

To understand the role of ICT and industry 4.0 in Hotel industry of Uzbekistan

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Abstract: *The main aim of this research is to understand the role of innovative Information and Communication Technology Solution in Uzbekistan hotel and tourism sector and analyze its impact on industry 4.0 development within Uzbekistan Hotels (Hyatt Regency and Hilton hotels were taken as an example). A particular focus is paid to the ICT application benefits and challenges for hotel industry and in final parts some proper recommendations will be given to enhance their service quality, increase competitiveness and speed by usage of ICT and finally an individual reflection was provided to demonstrate how the module was useful and beneficial and how it affected to the author’s professional enhancement.*

Key words: *ICT, Industry 4.0 development, Uzbekistan hotels, innovative information*

Introduction

Tourism and hospitality are informative – intensive sectors with a quite long value chain, in which information management plays undeniably essential role. There are five basic types of tourism industries namely, Ethic tourism, Ecological tourism, Historical and cultural, Health tourism and MICE tourism (meetings, incentives, conferences, events). Seeking, retrieving, creating, storing and transfer of data are fundamental operation of all tourism enterprises. Nowadays hospitality economy is driven by telecommunications and Information technology (IT). All tourism companies and Hotels undergo the growing impact of ICT. Information and Communication technology in hospitality sector supports efficient functioning of enterprises, since it speeds up management measures and enhance both efficiency and quality of economic operations performed in enterprises. The introduction of modern IT lets for taking better advantage of the resources at the disposal of a tourist enterprise, whereas their fast development imposes the need for reorganizing enterprises and making investments (Jaremen, 2016). Hotels all over the globe have ICT applications, for instance inventory, websites, email, room booking service, e-transactions, e-services (Ham et al., 2005 in Sirirak et al., 2011). Buhalis and Law (2008 cited in Yasin et al., 2017) are claimed the importance of ICT effect on the hotel industry. Among the benefits of implementing ICT within the tourism industry is decreased cost in operation, enhanced consumer satisfaction rate and increased working productivity of hospitality employees and expanded market share/ growth (David et al., 1996; Buhalis and Main, 1998; Tae et al., 2008; Karadag et al., 2009 in Sirirak et al., 2011).

Based on the ICT development index 2017, which own 3 sub-indices, for example, access, utilize and finally sub – index of practical skills encompassing the parts of the ICT improvement operation, according to the statistics (UzReport, 2017) Uzbekistan is ranks in the 95th place in the globe. The amounts of gadget users were increased by 7 % which was about 22.8 million in early 2017 (UzDaily, 2018). The Uzbek government is planning and working on to create a concept of “safe city”, where almost 16 thousand video cameras to be installed and followed by the implementation of the “safe country” and “Safe tourism” projects (Inoyatova, 2021).

In the following parts author used several materials, such as online journals, books, publications and Hotel customers’ feedbacks to analyze successes and challenges of ICT and industry 4.0 revolutions implementation in Uzbekistan Hotel industry.

Theoretical Perspective

Industry 4.0 revolution and ICT application

Today the significantly evolving digital transformation among worldwide economies is called “industry 4.0”. Industry 4 is a collective word which involves lots of modern automation systems, goods technologies and information exchanges (Oztemel & Gursev, 2018). It deals with the digital transformation experienced in technology and transforms existing business models with this transformation. This process in business model is referred the “fourth industrial revolution”.

Chart 1. Definition of industry 4.0¹

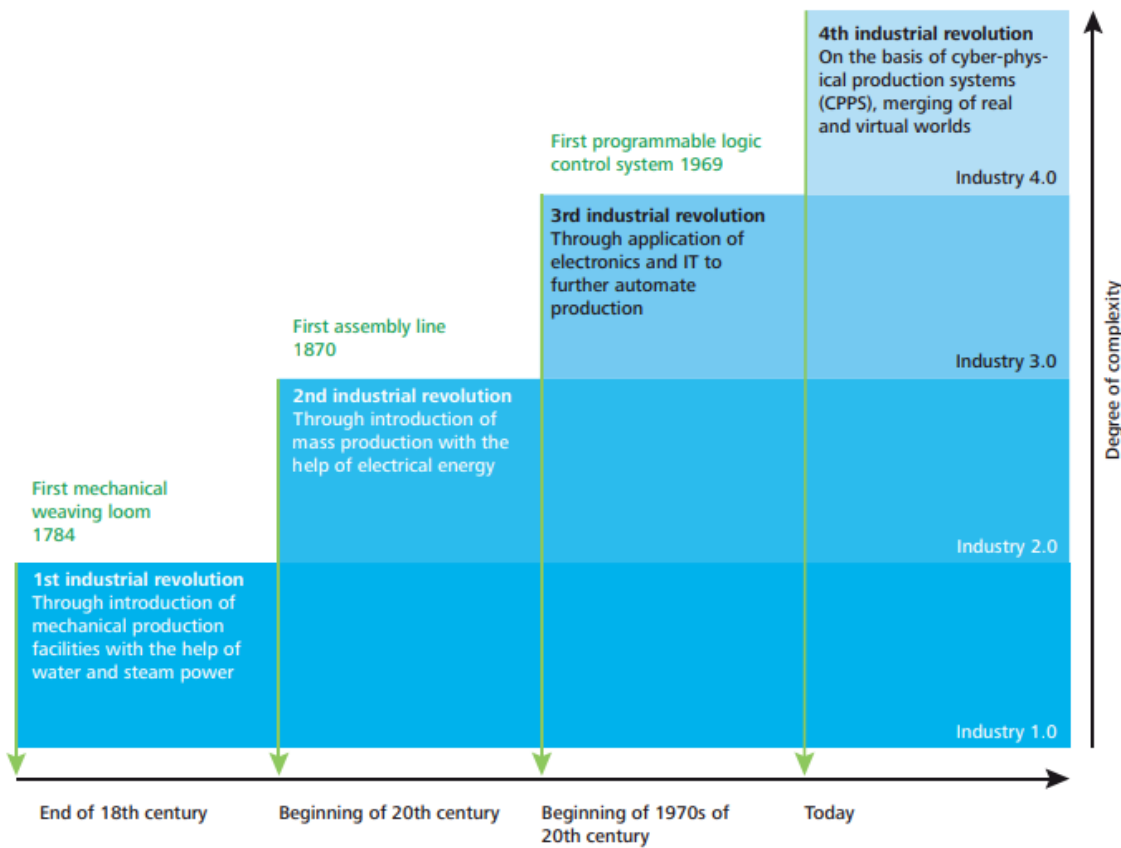


Figure 1

First industrial revolution starts in 1712 beginning of the 18th century, with innovation of “Steam Machine”, it appeared with mechanical production system by utilize steam power and water. Then second industrial revolution was introduced in 20th century, it was about mass production with the help of electoral energy. Third Industrial revolution was about using automation of production processes, after 20th century a digital revolution began to be lived. Finally, last Fourth industrial revolution has come, it was first used in Germany in 2011 (Jeschke, et al. 2017). With industry 4 the globe is starting a new modern industrial revolution, the impact and power of the emerging technologies is further improved by the ever-widening data communication, ICT applications and

expanding information network. Without doubt this new modern era will have the effect of changing service life of goods, business life and service areas, machine security and even socio – economical standards.

In Uzbekistan almost all hotels adopted ICT solution in the past, but not every have Industry 4.0 revolution, which is very essential for their future success. By using ICT application Hotels learn the logic and regulations of digitalization of business operations, which will be further applied processes and goods customization with the support of Industry 4.0 revolutions (Bettiol et al., 2020).

Findings and Analysis

ICT in Uzbekistan Hotel’s front office System (HFOS)

Nowadays, in Uzbekistan all Hotels use ICT technologies, as to ease their duties like, taking reservation, telecommunication, guest accounting and room management. Hotels have started to use ICT application as an essential strategic asset and ICT has been rapidly changed and improved day by day and majority of Hotels spend a lot of money to own latest technologies. ICT application offers multitude pluses for hotels of all size. One of the main benefits might be, it increases effectiveness due to cost decline and revenue expansion. In Hyatt Regency in Tashkent, IT helped them return in competition, they relies on Information Technology to enhance their workers’ efficiency and productivity, and as well as consumers satisfaction(Luxury Tashkent Hotel | Hyatt Regency Tashkent, no date). they use most typical IT tool, Hotel Information system (HIS). According to the words of FOA (Front office assistance) Jin Lee, HIS divided into 4 categories which are, guest – related interface, Restaurant management system, front office system and back office system. But Hotel Front Office System is most essential in HIS, particularly in room division department, because they operate 7/24 and 365 days a year. Usually workers use this system at the point of to make contact with guests and hotel staff should use HFOS regardless of their personal desires, she also claimed that, the system provides accurate and sufficient data to the users(Luxury Tashkent Hotel | Hyatt Regency Tashkent, no date). The system is created and designed using an easy to understand technology (Fadzilah, Artinah and Rahmat, 2013).

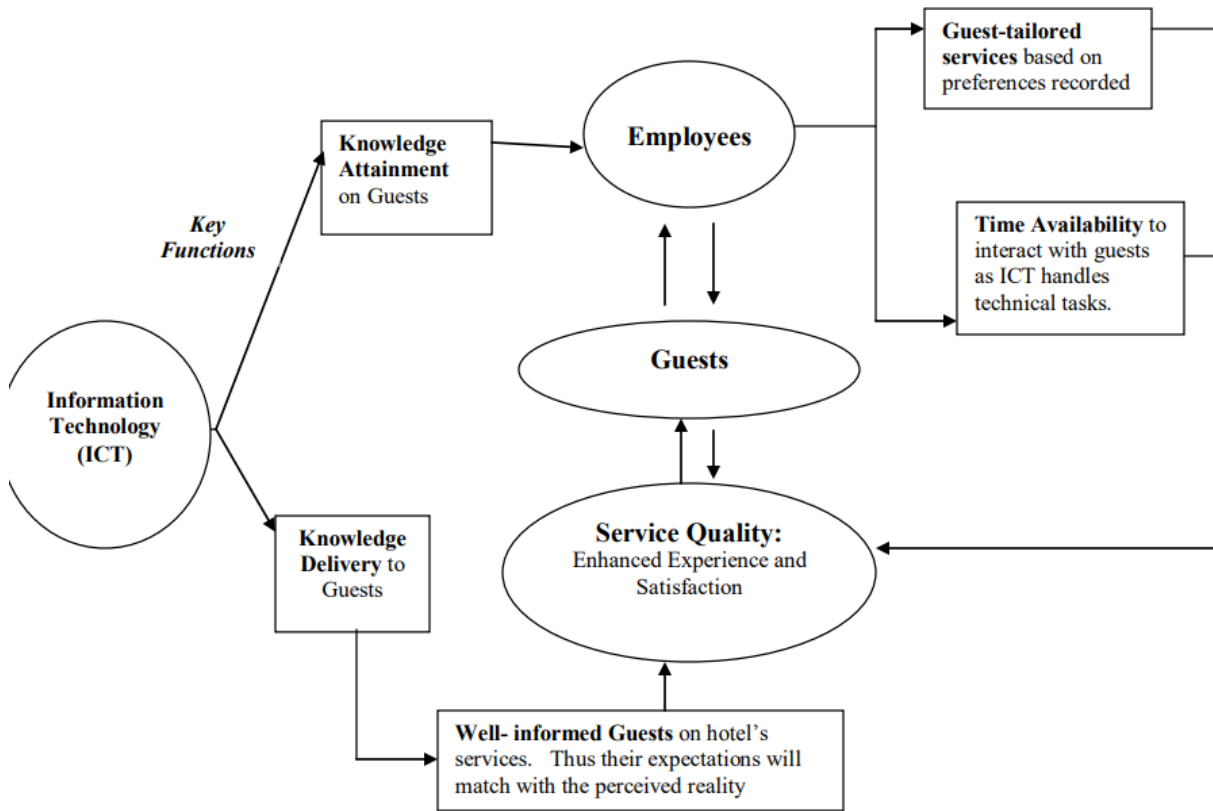


Table 2: Concept Map demonstrating the positive role ICT can play in drawing mutual understanding and communication between Hotel's Employees and Guests.

ICT application in Food and Beverage Department

Today as IT rise, industries use computer information system to support them in gaining their business strategic and competitive goal. Based on International Quality and Productivity center (2001), as the company develops improvement in the modern digital economy, industry relies on its IT departments to plan, install online solutions and to plan. Nowadays, majority of Hotels in Uzbekistan are using IT to unite with their stakeholders, for instance customers, suppliers, employees and management (Fadzilah, Artinah and Rahmat, 2013).

According to the secondary research, RMIS (Restaurant Management Information System) is a system that shore up the administration in their decision making process and traditional financial reporting, forecasting and variance reporting. Hyatt Regency Tashkent and Hilton hotels used RMIS to improve store performance in several ways, such as making reports that assist in managerial decision making, minimizing food delivering periods, improving service quality, doing forecasts that help managers in ordering, controlling food production and scheduling labor (Luxury Tashkent Hotel | Hyatt Regency Tashkent, no date).

No	IT Applications	Effects on service quality
1	Electronic system of recording and storing Data of the Guests.	Increased productivity and improved time to guests.
2	Central Reservation System	Fast check-in and out, reduce the overbooking problems, and increasing in service quality offered to guests.
3	Lobby-based kiosk touch-screen	Different types of information in different languages
4	In-room computer installation	More freedom for the guests in their rooms
5	In-room entertainment	Entertainment and comfort facilities for guests
6	Electronic lock system	A high security system, more satisfactions for guests
7	Electronic concierge	Give more free time for the employee to welcome their guests in-doors

Table3: The Best Applications of ICTs at Hotels

Source: Adapted from International Labor Organization, 2009

Impact of ICT on hotel reputation

ICT has an impact on online reviews (e WOM) on hotel customers' behavior among hotel selection factors can be higher. Owing to the ICT there are two way of communication between the customers and hotel industry, so it has a high impact on hotel promotion and sales. Hotel services are better to promote via the internet rather than published catalogs and brochures. It's claimed that, multimedia message is more eye-catching to consumers; at the same time it allows to recognize consumers' profiles and offer custom-made services. According to secondary research, ICT applications reduce operation cost for business, convenience for customers and high speed of transactions. It can spread the marketing letter quickly at a minimum cost. By using ICT application hotels might minimize their transaction cost and eliminates the geographical barriers made by distance (through accumulating, delivering and processing appropriate data)(Khan and Hossain, 2018).

Conclusion and Recommendation

This study's main goal is to understand the role of ICT applications in Uzbek Hotel industry and analyze advantages and challenges which Hotels were faced after implementation of ICT applications in their information management system. Based on the analyses and secondary researches, it should be said that, ICT application has had positive impact on Uzbek Hotel industry, as they are able to use information and communication technologies for internal efficiencies, disseminating and processing information, controlling distribution and making new opportunities for future commercial improvement with a global audience. However, there is lack of information regarding to Industry 4.0 implementation in Hotels, it began to use only 5* hotels. Transformation has affected almost all aspects of industries, ranging from strategic objectives to infrastructure. Therefore, industry 4.0 implementation requires a deep understanding of the interaction, purposeful work of top administration and a well improved strategy. In order to improve Hotels customers' satisfaction level, minimize labor force and maximize work efficiency bellow mentioned several suitable recommendations.

There are some recommendations for overall improvement of the Uzbekistan Hotels' Information Management system and enhance ICT applications usage

- The findings showed that, ICT application should be used in Room Division system, due to it is first aspect that represents the service and quality of the hotel to the consumers. Moreover, check in and checkout is one of the most essential processes in division section and division pertaining to customer service.
- Hotel industries should be commended for its use of ICT applications and adaptation of new technologies, for instance Social Media Platforms for engaging with clients. The use of ICT has been clearly managed and implemented with very low cost and requiring little technical skill from employees.
- Continuous improvement of service through training employees, how to work with modern technologies, especially those working with guests directly.
- Every Hotel has to invest into high quality interactive corporate website with good quality photographs
- To improve the efficiency of ICT application, Various kind of inquire options should be accessible to guests, such as phone, fax, email, online booking form, online assistance so on, which need to be working appropriately and handled and answered accordingly

Author hopes that, this research will help managers of hotels use findings as guideline for them to practice and prioritize the ICT application in their working Hotel.

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