructured interviews were also conducted with the receptionists as well as their supervisors. A quantitative approach of data analysis was used on the

data collected by means of questionnaire and interviews. Tables and charts were used to collate the data for the analysis.

Data Analysis and Discussion of Findings

Demographic data of the respondents were analyzed here. Out of the 54 questionnaires distributed to 44 hotels, 30 questionnaires were received, 17 questionnaires were not returned while 7 questionnaires were void. The analyses of the 30 questionnaires received are as follows:

Description of respondent

Out of 54 questionnaires distributed to 44 hotels, 30 were received while 7 were void. The analyses of the 30 questionnaires received are as follows:

Table 2: Description of Respondents

Post held in the hotel	No of respondent
General manager	6
Supervisor	8
ICT head	5
Receptionist / Front office desk	11
Total	30

Source: Field work (2016)

The responses from some of the senior officers of the hotels were not encouraging due to the fact that most of them were too busy and were as well diplomatic, also the HODs of the ICT departments. Some did not even give attention, they just referred us to their supervisors or the receptionists or asked us to drop the questionnaires and check back.

Description of hotel

Table 3:Data on ICT facilities in the hotels considered

ICT facilities considered	Availability of the ICT infrastructure considered in the hotel
---------------------------	--

	Yes = available	No = not available
Hotel management	11	19
Website/online booking	11	19
E-mail based booking	12	18
Wireless internet	10	20
Intercom	24	6
Point of sales	14	16
ATM	4	26
E-check out form rooms	5	25
E-commerce	3	27
Cable TVs & other media	26	4
Global distribution system	4	26
CCTV camera	19	11
Fire /smoke detector	14	16
Electronic door	7	23

Source: Field work (2016)

Thirty (30) hotels were sampled and data obtained was tabulated (table 3) which was then converted to chart as shown in figure 2. From the chart above, the mostly used ICT infrastructures are Cable TV and Intercom. Cable TV was found in 26 hotels out of the 30 hotels while Intercom was found in 24 hotels within the sample area. The emergence of Cable TVs & other media can be attributed to the increase in number of Cable channels which serves as a tool for entertaining customers/visitors by offering different types of programs such as music, sports, movies, fashion, politics, religion etc. While the second most used ICT infrastructures (Intercom) can be referred to as an indispensable tool which enhances

communication between guests and the hotel staff. Although the technology is of age but it is still prevalent in the industry. It is obvious that the hotels in Abeokuta are not fully utilizing ICT infrastructures to boost their service delivery. The percentages of availability of ICT infrastructures sampled fall below average except for Cable TVs & other media, Intercoms and CCTV camera.

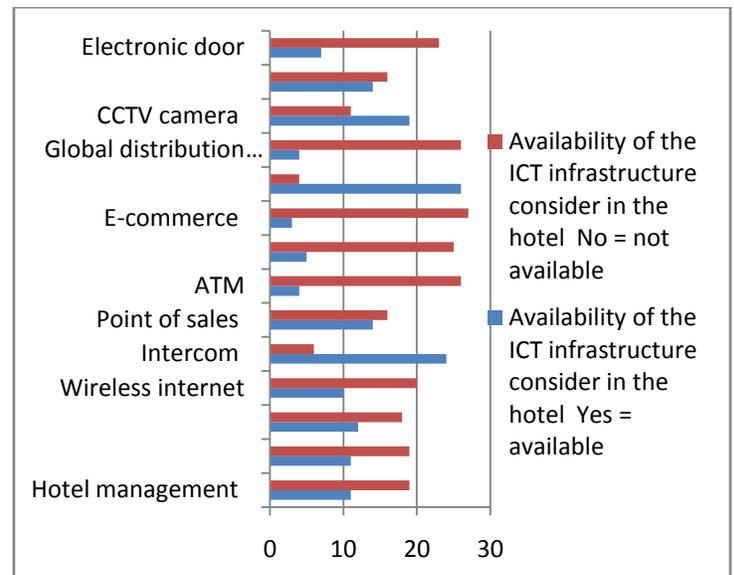


Figure 2: Chart Showing the ICT Infrastructures usage in the Hotels. Source: Field work (2016)

Age of Establishment

Analysis of Age of Establishment is as follows:

Table 5: Sample by Hotel age

Year of Establishment	No of Hotels
0 – 5yrs old	23
5 – 10yrs old	6
10 – 15yrs old	1
Above 15yrs	NIL

The age of the establishment was needed in order to know how recent the hotel is, since most properties less

than five years old would have been built to incorporate modern state of the art facilities such as wiring to all rooms for data access, electronic doors etc. while those between five and ten old would have been built and equipped without consideration of the above mentioned. Similarly, properties over ten years and fifteen years above are likely to be encountering issues associated with renovation in order to meet up with the current in-room technologies. It was revealed that 23 (77%) out the 30 sampled hotels are not more than five years that they were established.

Hotel Size and Grade

Table 5: Size and Classes of hotels

Size (No of Rooms)	Frequency
Below 50	19
50 – 100	6
100 - 150	2
150 - 200	3
200 above	Nil
Total	30

Classes of Hotels (*Means star grading)	Frequency
*	5
**	7
***	12
****	6
*****	Nil
Total	30

The size of the hotels was determined by the number of rooms in the hotel. From the analysis, the major hotels found in Abeokuta are of small – medium size. As a matter of fact, majority of the hotels were 3-star (40%) and the least were 4-star (20%). This implies that in Abeokuta metropolis, the hoteliers built more 3-star hotels compared to other grade of hotels, perhaps due to their patronage, affordable charges and the services rendered, as a result of these, most tourists or guests

that come in to Abeokuta prefer 3-star hotels. The fact that three star hotels are found majorly in Abeokuta defines the level of ICT infrastructures predominantly available.

Table 6: General statistics

Education level	Frequency	(%)
Certificate (SSSCE)	3	10
Diploma	12	40
Higher diploma	8	27
First degree	6	20
Masters	1	3
Non formal education	0	0

The authors were also interested in establishing the educational qualifications of the staff/ICT heads of the hotels. It was established that majority (40%) had only attained National Diploma (ND) level of education. In Abeokuta higher education hierarchy, this is one of the lowest level of education. Only 27% had Higher National Diploma (HND) and 20% had their first degree while 10% have S.S.C.E and 3% Master’s degree. It is important to note that education is an indicator of the quality of human resources available in any place therefore this low level of general education may imply some degree of incompetence and subsequently affect the quality and intensity of ICT integration in the hotel sector.

Table 6: Challenges of ICT usage by Hotels in Abeokuta

ICT challenges	Mean	Std.

		Deviation
Expensive to purchase	1.66	0.897
Low internet speed	2.54	0.905
Unreliable power	0.940	1.071
Unreliable service provider	1.96	0.940
System failure	2.07	0.842
Cyber security	1.89	1.188
Outdated ICT tools	2.27	1.041
Difficult to maintain	1.93	0.998
Risk of installing /safety	2.19	1.075
Requires additional skills or technical know-how	1.66	0.857

1 = Strongly Agree, 2 = Agree, 3 = Strongly Disagree, 4= Disagree

It was revealed that unreliable power supply has the lowest mean value and appears to have affected some because of its standard deviation value. This implies that most of the sampled hotels affirmed that unreliable power supply posed the greatest challenge for ICT usage. Other challenges include, “Expensive to purchase”, “Require additional skills”, “Cyber security”, “Difficult to maintain” and “unreliable service provider”. Others challenges with average mean value included, low internet speed, outdated tools, risk of installing and system failure.

The rate of unreliable power supply compared to rate of internet speed may imply that if a reliable alternative power is supplied, low internet speed will be another hindrance to its usage. Looking back at the table, with “expensive to purchase” having the same mean value with “require additional skills”, it is evident that some of these hotels would have integrated

the usage of ICT but are discouraged/burdened by high costs and faced with lack of skilled personnel.

Another challenges to compare is the internet speed and the outdated tools, it may imply that either the hoteliers import cheap used tools for the purpose of feeling that they have embraced the technology. However, owing to the fact that the tools are outdated, it becomes inefficient and ineffective. At times, it may fail to become compatible with modern equipment used by the target markets.

Table 8: Impact of ICT on Hotels in Abeokuta

Impact	No of respondents	Percentage (%)
Positive	27	90
Negative	3	10

A view on whether the use of ICT has brought any impact positively or negatively on the staff and hotel business as a whole, it was deduced from table 8 that 27 respondents (90%) submitted that it has a positive impact on the hotel business process and ease out employees workload. On the other hand, 3 respondents (10%) out of the sampled respondents said it has negative impact due to the fact that it is expensive to manage, procure and require technical skills.

Conclusion

As earlier said, the hospitality industry has been identified as one of the largest growing industry in the world. ICT in conjunction with globalization and information revolution has reshaped the industry. However, a new challenge for Hotel managers in this information age is how to adopt and diffuse the new, complex and varied services and ICT systems into their business operations.

Despite the emergence of these new, complex and varied ICT tools, most of the hotels still find it difficult to procure and integrate ICT infrastructures into their business processes. Even the few ICT infrastructures

found are not fully utilized. The low level of ICT procurement and usage were attributed to challenges such as unreliable power supply, cost of procurement, and requirement for skilled personnel, cyber-security and cost of maintenance.

Since it has been confirmed from the survey that ICT usage has a positive impact in the hotel business and services, the key action to take at this point is to arouse the owners, managers, ICT heads in the hotel industry to effectively maximize their usage so that they can be able to compete favourably with other hotels across the world.

Recommendation and Future Research

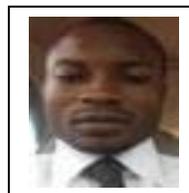
The main objective of this paper is to establish the nature of ICT usage and integration in the hospitality industry. Due to limited resources in terms of time and finances, the study was made only for Abeokuta metropolis, Ogun State, Nigeria. There is an urgent need to take a step forward to conduct the study across the state so as to get holistic view of the state of affairs. This will help to establish a comprehensive perspective to easily guide the regulating bodies and the practitioners on how to improve the integration and application of ICT in the hotel industry. On the part of governments, they should not just believe more in taxing hotels but also put proper regulations in place so that people will not just wake up and open a hotel without following due process

REFERENCES

- [1] Olifer. N. and Olifer. V. (2006) Computer Networks, Principles Technologies and Protocol for Network Design. John Wiley and Sons Ltd, England.
- [2] Nwakanma I. C. et. al. (2014). International Journal of Computer Science Issues, Vol. 11, Issue 4, No 1, July 2014.
- [3] Abegunde et.al. (2007). 6th FIG Regional Conference 2007: Strategic Integration of surveying services.
- [4] MFEA (2005). Ministry of finance and economic affairs, Zanzibar Economic

- Bulletin, A Quarterly Review of the Economy, 2 (3).
- [5] Kumar P (2001). Information and Communication Technology. University Science Press, New Delhi, India.
- [6] Porter ME (1980), Competitive Strategy, Free Press, New York, USA.
- [7] Yuan Y, Gretzel U, Fesenmaier DR (2006). The Role of Information Technology Use in American Convention and Visitors Bureaus. *Tourism Management*, 27(2):326-341.
- [9] Mihalič T, Buhalis D (2013). ICT as a new competitive advantage factor– case of small transitional hotel sector, *Econ. Bus. Rev.*; 15(1).
- [10] Badnjevic J, Padukova L (2006). ICT Awareness in Small Enterprises in India Tourism Branch. Master in Thesis Informatics, IT university of Goteborgn, Sweden.
- [11] Beech J, Chadwick S (2006). *The Business Tourism Management*, 1st Ed., Pearson Education Limited, England.
- [12] Knowles. T. (1998) *Hospitality management: An Introduction*, Prentice Hall London. 2nd Edition.
- [13] Lucey, T. (2005) *Management Information Systems*, Book Power, Britain.
- [14] www.mapsofworld.com/nigeria/cities/abeokuta.html

Authors Profile



LAWAL, Olanrewaju Olaide is currently undergoing a post graduate degree in Ladoke Akintola University of Technology (LAUTECH) Ogbomoso, Oyo State, Nigeria. He obtained B.Tech (Hons) Degree in Computer Engineering from the same institution. Presently at the department of Computer Engineering, Moshood Abiola Polytechnic, Abeokuta, Ogun State, Nigeria. His research interest areas are: Social Informatics, Wireless Sensor Networks, Computer Networks, Ear Biometrics and Computer Vision.



LOGUNLEKO, Abolore Muhamin is a lecturer of computer science at Moshood

Abiola Polytechnic Abeokuta, Ogun State, Nigeria. He has many years of experience in teaching. He bagged his B.SC degree in Mathematical Sciences (Computer Science Option) at Federal University of Agriculture, Abeokuta, Ogun State, Nigeria and Masters degree in Computer Science at the University of Ibadan, Nigeria. His research interest areas are: Software Engineering, Programming, Web Development, Data mining, Database and Computer Information System.



LOGUNLEKO Kolawole Bariu_{MNCs} is a System Analyst at D.S Adegbenro ICT polytechnic Itori, Ogun State, Nigeria. He bagged his B.SC degree in Mathematical Sciences

(Computer Science Option) at Federal University of Agriculture, Abeokuta, Ogun State, Nigeria and Master degree in view in the same institution. His research interest areas are: Computer Networks, Data Communication, Computer Numerical Analysis, Knowledge Based System and Computer Information System.



OLAITAN, Omotayo Temitope is a Technologist in the department of Computer Science, Moshood Abiola Polytechnic Abeokuta, Ogun State, Nigeria. He obtained Higher National Diploma (HND) in

Computer Science from Federal Polytechnic Ede, Osun State, Nigeria. His research interest areas are: Database design, Web development and Information Communication Technology (ICT) integration.