

#### **Prospects and Challenges of Property Management System in the Hotel Industry in** Ghana: Evidence from Selected Hotels in the Kumasi, Ghana

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#### Abstract

Property management system (PMS) is the key technology used in addressing guest requirement and concerns. The hospitality industry like any other sector of the global economy has undergone major paradigm shift from the old methods of daily manual operations to embracing new technology to remain competitive in satisfying the guest. This research paper sought to find out the usage of PMS in the hotels in Kumasi, using five (5) selected star hotels as case study. PMS usage importance, benefits and challenges were examined. Convenience and purposive sampling techniques and structured interview were used to collect data from staff in the hotel. Technology Acceptance Model was adapted for the study. Thematic analysis was used to interpret and highlight similarities and differences in the data gathered from the field. The research revealed that the software demands expertise and initial cost of instalment and operation is high, which explains why PMS is not used in small hotels in Ghana. It was also found that the benefits of the PMS outweigh the challenges; therefore, it is recommended that the usage of PMS should be the desire of all hotels in Ghana to enhance the service quality and experience offered to both local and foreign guests.

Keywords: Property Management System (PMS); Information and Communication Technology (ICT); Technology Acceptance Model

## **1. Introduction**

Over the past decade, the hospitality industry like any other sector of the global economy has undergone a major paradigm shift from the old methods of daily manual operations and services to embracing modern technology. The paradigm shift is to ensure better customer service, improve efficiency, cost reduction and remain competitive. The vast majority of hoteliers continue to strive to ensure customer satisfaction since it leads to customer loyalty and repeat business (Kasavana, 2011). However, in the quest to satisfy hotel guests, most lodging establishment are hampered by operational inefficiencies and constant delays. In most cases, these inadequacies arise from legacy technology infrastructures and lack of adoption of appropriate software solutions (Webrezpro, 2019). Undesirably, these solutions lack advanced features and functionality as well as inability to centrally connect with other hotel technologies and data sources (Starfleet Research, 2018).



In Ghana, researches conducted by Hinson and Boateng (2007) and Quarshie and Amenumey (2018) indicate that there is limited understanding, use and application of ICT in the hotel and tourism industry as a whole. This becomes an obvious challenge because in the current dispensation the foundation of ICT in the hotel industry largely rests on Property Management System (PMS). These deficiencies adversely affect hotel operations and hamper the pace of service delivery which ultimately hinders customer satisfaction and loyalty intentions. Dhiman and Anand (2015) argued that the hotel industry has changed entirely to cope with the myriads of changes in guest requirements, and for most hotels the key technology used in addressing these concerns is the Property Management Systems (PMS). According to Kasavana and Cahill (2003), PMS refers to "a set of application programs that directly relate to hotel front office and back office activities e.g. revenue management, reservation management, room and rate assignment, check-in and out management, guest accounting, folio management, account settlement and room status management".

The traditional hotel industry has placed great emphasis on the provision of quality service to guests. In response to the increasing demand for intensive information from customers and hotel practitioners, hotels have adopted computer-based IT facilities such as ???to improve operational efficiency, reduce costs and enhance service quality (Cobanoglu et al., 2001). According to Levy-Bonvin (2003), property management systems made its debut in the hospitality industry in the 1980s. This period coincided with the dawn of the computer age which called for digitization of reservation and check-in processes. In fact, these initial systems were hardly fully-fledged PMS but rather similar to series of Excel spreadsheets used to manage hotel operations. Oracle (2019) recorded that until recently, hotel PMS solutions were often managed on hotel premises. On-premises PMS applications had challenges including hardware that takes up enormous space, software updates, upgrades and management of patches manually by on-site staff. However, Kasavana (2011) contended that with the advancement of technology and cloud computing, hotel PMS have developed more innovatively to engage with guests while enabling hotels to reduce IT costs and logistics. Cloud-based, mobile-enabled hotel PMS platforms offer hotels with advanced services like guestfacing features, guest-staff communication as well as free automatic updates, upgrades and patches, saving hotels time and money (Oracle, 2019).

Sarangi (2019) argued that although hotels initially adopted PMSs to bring about higher levels of automation especially in the efficient management of guest check-in, checkout and housekeeping services, hotel PMS currently focus on the entire guest experience cycle – right from the booking process to capturing guest data for guest relationship management in future. Notwithstanding the growth and usage of PMS in the hotel industry, it is important to note that not every hotel uses one. Research conducted by Software Advice in 2015 titled "Hotel Management Software BuyerView" showed that in 2015 only 34% of hotels used special software packages; 25% continue to use pen and paper mechanism to manage their hotels, whereas 16% lacked any form of hotel



software systems. The report was based on data from 385 owners of hotels, motels, inns and resorts in the US (Software Advice, 2015).

Webrezpro (2019) contended that PMS has become an indispensable tool in the challenging and competitive world of hotel management. Thus, PMSs are designed to manage the operations of a complex hotel environment efficiently and the system facilitates important responsibilities in the hotel ranging from reservations to administration. Also, Krželj-Čolović and Cerović (2013) affirmed that PMS is an essential component in the management of business activities in the hotel industry and the software provide tools which support administration, data

management, accommodation capacities management, guest cycle, human resource management as well as accounting. In addition, the system presents an integrative functionality which connects with sales and catering, accounting, quality management system and central reservation systems to ensure high-level business performance and sustenance.

In the African setting, although the adoption of PMS in hotel operations is still evolving, Mupfiga (2015) emphasised that the system improves general administration and operational functions and more importantly, hotels gain more benefits from PMSs, since it aids the introduction of a unified system for planning, budgeting and controlling operations efficiently. In the Ghanaian hotel industry, it has been expounded that the use of software technology synchronizes and standardizes all essential hotel activities, ensures better monitoring and control as well as reduces processing time of clients, minimizes losses and reduces the cost of hotel operations (Dogbevi, 2016).

In spite of the role PMS plays in improving efficiency, data management and profitability in the hotel industry, little research has been conducted to actually assess the impact of usage of PMS especially within the Ghanaian context. Therefore, this paper sought to investigate the application of PMS in the hotel industry in Ghana to provide useful information to help bridge this gap. Moreover, this paper offers empirical results which highlight the need for Ghanaian hotels to adopt PMS and integrate the system fully with other vital databases to improve on guests' satisfaction in order to bring about customer loyalty and competitive placement. This signifies that although the use of PMS and ICT in general is essential towards operational functionality and success in the hotel industry, the application of the PMS system within Ghanaian hotel settings remains rare. Therefore, the study seeks to assess the importance of the use of Property Management System (PMS) in the Ghanaian hotel industry by using selected star hotels in Kumasi as case study.

## 2. Materials and Methods

The study employed a case study research design to investigate the use of PMS at five hotels in Kumasi Metropolis. According to Yin (2014), case study research is an empirical investigation that explores a modern phenomenon within its real-life setting. Case study research is typically based on an in-depth investigation of an occurrence to



explore the causes of underlying ideologies. In terms of strategy, the research used qualitative approach since it aimed at obtaining thorough and comprehensive understanding of the phenomenon under investigation. According to Burns and Grove (2010), qualitative research offers a systematic approach to describe a phenomenon by gaining an understanding of fundamental outlooks and motivations. Sampling for this research was done using purposive sampling technique to select samples that are involved or affected by the usage of the PMS. The hotels used as the study organizations included; Golden Tulip Hotel; Kumasi, Oak Plaza Suites; Kumasi, Sports Hotel Kumasi, Golden Bean Hotel and Rose Tree International Hotels. These hotels are ranked between 3 and 4 stars. They were sampled purposively because they had various PMS which made them appropriate for the study. Similarly, respondents were sampled purposively and conveniently to achieve the study objectives. In all thirty (30) respondents were selected for the study.

The respondents interviewed were made up of managers of the hotel including ICT Manager, Front Office Manager and Executive Housekeeper. They were selected because they have broad overview of how the hotels are changing in response to the application of PMS as well as how integration of PMS facilitates daily operations.

In-depth interviews were used as the instrument of data collection. Corbin and Strauss (2014) defined in-depth interview as a research instrument that consists of series of mostly open-ended questions which allows for discussions with interviewees to elicit detailed and comparable qualitative data. In-depth interview was used as research instrument because it affords the opportunity to dig deeper to obtain detailed information on features, functionality, importance, challenges and selection criteria. Data analysis was done qualitatively using thematic analysis where common themes were derived from the data to identify, analyse and interpret patterns within qualitative data as well as highlight similarities and differences to generate thorough in-depth insights (Braun & Clarke, 2006). The anonymity as well as the confidentiality of respondents was ensured and those respondents who were not willing to answer questions were excluded from the survey.

## 3. Results

The aim of this study was to assess the prospects of PMS, challenges of using PMS and factors considered before the adoption of PMS at Golden Tulip Kumasi City Hotel.

#### **3.1 Prospect of Using PMS at the Selected Hotels**

The type of PMS used at the selected hotels included Amadeus Central System. The Amadeus Central System is a cloud-based PMS that enables the hotel to centrally control distribution, merchandising and pricing across multiple channels to suit guest needs. The system is described as comprehensive database that supports instantaneous view of business performance enabling hotel management to deliver dynamic guest



services, respond swiftly to market dynamics and increase profitability. The system empowers staff to manage their department online from any location on any device.

Results from the interviews showed that the prospects of using Amadeus Central System at the hotels included streamlining front office operations and standardizing back-office operations. The benefit of streamlining front office operations is derived from the reservations, front desk and housekeeping modules. The reservation module helps the hotels to control online bookings, manages room inventory which prevents double bookings and overbookings, as well as collection of e-payments which drives revenue generation. The front desk module tracks guest cycle and facilitates faster check-in/check-out for guests which saves enormous time and improves service delivery. The housekeeping module of Amadeus Central System assists the hotel to handle housekeeping management and property maintenance via connection with front office and personalized task-list management.

Additionally, the findings demonstrated that the standardization of back-office operations through Amadeus Central System is facilitated through revenue management, staff management and review management modules. The revenue management module of the system helps the hotel to easily track account receivables, payments and assists in dynamic pricing of rooms rates based on competitor analysis which in turn enhance profitability of the hotel. Staff management module improves efficiency in the hotel since less time is spent on administrative tasks and paperwork. Review management module facilitates the production of automated reports including night audit reports, shift audit reports, room and tax reports which enhance evaluation of business performance and forecasting.

## **3.2 Challenges Encountered in Using PMS at the Selected Hotels**

It was revealed that the key challenge encountered was occasional reluctance of information sharing across departments which hinders optimum performance of the system. Also, Amadeus Central System increases hotel's costs resulting from continuous trainings especially with the introduction of updates and new features. At the time the researches were ending this study, the hotel was changing from Amadeus to Opera because according to them it is user friendly than Amadeus. This move enforces the TAM theory however; the overall results partially support the TAM model because staff need to be trained from time to time before positive industrial performance is achieved.

## 3.3 Factors Considered by the Selected Hotels in Choosing PMS

In the selection of Amadeus Central System by the hotels, a number of factors were considered. The interviews revealed that Amadeus Central System was chosen by the hotel based on important factors namely; suitable features and functionality, cloudbased, user-friendliness, flexibility and seamless integration with other products and devices. This enforces part of the TAM model which claims that perceive usefulness



and ease of use coupled with behavioural intention are the factors that leads to positive industrial performance. Consequently, it is obvious that a hotel may definitely look for a more user-friendly software and go in for that as in the case of the hotel under study.

## 4. Discussion

The study found that the main benefit of using PMS at the selected hotels were streamlining front and back-office operations through modules such as reservations, front desk, revenue management and staff management which leads to efficiency, convenience, property maintenance, revenue generation, improved service delivery, increased profitability and business forecasting. These findings are confirmed by Krželj-Čolović and Cerović (2013) who found that PMS improves profitability, business performance, quality assets management, increased flexibility and competitive positioning of hotels in Croatia. In addition, the results are similar to Moyeenudin et al. (2018) who revealed that PMS offers unique features and modules which help hotels in Chennai, India to enhance yield management, profitability, guest satisfaction and overall business. Furthermore, the study found that the key challenges faced by the hotel in using PMS were occasional reluctance of information sharing across departments and increase in hotel's costs due to continuous trainings. The finding is supported by Tiedemann et al. (2009) assertion that there was lack of inter-departmental sharing of information and full integration of IT systems among Spanish hotels. Also, the result is in line with Maria et al. (2018) who attributed that the main shortfall of using Fidelio Opera PMS at Transcorp Hilton Hotel, Abuja were related to cost, intrusion and colour coding. Consequently, the study found that the factors that influenced the choice of Amadeus Central System by the hotels were based on suitable features and functionality, cloud-based, user-friendliness, flexibility and seamless integration with other products and devices. The finding is related to Moyeenudin et al. (2018) who revealed that selection of PMS should be based on needs analysis of the hotel to address specific requirements. However, the results are dissimilar to Chand and Anand (2012) when they pointed out that hoteliers rather tend to dwell heavily on planning, information collection and quality assurance in the selection of PMS.

# 5. Conclusions and Recommendations

In conclusion, it can be elucidated that selected hotel businesses in the hospitality industry have indeed moved from the old methods of daily manual operations to the use of modern technology like PMS in order to ensure better customer service, efficiency and remain competitive. The main importance derived from using PMS among selected hotels in the industry included streamlining front and back-office operations through modules such as reservations, front desk, revenue management and staff management which leads to efficiency, convenience, property maintenance, revenue generation,



improved service delivery, increased profitability and business forecasting. In the selection of PMS among selected hotels, factors that were considered included suitability and functionality, cloud-based, user-friendliness, flexibility and seamless integration with other products and devices. Nevertheless, the key challenges encountered in the use of PMS were extra costs and occasional reluctance of information sharing across departments which hinders optimum performance of the system. Therefore, it is recommended that information sharing among various departments of the selected hotels is swiftly performed to enhance efficiency, transparency and accountability to ensure optimum performance of the system. In addition, the hotel businesses in the study context must adequately plan and budget for capacity trainings on a quarterly basis in order to make provisions and assuage the impact of such recurrent expenditure. In so doing, the hotel businesses would further strengthen its position as a leading stakeholder in the Ghanaian hospitality industry as well as boost its profitability, prestige and competitive positioning within the West African sub-region.

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