

**DETERMINANTS OF REVENUE MANAGEMENT PRACTICES AND THEIR  
EFFECTS ON THE FINANCIAL PERFORMANCE OF STAR-RATED  
HOTELS IN KENYA**

**BY**

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**A THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF DOCTOR OF PHILOSOPHY IN HOSPITALITY MANAGEMENT**

**SCHOOL OF BUSINESS ECONOMICS**

**MASENO UNIVERSITY**

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**DECLARATION**

This thesis is my original work and has never been submitted for a degree in any other University

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## **ACKNOWLEDGEMENT**

Research is a quest into a novel indefinable realm of discovery, full of several hurdles to complete this journey. I am grateful to the department of ECOHIM for recommending supervisors who led me during this research expedition. I recognize the technical input of Dr. Billy I. Wadongo, the counsel of Dr. Tom K. Olielo. I recognize the full support of the current COD - ECOHIM and previously chair departmental Postgraduate committee - Dr. George O. Otieno- for effective semester coordination of postgraduate seminars and workshops, "physical and virtual" at the ECOHIM department that was very useful during concept, proposal, and thesis development. Further appreciates Dr. Oscar Kambona, our all-time panelist during all departmental and school postgraduate seminars and workshops, for insightful critiques.

I am grateful to Maseno University Deans and their office; the Dean-School of Graduate Studies, the Dean-School of Business and Economics, the Dean-School of Physical & Biological Sciences, and the Librarian, lecturers, and secretaries in the Department of ECOHIM.

I appreciate the guidance and research approvals by the Maseno University School of Graduate Studies and Ethics Review Committee, the National Commission for Science & Technology (NACOSTI), County Commissioners, County Directors of Education, and Managers of star-rated hotels whose authority was granted for data collection, which was done successfully across the country.

I appreciate a 3-year Ph.D. scholarship by the Government of the Republic of Kenya through the Higher Education Loans Board 2018/2019 and Maseno University Postgraduate research grants that significantly expedited my tuition fees and fieldwork consecutively.

Lastly, I extend gratitude to my entire family for their emotional support, patience, and indulgence, permitting me to concentrate with minor distractions. I express my utmost gratitude to all my friends whose inspiration cured my thirst during this journey.

## **DEDICATION**

I dedicate the thesis to Mum and Dad - Gianna & Chris; your love is unimaginable

## ABSTRACT

Revenue management (RM) has garnered huge attention in management science research. Past RM researches have hypothetical and methodological inadequacies, such as few variables of the study, errors in measurements, and the model being studied leading to conflicting results. The predicted association between the determinants of RM practices studied and financial performance was not explained exhaustively. Hence, this study's specific objectives were to: establish the determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya; examine the revenue management practices and their effects on the financial performance of star-rated hotels in Kenya; determine the determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya; investigate the mediation role of revenue management practices on the relationship between determinants of revenue management and their effects on the hotel financial performance in Kenya. The study employed a quantitative research approach using a cross-sectional survey design. The study used a sample of 138 revenue managers from 215 targeted star-rated hotels. Self-administered questionnaires were used to collect data, validated using a pretest of 32 questionnaires and reliability using the Cronbach's Alpha test. The pretest result was 0.7, which was acceptable, and some improvements were made to the questionnaire before the final data collection. The study adopted a Covariance Based-Structural Equation Modeling and regression models approaches were used to analyze the quantitative data and test the hypothesized relationships between the key variables. Data screening, the unidimensionality of the model, and testing the validity of the factors were done. The proposed framework was evaluated using Confirmatory Factor Analysis; a modified model was validated and deemed a good fit for the data and thus accepted. For objective one, the findings revealed that determinants of revenue management explain variation in RM practices as follows, RM policy and implementation (20.9%), the status of RM practice (40.1%), RM tools (20.6%), Pricing techniques (17.6%), RM team (33.2%), RM social media integration (38.5%), non-pricing techniques (25.1%) and RM data and information (29.7%). The model 1 fit indices of chi-square=68.328(23df)  $p=.064$  CFI=.952 RMSEA=.045 NFI=.983 indicated that the model was acceptable. For objective two, the RM practices explain variation in hotel financial performance as follows profitability (30.5%), solvency (45.5%), liquidity (17.2%), valuation (20.2%), and efficiency (25.8%), and general financial performance (26.6%). The model 3 fit indices chi-square=105.1 (93df)  $P=0.06$  CFI=.97 RMSEA=.018 NFI=.97 indicated that the model was acceptable. For objective three, the determinants of revenue management explain variation in financial performance of star-rated as follows, profitability (42.1%), solvency (24.2%), liquidity (20.0%), valuation (13.2%) and efficiency (15.0%), general financial performance (46.7%). The model 3 fit indices of chi-square=43.813 (36)  $p=.076$  CFI=.98 RMSEA=.042, NFI=.98, indicated that the model was acceptable. Finally, for objective four, RM practices mediate the relationship between determinants of revenue management and explain 57.7% variation in the financial performance of star-rated hotels ( $R=0.577, p=.05$ ), the model 4 results indicated that introducing a vector mediator, the beta value for the determinants variable dropped to 0.127 from 0.457 (in the direct correlation). The study concluded that there is an association between determinants of revenue management, RM practices, and financial performance. The study revealed that to effectively execute and gain from RM practices and diagnose and design appropriate responses for declining hotel occupancy rates, it is vital to address the match between key variables and hotel financial performance in Kenya. The research could serve as a foundation in academic fraternity and future scholarly works on related subjects and may expand opportunities for research in areas not adequately covered by the survey. The findings may be used in developing policies that may guide into adopting a framework that emboldens the hotel sector in understanding the revenue management practices that significantly influence the sector's financial performance. A more extensive longitudinal study employing various approaches would be good to evaluate whether the RM practices examined here and their influence on financial performance are constant.

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## **LIST OF ABBREVIATIONS**

ADR-Average Daily Rate  
AMOS-Analysis of Moment structures  
ANOVA-One - way analysis of variance  
AR-Available Room  
AVE-Average Variance Extracted  
B-Regression Weight  
CFA- Confirmatory Factor Analysis  
CFI- Comparative Fit Index  
CIEC-Census and Economic Information Center  
CMIN/DF-Relative Chi-square  
CMIN-Chi-square  
CRHG-Carlson Rezidor Hotel Group  
FIML-Full information Maximum Likelihood  
FIT-Free Independent Travel  
GDP -Gross Domestic Product  
GFI-Goodness-of-fit index  
GOPPAR-Gross Operating Profit Per Available Room  
H-hypothesis  
IBM SPSS- Statistical Package for Social Sciences  
ICT-Information Communication Technology  
IHG-Intercontinental Hotel Group  
ISHC- International Society of Hospitality Consultants  
KNBS-Kenya National Bureau of Statistics  
KSAs- Knowledge, Skills & Abilities  
M=Mean  
MANOVA-multivariate analysis of variance  
MAR-Missing At Random  
MCAR-Missing Completely At Random  
MI-Modification Indices  
ML-Maximum Likelihood

MSEM-Multilevel structural equation modeling  
MSM-Method Of Simulated Moments  
NACOSTI-National Council for Science Technology and Innovation  
NFI-Normed Fit Index  
NNFI-Non- Normed Fit Index,  
OLS-ordinary least square regressions  
OR-Occupied Room  
PERFORM<sup>Sm</sup> Retail Price Optimization at InterContinental Hotels Group,  
P-Significance level  
PWC-Price Water House Coopers  
R<sup>2</sup>-Variance explained (adjusted R square)  
REMANOR-Revenue Management Orientation  
REVPAR-Revenue Per Available Room  
REVPOR-Revenue Per Occupied Room  
RMSEA-Root Mean Square Error of Approximation  
RMS-Revenue Management System  
RMSR-Root Mean Square Residual  
ROI-Return On Investment  
RQ-Research questions  
S.D-Standard deviation  
S.E-Standard error  
SEM-Structural Equation Modelling  
SNAP- Stay Night Automated Pricing  
STR-Smith Travel Research  
TLI-Tucker-Lewis Index  
TRA-Tourism Regulatory Authority  
TREVPAR-Total Revenue Per Available Room  
UK-United Kingdom  
US-United States  
WTTC-World Travel & Tourism Council  
 $\chi^2$  -Chi-square

## DEFINITION OF OPERATIONAL TERMS

**A determinant** is a factor that decisively affects the nature or outcome of something. Many factors combine to affect the practice of revenue management and the financial performance of hotels. To a large extent, factors such as the location of hotels, the star rating, technology, environment, market orientation, and seasonality all have considerable impacts on revenue management and financial performance

**A guest** is a person whose name and address are registered on the registry maintained by the hotel and who is a bona fide occupant of a hotel room.

**A Hotel** is a unit classified as star-rated by the TRA of Kenya as of 2020. For this study, the sampled hotels were those classified and under operation from January to June 2021 when the study took place and a period coincidental with the COVID-19 pandemic, hence hotels operating and those that observed COVID-19 protocols issued by WHO and the Ministry of Health, Kenya.

**An employee** is hired and remunerated in a star-rated hotel in Kenya who does their job based on task orientation.

**Average Room Rate** - A hotel's overall Average Room Rates are computed by dividing total Room Revenue by all Rooms Occupied (Hospitality-Professionals-Association, 2013)

**A star-rated hotel** refers to facilities classified as star-rated offering accommodation, restaurants, and other food and beverage services registered by and in compliance with Tourism Act Number 28-2011 & TRA Regulations LN. 128-2014, published as TRA list of registered tourism enterprises F/Y2019/2020

**Contingency Theory** established that there is no uniformly practical quality managerial approach that applies equitably to all institutions in all circumstances. However, specific system characteristics and performance depend on particular institutional and situational variables.

**Contingency variables** are potential hotel and context environmental characteristics, events, or probable conditions that cannot be precisely anticipated in the hospitality sector.

**The revenue manager** oversees the accounting department's routine operations, such as preparing and managing restaurant and hotel sections' financial budgets, implementing and controlling hotel financial aspects, including payroll per county, state, and KRA tax laws, and the hotel's Standard Operating Procedures.

**The hotel industry** is an essential part of the travel and tourism more significant sector covering many businesses that benefit clients. Accommodation, which comprises hotel, bed & breakfast, and lodging enterprises, is one of the hotel sector's three main focus areas. It is focused on client satisfaction and offering them one-of-a-kind experiences. The second area of focus is food and refreshment, including restaurants, fast-food franchises, and F&B enterprises.

**The hotel occupancy rate** is a metric that measures how well a hotel's physical capacity is being used. It is calculated based on the number of overnight stays/room nights (Ivanov, 2014).

**Hotel financial performance** is based on numerous criteria such as occupancy rate, average daily income, or a percentage of the occupied rooms to the overall hotel guest rooms (Al Saleem & Al-Juboori, 2013).

**The occupancy ratio or percentage** is obtained by dividing occupied rooms by available guest rooms. Rooms Occupied do not include Complimentary rooms (Hospitality-Professionals-Association, 2013).

**Hotel performance** is the historical, present, or forthcoming achievement of a hotel job or measurement judged compared to pre-determined correctness, thoroughness, worth, or timeliness standards.

**Practice** defines why something happened instead of what is expected to happen.



**Price discrimination** is a technique applied with the economic justification that there are modifications in the price of hotels based on market segments; case in point, frequent flyers are less price-conscious than holidaymakers and could manage to pay more rates (Ivanov & Zhechev, 2012).

A **price fence** is a circumstance under which particular products are being sold. Hotel price fences are determined by date, length of stay, guest character traits (e.g., club member, public servant), termination, alteration, payment terms, lead time frame, and age (Zhang & Bell, 2010).

**Profitability** refers to an investment's ability to create sufficient returns to cover operating costs and compensate the business's owner with profits.

**Revenue management** is an umbrella term for various strategies to help capacity-constrained service sectors maximize revenue. It also helps them maximize revenue (Guo, Xiao, & Li, 2012). RM is the systematic procedure of allocating the correct capacity to the right client at the right time and price (Kime, 2003).

**Revenue Management Systems** are computer-controlled revenue and reservation systems that calibrate hotel prices by managing present room reservations and chronological demand to maximize profit.

**Yield management** is modifying the price in reaction to changes in market conditions such as competition or demand (Thompson, 2010).

**Star rating:** A concept that categorizes hotels using stars as a symbol for service quality. It is aligned with international best practices. Kenya's star grading levels of one to five stars are done by Tourism Regulatory Authority periodically under national classification in 5 years cycle but continuous for new and upgraded establishments on a need basis based on approved EAC Classification Criteria.

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## **CHAPTER ONE**

### **INTRODUCTION**

The chapter is divided into the following sections: background to the study, statement of the problem, research objectives, hypothesis, the conceptual framework of the study, justification of the study, the significance of the research, assumptions, and limitations of the study.

#### **1.1 Background to the study**

A hotel is a business that provides lodging and other services that vary in size and type (Kofa, 2018). Hotels can be classified according to their star rating; this scheme was pioneered in 1937 by the American Automobile Association (AAA), an international association of self-governing automobile dealers that classified restaurants using diamonds instead of stars. The AAA five-diamond awards are comparable to a hotel's five-star grading system, ranging from "acceptable" to "outstanding." The hotel rating system is frequently used to categorize hotels based on quality (Judd & Simpson, 2008). The different rating objective has been enhanced to encompass the entire hospitality experience; higher rankings mean more incredible luxury (Adedipe, 2018). In Kenya, the Tourism Regulatory Authority (TRA) assigns hotel stars.

The global hotel sector, under the more extensive tourism and travel sector, contributed \$ 8.8 trillion to the global economy the year 2018, according to the World Travel & Tourism Council's (WTTC) annual research on economic and social imports of the hotel sector, which has been in existence for the last 25 years. The report further highlights that hotels' global occupancy rates in most regions increased over the previous five years. In Africa, the sector remains one of the key growth drivers of the continent's economy, contributing 8.5%, about \$194.2 billion of the GDP in 2018, from 8.1% in 2017 and 7.8% in 2016 (Jumia, 2019). According to the Kenya National Bureau of Statistics, the hotel sector remains a significant driver of the Kenyan economy,

evidenced by the continued contribution to GDP by food services and accommodation, whose growth expanded from 14.4% in 2017 to 16.6% in 2018 (KNBS) Economic Survey 2019. Tourism Regulatory Authority (TRA) highlights that; the hotel sector has about 225 classified hotels rating one star to five stars contributing a total of 16,156 sellable rooms hosting sellable 26,786-bed capacities (TRA, 2020).

Despite this sector's significance, in the past few years to 2019, the global hotel occupancy rates have remained between 50% and 80%, with peaks and troughs in line with seasonality. The occupancy rate of hotels in the Middle East and Africa fell to about 47.5%, while in Europe, the rates exceeded 80% thrice during the given time frame (Siteminder, 2020). The occupancy rates in Africa rose from 54.9% in 2016 to 58% in 2019; however, Kenyan hotels recorded an average of 48% occupancy in 2017 (Ngugi, 2018). Kenya's Hotel Bed Occupancy rate was at 30.800 % in 2019, a decrease from the previous 32.500 % in 2018, and averaged 36.250 % for the period ranging from 2002 to the year 2019.

A comparison of data recorded by the Census and Economic Information Center (CIEC) and KNBS revealed that the occupancy rate of Kenyan hotels in different regions is below average and varies widely. For instance, Coastal Beach and Coast Hinterland from 2002 to 2016 averaged 43.000% and 28.000%, respectively. Nairobi High Class and other hotels from 2002 to 2017 recorded an average of 40.50% and 32.15%, respectively. For the same period, the Central region averaged 27.050%; the Maasai region averaged 39.000%; Nyanza Basin averaged 26.000%; the Western averaged 26.000%; the Northern region averaged 23.000% from 2002 to 2016 (CIEC, 2020; Appendix II, III & IV). Some key factors that affect the occupancy rates of hotels include price and location. However, there are plenty of other factors, including guest

experience, the rooms' cleanliness, the quality, and the availability of amenities (Hamzehzadeh, 2017).

Most of the occupancy problems changes during peak season, in that most hotels contract themselves out due to inadequate space and rooms for sale because of previous low season bookings associated with high discounts, such that, when the high season arrives, they are incapable of realizing the maximum revenues possible (Iranlu, 2006; Miricho, 2013). Further, decreased occupancy rates have been associated partly with the decrease in customers' financial situations and the development of "unauthorized" hotels, which are not subject to any legal regulations or even compelled to pay taxes; hence they inflict losses on hotels (Hamzehzadeh, 2017). Moreover, the number of rental homes, homestays, and guest camping has become popular and increased over the past few years, which has led to a more significant recession in the hotel market. More tourists prefer staying in lodges or apartments instead of hotel rooms (Nakaweesi & Kamukama, 2016). At times hotels lower the service standards, which causes trouble for guests, as their activities are not monitored by relevant organizations (Hamzehzadeh, 2017). The low occupancy rate is also attributed to the expensive hotel rates, thus scaring away customers to low-cost apartments and lodges (Nakaweesi & Kamukama, 2016). Though occupancy rate should be combined with other metrics, the goal is to maximize hotel revenues. Low occupancy rates may mean its existing owners poorly manage the facility or it is in an undesirable location (Chen, 2020). For hotels in developing countries to break even under normal circumstances, they should operate at 40 percent occupancy (Nakaweesi & Kamukama, 2016). It has been revealed that certain hotels stabilize at significantly higher occupancy rates than others (O'Neill, 2011). Failure to link spending with occupancy is one reason for poor performance in hotels (Mogelonsky, 2016).

Hotels are adopting revenue management strategies to manage low occupancy rates and maximize revenue increase, which translates to improved performance. Revenue management is a management tool that aims to increase sales revenues by manipulating the prices at which frozen products like hotel rooms are made available for sale concerning the current and forecasted demand (Hospitality-Professionals-Association, 2013). Revenue management integration in hotel operations has been found to affect the hotel's financial performance and competitiveness positively and provides hotels and resorts with greater profitability (Ferguson & Smith, 2014). By applying revenue management strategies, hotels can; understand the guest's demands or booking patterns, apply reasonable room rates, expand the hotel business, and win against competitors (Patel, 2020). Revenue management will carry out a common approach and aim at growing a hotel's overall potential to obtain maximum profits (Beonprice, 2018). Hotels that use revenue management systems (RMS) outperform non-users in decreasing demand; revenue management users have been more effective in improving occupancy (Ortega, 2016).

Revenue management helps hotels to drive more revenue from their rooms. Hotel practitioners have reported that hotels implementing revenue management have improved their occupancies from 3% to 6% (Haley, 2005). Suitable revenue management systems generate a 5-10% rise in sales and improve occupancy rates during low-peak business cycles (Morag, 2013). Embracing restaurant revenue management models increase revenues from 3.5% to 7.3% (Bertsimas & Popescu, 2003). Revenue management leads to hotels' more incredible financial performance (Selmi & Chaney, 2018). Occupancy, average daily rate, and revenue per available room are often considered valuable metrics for hotel owners' revenue management strategy (Revfine, 2020). The financial performance of hotels is often quantified by total revenue per available room, recommended as the best ordinary metric (Schwartz, Singal, & Altin, 2017). Other essential



metrics for financial performance include; gross operating profit per available sq ft and revenue per available room (Kimes, 2017); Average rate per room (Zhenshan & Jianming, 2016). These metrics highlighted are proposed as financial performance indicators in hotels and may be construed in returns (Ivanov, 2014). Further, the return on investment may be used to measure performance (Luo & Lam, 2017), (Fissha & Shrestha, 2017).

Revenue management practices change from one hotel to another based on type, rating, brand, location, ownership, affiliation, and management (Kaminski & Smith, 2016). Aspects like cyclical demand necessitate the application of revenue management in hotels, high fixed costs and low variable costs, the practice of anticipated service sales, market segmentation, and the rigidity of the capabilities (Poutier & Legohérel, 2010; Sinsou & Rannou, 2005). Moreover, revenue management is influenced by external factors like competition, seasonality (Abrate & Viglia, 2016); macro and microeconomic impacts, industry trends and changing customer demographics (Hospitality-Professionals-Association, 2013); tangible and intangible hotel characteristics, diverse geographies and market structures (Soohyang, Hee-Chan, & Seul, 2016). Revenue Management strategies tend to focus on two segments of demand: transient and group, which serve as the foundation for the pricing and mix of business at a particular hotel (Kaminski & Smith, 2016). Further, for a hotel to be said to have RM place, the presence of some elements like adopted and implemented revenue management policies, revenue management techniques, systems, and integration to technology suggests so (Mehmet, 2015; Nanishka, 2015; Kimes & Wirtz, 2007; Varini & Sirsi, 2012).

The study's background reveals that RM practices may increase occupancies and maximize revenues in hotels, there is a less comprehensive construct existing in the literature that captures what determines revenue management and their effects in hotels, the key elements of revenue

management practices and their effects on hotel financial performance of star rated hotels in Kenya. This study, therefore, aims to investigate the determinants of revenue management and practice of revenue management and find their linkage and effects on financial performance of star-rated hotels in Kenya.

## **1.2 Statement of the problem**

The hotel room revenue in Kenya has declined since 2012, shrinking by 7.1% in 2014, and has fallen cumulatively by 16% since 2011 (PricewaterhouseCoopers, 2015). Kenya's hotel industry has a lower occupancy rate, averaging 34.4% compared to the Sub-Saharan average of 59.4% and European and American markets, which recorded above 65.5% between 2011 and 2015 (Cytton, 2016). Occupancy rate have decreasing consistently from 40.3% in 2011, 36.4% in 2012, 36.1% in 2013, 31.6% in 2014 to 29.1% in 2015 (KNBS, 2019). There was a slight increase in 2017 and 2018, with 30% and 32.5 %, then a drop to 30.8 % in 2019 (KNBS, 2020). The occupancies are highly hit during low peak seasons by up to 80% (Miricho, 2013). Also, sudden abruptness may affect occupancies; for instance, during the Covid-19 pandemic of 2020, Kenyan hotel occupancy rates fell to 24 % from 51 % in March the previous month as the Covid-19 restrictions on movement and mass gatherings hit the economy. Against this backdrop, hotel rooms and bed capacities increase while occupancy rates decrease. It is approximated that 16,156 sellable rooms are hosting 26,786-bed capacities as of 2021, with a growth rate estimated at 3% since 2011 (TRA, 2021).

Therefore, the number of sellable hotel rooms increases despite the hotel occupancy rate decreasing and remaining relatively low when posting marginal growth over the years. It is argued that the higher the room occupancy, the bigger the profits, and the lower the room occupancy, the lower the profits (Abdullah, 2012); this implies that hotels are earning lower profits which is a

reflection of poor financial performance. Also, low occupancy rates imply that many hotels are not generating sufficient revenues to meet their short-term financial obligations, affecting their liquidity positions and forcing some hotels to close. Ordinarily, an increase in hotels and sellable rooms should translate to an increase in occupancies which precipitates better performance of hotels.

Kenyan hotels have grown increasingly challenging to run due to the increased demands of the ever-changing business climate. Hotels find it challenging to register significant financial performance. As a result of internal and external determinants of revenue management within the sector, adverse effects continue to influence the hotel industry in Kenya, denying hotels stable occupancies and chances to achieve the maximum possible hotel room rates and total revenues. There is a need to improve the performance of hotels significantly by adopting revenue management practices as an intervention to solve Kenyan hotel occupancy and financial performance difficulties. Irrespective of the massive assurances and enhancements of the hospitality industry application of revenue management practices and its contribution to the performance of hotels, there is inadequate research on the effects of revenue management practices within this sector in Kenya. As a result, the research looked into the relationship and effects of determinants of RM practices and hotel financial performance in Kenya. Further, the role of RM practices as a mediator in the correlation between determinants of revenue management and hotel financial performance. Find what determines RM practices, and revenue managers could evaluate the effects of RM practices and financial performance to define the hotel industry's future orientation.

### **1.3 Research objectives**

#### **1.3.1 General objective**

The general objective of this study is to investigate determinants of revenue management practices and their effects on the financial performance of star-rated hotels in Kenya.

#### **1.3.2 Specific objectives**

The particular objectives of the study were;

1. To establish the determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya.
2. To determine the revenue management practices and their effects on the financial performance of star-rated hotels in Kenya.
3. To examine the determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya.
4. To investigate the mediation role of revenue management practices on the relationship between determinants of revenue management and their effects on the hotel financial performance in Kenya.

#### **1.3.3 Research hypotheses**

*H<sub>01</sub>: There is no statistically significant link between the determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya.*

*H<sub>02</sub>: There is no statistically significant link between revenue management practices and their effects on the financial performance of star-rated hotels in Kenya*

*H<sub>03</sub>: There is no statistically significant relationship between the determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya.*

*H<sub>04</sub>: Revenue management practices do not statistically significantly mediate the relationship between determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya*

#### **1.4 The Justification of the Study**

In Kenya, the hotel sector is averse to change and slow to adapt novel ideas; they need an apparent reason to capitalize on the new and innovative methods of doing similar roles (Miricho, 2013). Adopting innovative ideas in Kenyan hotels is coupled with several challenges and is primarily influenced by external pressure (Kilali, 2016). Further, the Kenyan hotel problems of lengthy low occupancies and poor financial performance require a lifelong resolution, particularly during low seasons. This solution may be contained in implementing RM practices in Kenyan hotels. The study's objective was to investigate the determinants of RM practices and how they influence hotel financial performance. The study notably investigated determinants of revenue management, RM practices ranging from RM implementation, RM systems, RM techniques, and their linkage to financial performance.

Consequently, it answered whether the situation in Kenyan hotels necessitates an RM approach. The study findings may encourage the hotel sector to accept revenue management practices as an essential, contemporary best practice tool to manage, improve, and maximize occupancies and revenues. It is antedated that this research may develop a revenue management model that may be quickly adopted, less costly, and applicable to our indigenous hotel sector. Further, it creates awareness in the hotel sector of the missed chances of making a massive difference in their revenues. The hoteliers concerned with implementing RM and performance in hotels may find this a helpful study.

The study could be substantial to diverse stakeholders. The academic fraternity can gain insights from newly developed academic literature on determinants of RM practices and their influence on hotel financial performance. The research could be a foundation for future scholarly works on related subjects. In effect, it may expand opportunities for research in areas not adequately covered by the survey. The findings of this study may assist policymakers in developing policies that can guide the sector forward into adopting a framework that emboldens the hospitality sector in understanding the characteristics of revenue management strategies that significantly influence the improvement of the sector's performance. As a result of this study, the hotel industry and other affiliated institutions benefit significantly. These research findings may help develop policy guidelines for changing institutional frameworks and policy interventions related to revenue management practices. The findings may benefit management of the hotel industry who may gain insights on the status of RM implementation in the hospitality sector, how RM policy, its application, RM systems, and RM strategies contribute to financial performance, which may help them to practice and make a decision related to financial performance effectively. As a result, the Hotel industry and other affiliated institutions can benefit significantly from this research.

### **1.5 Assumptions of the study**

The researcher must make assumptions about those aspects of the research beyond his or her control (Simon, 2011). The first assumption was that adopting revenue management practices is an intervention tool that may improve occupancies, maximize revenue, and precipitate better hotel financial performance. Further, it was assumed that the sampled respondents would fully participate in the study. To reduce non-response bias, the researcher explored cooperation with respondents to forge willingness and ability to engage them during operations, minimize lack of time and cost restraints, or for some other reason. Additionally, all sampled respondents were knowledgeable about the research topic, were contacted, and provided genuine, accurate, and reliable data that enabled the researcher to achieve a prudent outcome about the study topic.

## **1.6 Scope and Limitations of the study**

There has been increasing attention on hotel standardization, internationalization, and operations (Fredrick & Authority, 2019). The study covered star-rated hotels in Kenya registered and regulated by Tourism Regulatory Authority. The study focused on the determinants of revenue management practices and their effects on the financial performance of star-rated hotels, and the study collected data from revenue managers of star-rated hotels using questionnaires. Such intentional diversity and variability may make the generalizability of this study's findings difficult. Hence, the study's findings are limited to only star-rated hotels and not to the entire hotel sector in Kenya or the world; caution should be exercised when generalizing anticipated findings. Secondly, the study did not directly involve owners of star-rated hotels in Kenya. Given the geographic scope of Kenya's dispersion of star-rated hotels within the country and the situation brought about by the emergence of the Covid-19 pandemic during the time of the study, there was the constraint of time and financial resources that affected the length of time of data collection exercise and the size of sample for this study. However, resources and time constraints were minimized by efficiently utilizing limited time and financial resources. The constraints brought by the Covid-19 pandemic were minimized by complete adherence to the Covid-19 protocols and guidelines issued and enforced by the government for application and observance by hotels during the data collection.

## **1.7 Conceptual framework**

This hypothetical proposal relies on the opinions regarding contingency research that suggests how to determine and oppose the connections between aspects of contingency and RM practices that explain the projected conceptual framework (Wadongo, 2014). The development of a conceptual framework and identification of determinants of revenue management and revenue management practices, the study is informed by contingency theory that developed from influential literature of the mid-1960s. The premise of contingency theory is that there is not at all a unique proper

arrangement performance management structure that is spread over correspondingly to all or any organizations at all times; however, different organizations' situations will rely on obvious influential and significant contingent situations (Abdel-Kader & Wadongo, 2014; Sayilar, 2016). Performance management and effectiveness of hotels are influenced by Contingency aspects like; innovation, technology, strategies, initiatives, and external factors (Wadongo, 2014). Furthermore, certain contingency factors include hotels' characteristics regarding dimensions, size, quality, and location vis via destinations like towns and airports (Gabriele, 2015).

Hedonic pricing, discrete choice, and dynamic pricing models informed the study on the aspects of practices that constitute revenue management in a hotel (Vulcano, Van Ryzin, & Chaar, 2010; Zhang & Weatherford, 2017). In comparison, a theory of social change formulated by Kurt Lewin was used as a framework to investigate conditions in the successful application of management (Zand & Sorensen, 1975). The theory of change was adopted to explore the value of revenue management practices as an intervention for the relationship between determinants of revenue management and their effects on financial performance. The theory of change of an intervention depicts the causal pathways from outputs through outcomes via intermediate states towards impact.

Researchers have confirmed an association between determinants of revenue management and performance in different organizations (Gabriele, 2015; Wadongo, 2014). Past research has deficiencies in incorporating studies of one or two variables through choice fit and need on linkage impacts, which is uncertain thanks to common elements among determinants of revenue management. Further, most of those studies are stricken by hypothetical and methodological inadequacies, such as few study variables, measurement errors, and the model being studied leading to contradictory results (Ferreira & Otley, 2010). Another inadequacy is that the predicted association between the determinants of RM studied and financial performance was not explained



exhaustively (Betts, 2011). For example, the following factors have not been considered probable amplifications of significant associations. Such factors include; government support, risk-averse managers, high profit-making business, and a tendency to clinch what others liquidate. Further, the associations are believed to be direct, while effects are said to even, while some connections could also be curvilinear when several proportions of efficiency contingencies are considered (Betts, 2011).

Analysis of related literature divulges that it is essential to discover how determinants of revenue management affect RM practices and financial performance, which is inadequately researched within the hotel sector. The absence of replication of such investigations in diverse settings, just like the hotel sector in developing countries, and the absence of limelight on present facets of revenue management practices restrict the ability to generalize and revive contingency and social change theory through other major academic domains. Regardless of the constrictions raised regarding contingency theory, dynamic pricing theory, and theory of social change, they are still credible theories for pursuing a considerate association flanked by determinants of revenue management, revenue management practices, and financial performance of the hotels in an exceedingly profoundly and vibrant hotel industry.

The conceptual framework that will guide the research describes the independent variables, the determinants of revenue management (internal and external), and their proposed effects on financial performance. The intervening variable; is revenue management practices (RM implementation, RM techniques, and RM systems) and their effects on financial performance.

Figure 1.7.1 below displays the conceptual framework for the study.

INDEPENDENT VARIABLE

MEDIATING VARIABLE

DEPENDENT VARIABLE

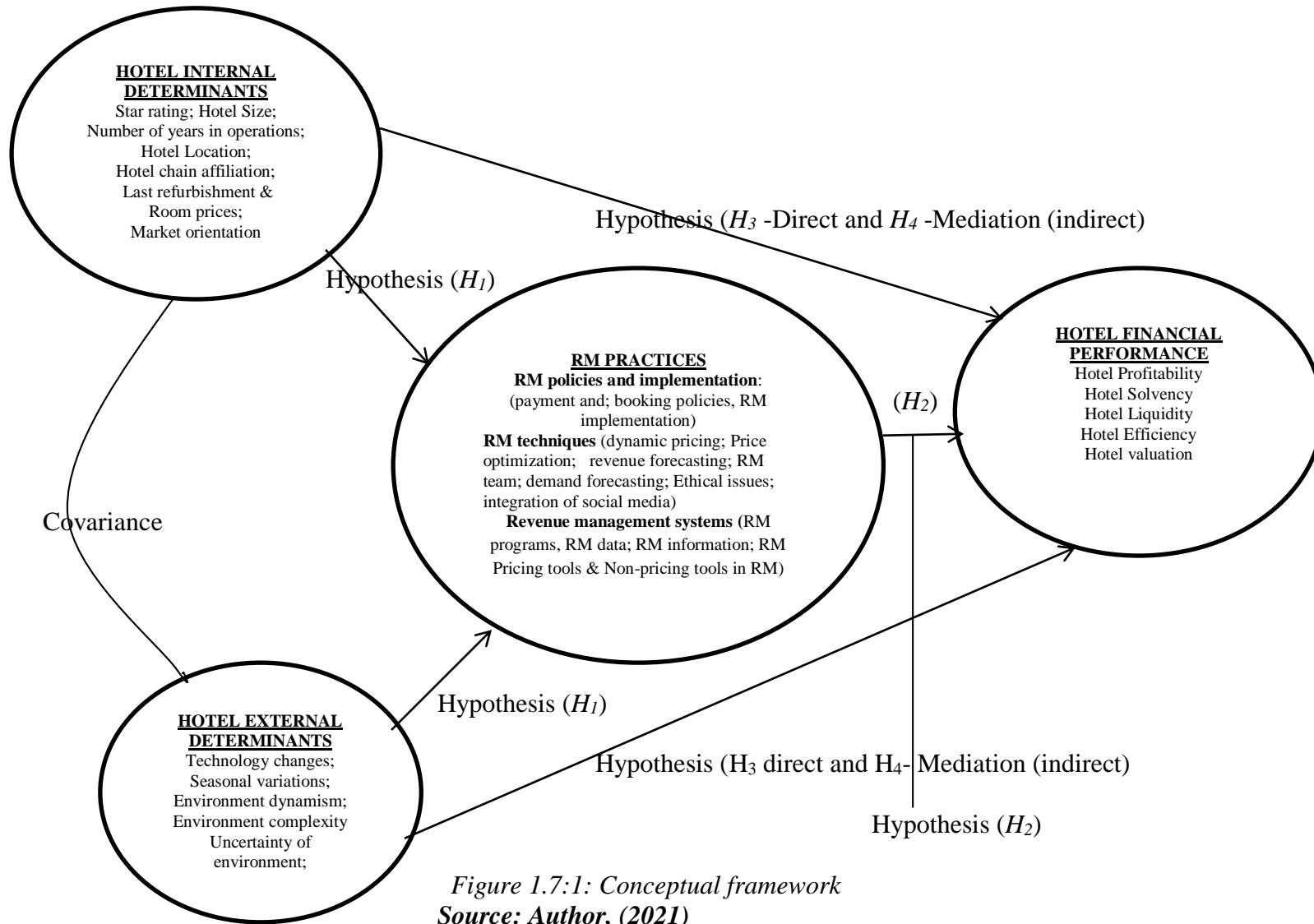


Figure 1.7:1: Conceptual framework  
Source: Author, (2021)

## **CHAPTER TWO**

### **LITERATURE REVIEW**

This chapter was categorized into subsections with reviewed literature on theoretical literature and empirical literature on determinants of revenue management, revenue management practices, their effects, and financial performance aligned with the study's objectives. The reviewed literature is pertinent to the study problem at hand. Further, gaps in knowledge have been presented.

#### **2.1 Theoretical literature**

##### **2.1.1 Contingency theory**

The current study used contingency theory to identify the determinants of revenue management and underscore the importance of contingency elements towards the performance of hotels—the theory which emerged from significant mid-1960s literature. The contingency approach assumes that different organizations' circumstances or factors are contingent on apparent significant and crucial circumstances (Abdel-Kader & Wadongo, 2014) and that no one-size-fits-all management model applies to any or all organizations at all times. Most of the studies on contingency theory have been on advanced managerial aspects like leadership, structure, human personnel, and marketing of the hotels (Ivana, 2013; Matikainen, 2019). The management of a hotel's performance is determined by external contingent elements such as creativity, technologies, policies, control schemes, and environmental stressors (Wadongo, 2014). Specific internal contingent facets in the hotel industry include the hotel's dimensions, structure, quality, and placement to nearby locations such as cities and airports (Gabriele, 2015).

##### **2.1.2 The deterministic Linear programming model**

Hotel revenue management concerns the allocation of limited rooms to demands from different price categories. Hotel rooms fall into groups of different amenities, each having its prices. Due to

a shortage of rooms in one category, demand may be offered a room in a higher category but at the same lower price, called upgrading. Overbooking is also practiced because of late cancellations and no-shows. Usually, upgrading is done separately from pricing optimization, leading to suboptimal solutions. A deterministic linear programming (DLP) model to simultaneously consider hotel room pricing and allocation, including overbooking and upgrading, through a process that deals explicitly with room categories (Zhang & Weatherford, 2017). The main weakness of DLP is that it systematically ignores demand uncertainty by only considering expected demand.

### **2.1.3 Dynamic pricing model**

Dynamic pricing for network revenue management has received considerable attention in research and practice (Zhang & Weatherford, 2017). They propose a dynamic programming formulation for the problem. Due to the well-known curse of dimensionality, solving the problem is out of reach. The dynamic pricing approach generates an upper bound tighter than the bounds from a deterministic approximation and a dynamic programming decomposition scheme. The new approach to problem instances generated based on the data obtained from a central resort hotel in the US shows that a heuristic control policy based on the new approach leads to higher revenues than several benchmark policies. While such models are reasonable for some industries, such as airlines, it is not suitable for industries where prices are used directly as control variables, including many hotel and hotel chains.

### **2.1.4 Discrete choice model**

Discrete choice models are appealing for airline revenue management (RM) because they offer a means to profitably exploit preferences for attributes such as time of day, routing, brand, and price (Vulcano, Van Ryzin & Chahr, 2010). They are also good at modeling demand for unrestricted

fare class structures, widespread throughout the industry. However, there is little empirical research on the practicality and effectiveness of choice-based RM models in the hotel industry.

### **2.1.5 Hedonic pricing model**

The hedonic pricing model estimates the extent to which each factor affects the market price of the hotel. When running this model, if non-environmental factors are controlled for (held steady), any remaining discrepancies in price will represent differences in the good's external surroundings. The significant advantages of the hedonic pricing model include giving an estimate of the value of a good as determined by the item's characteristics and external factors. Hedonic pricing uses actual data and statistics when determining the prices of properties. The 'hedonic pricing' model views goods and services as collections of 'attributes' or 'characteristics.' The modeling approach can be applied to any market for a differentiated product or service (Chen & Rothschild, 2010; Monty & Kidmore, 2003). For example, markets for housing, automobiles, and computers, as well as for environmental services (or disservices) such as air pollution, noise, and similar externalities, have been widely investigated using the hedonic pricing technique. However, there are few examples of applications of the technique to the hospitality sector in general and accommodation in particular.

### **2.1.6 Theory of change**

Many forces may affect the success of a change. A theory of social change formulated by Kurt Lewin was used as a framework to investigate conditions in the successful application of management science (Zand & Sorensen, 1975). The theory of change was adopted to explore the value of revenue management practices as an intervention for the relationship between determinants of revenue management and their effects on financial performance. The theory of change of an intervention depicts the causal pathways from outputs through outcomes via intermediate states towards impact.

The theory of change further defines the internal and external determinants that influence change along the significant pathways that affect whether one result can lead to the next. These contributing determinants are called drivers and assumptions. This approach benefits from incorporating the intended logic of intervention into its implementation context. It is, therefore, an influential theory when trying to identify the determinants of revenue management in hotels and their effects on the practices key to revenue management as well as the performance of hotels.

## **2.2 Empirical literature**

This section presents the empirical literature reviewed per the study's objectives.

### **2.2.1 Determinants of revenue management and their effects on RM practices**

The various determinants influencing RM practices are categorized into two major types; internal determinants and external determinants.

#### **2.2.1.1 Hotel internal determinants of revenue management and their effects on revenue management practices**

Star rating features a sound impact on revenue management; however, it does not affect decision-making related to revenue management (Wang, Tian, Li & Hu, 2013). Further, (Sainaghi 2011) revealed that hotel rating is significantly associated with RevPAR. The RM tools from a chain hotel database revealed that ratings are more effective for increasing occupancies than realizing high prices (Ortega, 2016). Therefore, star ratings of hotels are crucial and associated with revenues and occupancies. There is a need to determine if the rating of hotels has a substantial influence on revenue management practices

Abad, De la Fuente-Cabrero, González-Serrano, & TalónBallestero, (2019) revealed that the hotel classification, affiliation to the chain, and the presence of skilled full-time employees are the variables for successful revenue management (RM) adoption in urban hotels. The study used few

variables and focused on urban hotels; there is a need to determine if classification and affiliation to chain hotels located away from urban centers experience have adopted revenue management practices.

The hotel sector often contends that the three vital elements for restaurants and such businesses are; "location, location, and location" (Mezias & Baum, 1992). The hotel's location and fixed prices have purposeful long-term implications on hotel achievement (Mezias & Baum, 1992). Sainaghi (2011) proposed that the establishment's central locality broadens its RevPAR approximation value. Further, Sainaghi (2011) pursued "where" and "what" dimensions involving seventy-two respondents from hotels categorized as 3 to 5 stars. Fiscal reviews and sum-ups disclosed that the "what" is characterized by four principles, including; several rooms, number of employees, market orientation, and a period after refurbishment while ("where") upholds the significance of the area, predominantly the centrality of the facility inside the destination. Where a hotel is situated does not impact revenue management policy-making or the hotel's performance (Wang, Hu, Li, & Tian, 2013). It is essential to determine if a connection between hotel location and other aspects of RM practices like techniques and systems exists.

Hotel size; studies have found an indirect linkage between guest rooms with revenues (Sainaghi, 2011). Dimensions of hotels in by guest rooms significantly have worth to RM decisions. Employees generally add worth to occupancy or value and significantly influence the RevPAR (Sainaghi, 2011). Nevertheless, there is a need to find the linkage and effects of hotel size and revenue management practices in general (Wang, Hu, Tian, & Li, 2013).

Formation dimensions: Founding factors have a significant linkage with REVPAR. The impact of time slack is when new hotel renovations require time for them to be perceived and supply productive effects, significantly affecting RevPAR (Sainaghi, 2011). It is indispensable to

establish if founding factors link RM practices. Market Orientation; there is an indirect link between market orientation and RevPAR that "produces a degree of elucidated variance of 65 percent" (Jeffrey & Barden, 2000a). More research using like models (Jeffrey & Barden, 2000b) affirmed the identical findings (Sainaghi 2011). Therefore, it was purposive to determine if market orientation affects RM strategies.

Guest room rates: A hedonic price model was proposed and approved to measure prices by changing hotels' qualities and features. However, the residuals' spatial inquiries may fathom the rooms' rates not elucidated by the model (Pawlicz & Napierala, 2017). Further, effects on prices by hotel star ratings are confirmed from databanks of Online Travel Mediators and star appraisals, with every extra star rate authorizing contributing 25-36% significance on prices. It is precise that room rates go hand in hand with prices, but there is a limited connection with other aspects of RM; thus, it is purposive to examine if guest room rates connect with RM strategies and the hotel's financial performance.

#### **2.2.1.2 Hotel external determinants of revenue management and their effect on revenue management practices**

Seasonality: These changes in the hotel industry occur over time; they are measured mainly by the number of customers, client expenditures, reservations, mode of transport, professional entries, and net demand traffic flow (Butler, 2001). Every hotel is laid low with seasonality insignificantly or severely (Bergin-Seers, O'Mahony, Galloway, McMurray, & Lee, 2008). Seasonality has some implications on hotels' performance due to the misshaped systems that cause substitute methods of using commodities in the hospitality sector (Chiutsi & Mudzengi, 2017; Chung, 2009). The association and effects of seasonality to RM practices have not been wholly exploited, hence the need to explore the linkage.



Technology changes; computerized RM imposes information gathering and elucidation for managers' use (Maëla, 2015). Hotels need to computerize RM to expand efficiency since it creates about 37.0 percent change (Kimes, 2010). Most hotels use micro frameworks to manage their property, particularly Fidelio package suite 8. Such a system reinforces practices like dynamic pricing frameworks enthusiastic about occupancy rates. However, the system's forecasting of demand has not been supported (Mayer, 2015). An overview of RM papers concerning hotel settings across academic literature from 2001-2013 distinguished RM-related articles (Mehmet & Lan, 2016). The articles discovered that RM is turning strategic methodologically, technologically focused, client-driven, and carried on as a necessary instrument for hotel businesses. Despite that value, there is inadequate literature concerning this issue in hotels in the global south. Hence, empirical investigations need to be conducted on technological changes, associations, and effects on hotel RM practices.

Environmental Uncertainty: The degree of advancement that includes the speed and rate of a hotel's situation in the business environment is the level of environmental uncertainty (Awang, Ishak, Mohd-Radzi, Taha, 2008). The hospitality sector is categorized by a delayed period of susceptibility, the unpredictability of the economy, instability of political situations, oppression based on fear, and pandemics (Simon, Harry & Katharine, 2015). By combining six major measurements, several variables can affect the uncertainty in the hospitality sector: changes in guest room rates; demand for guest rooms; changes in regulatory service; changes in labor accessibility; changes in rival hotels' approaches; guest's likes and desires (Awang et al., 2008). Besides, prices of competitors, unanticipated variations in prices by vendors, opportunities relating to business equity and finance, demand curve, supply of labor, marketing aspects of new competing firms, and the influence of the latest innovations all add to the uncertainty in the hotel

sector (Olsen, Tse & West, 1992). This study explores limited empirical evidence on the link between environmental uncertainty aspects and RM Practices.

Environmental complexity: The extent of variation in the context is environmental complexity (Awang et al., 2008). Furthermore, environmental complexity impacts performance because it governs lean operations and purchasing in businesses (Azadegan, Zangoueinezhad, Linderman & Patel, 2013). Six indications can assess the hotel industry's complexity: extensive competitor convergence, centralization of clients, general aggregation of industry sales, services, and products difference, consolidation of labor accessibility, and technical procedures inside the industry (Awang et al., 2008). Though it is evident that environmental complexity influences the hotel business, the relationship and effects are inadequately examined in Kenya's hotel industry (Njoroge, Kinuu, Ongeti & Kasomi, 2016). Hence, there is a need to determine if environmental complexity is related to RM practices.

Environmental dynamism is both volatility and unpredictability of the external business environment (Li & Liu, 2014). Environmental dynamism is measured using technological variations, client competition, unpredictability, market changes, speed of changes, and uncertainty about customer behavior (Wang, Senaratne, & Rafiq, 2015). Environmental dynamism may be defined as the degree to which a client's leanings and a facility's services change with time (Wijbenga & Van-Witteloostuijn, 2007). It has been revealed that environmental dynamism significantly influences the hotel business (Akgün et al., 2008). The two measurements for environmental dynamism are the frequency and intensity of those induced organization changes (Subhi-Idris, & Momani, 2013). While these studies acknowledge that environmental dynamism influences business, few studies have explored it without linking it against RM techniques; thus, it was vital to determine if that association exists.

The application of new technologies and revenue management software, such as JDA Software and Stay Night Automated Pricing software (SNAP), are used to drive higher income for its hotels and remain competitive. However, factors like seasonality, competitors, unstable economic and market conditions and determinants hinder the fruitful adoption of revenue management practices. Hence, there is a need to explore the determinants of revenue management and their effects on revenue management practices in Kenyan hotels.

### **2.2.2 Determinants of revenue management and their effects on financial performance of hotels**

The hotel's size significantly influences the performance (Barros & Mascarenhas, 2005; Chen & Tseng, 2005; Israeli, 2002; Rodriguez & Cruz, 2007). Further, Claver-Cortés et al. (2007) showed that the size of a hotel could positively impact hotel performance by giving it a competitive edge. Kim et al. (2013) also discovered that the size of a hotel impacts occupancies per room and GOP, typically utilized as measures for hotel performance. Ayneshet (2020) sought to link hotel age, size, equity ratio, cost ratio, and profitability in Hawassa. Secondary data on the financial performance of Four-star hotels from 2013-2017 was obtained from annual reports and audited financial statements. Regression was used to analyze secondary data. The study found that variables affecting four-star hotel profitability in Hawassa are statistically significant. Equity ratio, operating cost ratio, and size have a 5% influence on four-star hotel financial performance, but hotel age was insignificant. The study used secondary data and has limited information on how to improve revenue management and capitalize on profitability ignoring other aspects of financial performance. Hence, it is necessary to explore the linkage between hotel characteristics and their effects on profitability in the hotel sector using primary data by integrating hotels of other star

ratings and other variables of financial performance like solvency, efficiency liquidity, and hotel valuation.

A previous investigation has hypothesized that a business's size significantly influences performance and scale economies (Sainaghi, 2011). The total available rooms in a hotel, number of employees, and turnover are characteristically used to estimate the size of the hotel. Nevertheless, size usually captures not only the existence of economies of scale but also diseconomies thanks to higher organization and management costs (Filippaios, Anastassopoulos & Phillips, 2009). Consequently, it was critical to investigate if hotel size is linked to certain aspects of financial performance.

The occupancy levels of about 3699 hotels in seven years from 2002 to 2008 by analyzing the length of stabilization grounded on location, size, type, and degree of hotel service (John, 211). The research found that specific hotels and sites stabilize more slowly or faster while the stabilization period is not influenced by the hotel's size and service quality. The survey also discovered that some hotels are far higher in occupancy than others. The survey was longitudinal and addressed stabilization only, and the current study will use hotel characteristics to address financial performance using a survey design.

The hotel's market orientation is also essential; an international appeal is commonly recognized as one of the hotel's performances metrics. According to Rosenbaum and Spears (2006), foreign travelers stay longer and spend more money. Increasing the number of reservations by attracting overseas guests is a good idea. Global client orientation influences business proceeds and is more prolific than domestic market-oriented hotels receiving international clientele (Bernard & Jensen, 1999; Wagner, 2005). Hotels with international orientations boost their performance by introducing fresh productivity expertise (Bernard & Jensen, 2004). While the study focused on

market orientation as a measure of general hotel performance, the study was inadequate in addressing the effect of market orientation on the financial performance of hotels.

A study on hotel occupancy volatility and its determinants in Hong Kong demonstrated that the hotel sector is sufficient to know the turning points in the occupancy rate in advance to control risks linked to this uncertainty and volatility, which are the periods when increases in occupancy rates change to lower occupancy levels and consequently fall occupancies (Tang, 2011). Further, the environmental change rate significantly influences hotels' performance (Awang et al., 2008). This study was centered on turning points in the occupancies and was inadequate in exploring aspects of volatility and uncertainty to the financial performance of hotels; it is vital to establish if the uncertainty between hotel RM practices and aspects of financial performance was inadequately addressed.

Baldigara and Koić, (2015) study that lasted approximately ten years, ranging between 2005 and 2014, aimed to investigate three models of net-occupancy rates for beds and beds in the Croatian hospitality business. Three model time-series predictions were used to this effect; the exponential model of Holt-Winters, the Naïve seasonal model, and the season auto regression integration moving-average model. These empirical results demonstrated that the time-series model utilized was good concerning MAPE, while the Holt-Winter model was superior to the seasonally naive and season ARIMA model. Though the longitudinal study gave rise to new models, it focused on managing occupancies without adequately linking occupancy to the financial performance of hotels.

Room rates; a study investigated the aspects that effects hotel room rates in Warsaw to determine the impact of various hotel traits and attributes on costs (Adam & Tomasz, 2017). In Warsaw, Poland, a hedonic price model (HPM) was used to quantify the influence of numerous site and

situational elements on hotel prices. Spatial analysis of residuals was employed to understand better room rates that HPM did not explain. A sample of prices from three diverse online travel agencies (OTAs) was investigated, and the OTAs' star ratings were either official or offered. Every other star permits the hotel to raise prices by 25% to 36%. Though the effect of star rating on hotel pricing was verified, there is little empirical evidence of the link between room rates and financial performance, which the current study seeks to explore.

The PricewaterhouseCoopers hospitality directions studied the impact of size on hotel profitability for a group of 2616 hotels using income before fixed costs per available room as the profitability of hotel indicator (Withiam, 2000). This study demonstrated the impact of size on the operational performance of hotels. Nevertheless, the findings revealed that the most profitable hotel size, according to the survey, is between 400 and 500 rooms, and these results were only validated for specific hotel types, like resorts and hotels in or near airports. The current study explores star-rated hotels with different room capacities across regions in Kenya.

Gabriele (2015) confirmed, by evaluating a sample of 112 hotels, the linkage between effectiveness and its predictors for the Piedmont hotel industry. The study investigated if variables like star rating, size, and additional amenities are linked with occupancy effectiveness, measured using revenues per available room. The study used the RevPAR indicator as the indicator of performance. While the performance was significantly correlated to the classification (stars) (0.919), it is inadequate to assess whether other hotel characteristics significantly impact financial performance.

Stanovicic, Moric, Lakovic, and Pekovic (2015) analyzed the potential efficiency sources using hotel financial metrics. The analysis of the following metrics focused on operating income, room revenue, occupancy, capital, room rates, and personnel. The evaluation was carried out on a sample

of the hotel by category and territory with roughly 31.35% of the available capabilities of hotels in Serbia ranging from 2004 to 2011 to establish the performance management is the process of hotel chains (Mašić, 2013). Key findings show that the hotel's financial efficiency is limited. Key elements influencing a severe economic scenario have been determined: prevailing seasonal conditions, over 77 percent of traveler night accommodation is centered between June and September. The study was on the national and the main Serbian cities, and the current study explores larger sample sizes in urban and rural areas in more diverse regions in Kenya.

Luo & Lam (2017) evaluated the urbanization influence on the performance of hotels in Guangdong by studying panel information spanning 1994 to 2014 and showed that occupancy levels are an indicator of hotels' performance. Occupancy levels were a key indicator in hotel performance measurement. A quantitative method was used in this investigation, while in statistical analysis, the linkage between hotel performance and urbanization, depending on the market, geographic, people, and social aspects, was tested. The study discovered that urbanization influences business performance. The study focused on urbanization and how hotel located within the city affects their performance; further, this study inadequately covered financial aspects.

In conclusion, several factors have been identified as key to hotel performance, and these factors include; location, type of facility, cleanliness, room rate, pricing, hotel size, number of rooms, and cleanliness (Al-Saleem & Al-Juboori, 2013; Hong, 2010; Sungjin, Gong, John, & Mengkai, 2018). There is little empirical evidence on the link and the effects of such factors as room rates, season changes, volatility, and industry uncertainty on financial performance. Also, significant value in financial performance was experienced in hotels where significant investments had been made; such hotels include those constructed in urban areas and car manufacturing areas, with few studies on hotels located in other places. The studies further reveal that models developed for

performance in hotels worked well in different seasons like winter or naïve season; hence, no single model was identified as appropriate for all seasons in developed countries. Again, there is little empirical evidence gathered from the hotel industry in Kenya. Hence, there is a need to have a survey study using star-rated hotels across different locations and determinants identified to explore their effects on the financial performance of hotels. Therefore, it is proposed that revenue management's determinants link and affect the financial performance of hotels.

### **2.2.3 Revenue management practices and their effects on hotel financial performance**

The following subsections have reviewed literature related to RM practices and hotel performance.

#### **2.2.3.1 Revenue Management policies, implementation & practices and their effects on hotel financial performance**

Implementing RM policy needs a range of measures to attain RM objectives. Critical processes of RM include: setting a goal for RM, data collection, data analysis, forecasting, strategic planning, and decision monitoring the implementation (Anderson & Kimes, 2011). Three fundamental principles for addressing hotel demand are having an advanced waitlist, bookings, and ensuring that guests sit at the hotel (Wirtz & Kimes, 2007). Pricing is vital to boost client demand and to improve hotel performance (Canina & Enz, 2012). If RM policies are correctly implemented and operationalized, the losses from inappropriate implementation can be reduced (Lieberman, 1993). Indeed, effective and efficient RM regulations require official operating procedures and practices so that workers may update them accordingly (Anderson & Xie, 2010).

Moreover, Nanishka (2015) gathered and analyzed data from six fine-dining restaurants on implementing the reserved seat policies affecting the number of bookings and non-attendants. Guesthouses in RM may be linked to various accommodations and hotel associates to develop tangible methodologies of procurement, administration, distribution, or fusion of such approaches



(Nanishka, 2015). The survey established that reservation policies help financial controllers function hotels to assess and improve hotel performance in terms of systems and procedures. In addition, it enhances customer patronage and inventory, controls demand, and flexible costs, hence improving the sustainable retention of hotels and employees, satisfying customers. Slowdown adoption of RM policies may be related to the splintered characteristics of the hospitality sector; for instance, ownership and competent employees to upgrade RM frameworks due to narrow gross margins. Successfully implementing RM and booking procedures can boost hotel revenues (Kimes et al., 2010). However, centralizing RM processes in large and acquainted chains impedes the consistent growth of the expertise and capacity required to enhance RM yields. As to whether RM necessitates performance, further research on RM within the hospitality sector should be done (Nanishka, 2015). Therefore, it is vital to examine whether RM policies and their execution are being implemented and whether they influence the financial performance of hotels.

### **2.2.3.2 Revenue management techniques and their effects on hotel financial performance**

There are some RM techniques like prize optimization, which manages rooms rate dependent on the level of occupancy, variety of speeds, and reasonable pricing, a concept previously implemented by more than two thousand hotels intercontinental network (Higbie, Eister & Koushik, 2012). They boost revenues and employ an effective progress strategy, taking demand from existing revenue management systems as an autonomous organization by splitting (Higbie et al., 2012). The dynamic pricing concept is among the critical values of today's business (Palmer & McMahon-Beattie, 2008). Dynamic pricing help hotels increase their returns and RevPAR by adding a level that shows variations in demand and occupancy rates (Tranter, Parker & Stuart-Hill, 2008). Clients pay for guestrooms and rank in several ways, which they continue to maintain given

reservations that depend on the quick booking (Palmer & Mc-Mahon-Beattie 2008; Tranter et al., 2008). These dynamic rates offer extra aid and follow the applicable reservation conditions and restrictions (Tranter et al., 2008). Clients should be guaranteed prices (Demirciftci, Beldona, Cobanoglu, & Cummings, 2010).

Further, Carvell and Quan (2008) have devised a changing price model that protects customers from these lower price guarantees from a reservation to arrival, which is not supposed to be exceeded 24 hours later. Liu (2012) has built an optimizing device for reservations to substitute the price technique used in Cornell for hotel reservations. The optimization device focused on the need for the tool when choosing occupancy rates because the setting of room prices depended on the drive to contract a room in a hotel (Liu, 2012). Mattila and Noone (2009) studied and highlighted two types; diverse and un-classified price techniques, and their impact on the ability of customers to afford payment through online systems. While these studies demonstrate the link between guestrooms, room prices, pay, and returns, there is limited empirical evidence of price optimization and financial performance.

An investigation on the price change approaches by Kenyan hotels and their impact on business profitability Njenga (2011). The study focused on hotels in six major cities: Nairobi, Nakuru, Kisumu, Nyeri, Mombasa, and Meru, representing four major administrative regions. The study used a descriptive survey design with 109 respondents filling out semi-structured questionnaires. The findings show that Kenyan hotels use various pricing techniques to accomplish their goals. Across all hotel classes, the Cost-plus price technique was prevalent. Price signaling, break-even pricing, and image premium pricing were widely used. Concerning the influence of the price changes technique on the profitability of the hotels, the Cost-plus price changes technique significantly contributed to return on investment, gross profit, liquidity, sales revenue, cash flow,

and lasting profitability. The study considered one aspect of revenue management in Kenyan hotels selected in only four major towns; the current study sought to explore more aspects of RM by including the non-pricing techniques and considering a wide range of classified hotels across Kenya.

Revenue forecasting requires a decision-making procedure to monitor the hotel's performance. It analyses the influence of projecting revenue through monitoring businesses and decision-making, indicating an extremely composite sector and giving the rest of the service sectors the chance to learn and build their equipment (Whitfield & Duffy, 2013). The linkage and dynamic deviations in bookings within the reservation context were incorporated in research that predicted the aggregate booking trajectory and the number of predicted reservations in the reserving timeframe (Koole & Haensel 2011). They also applied a precise value breakdown on past reservations and made changes according to the forecast inside the booking horizon without highlighting their effects on the financial aspect.

Integrating social media with RM presented new practices that generate higher income in establishing how the social media procedures adjust to RM (Sirsi & Varini, 2012). As hotels adopt more and more internet-based procedures and researchers determine how hotels can take these apps, hoteliers can choose all of them or anyone. They are more likely to run through RM (Noone, Rohlfs, & McGuire, 2011). Frequent web-based demos, like digital socializing, surveys and reviews, and networking sites, are essential considerations for hotels to consider while determining how goods, services, and prices are designed (Sirsi & Varini, 2012). While the integration of media has led to the generation of higher income in hotels, there is limited data on how factors like technology necessitate the integration of media to influence the financial performance of hotels.

Knowledge, skills, and expertise of the RM group: a study on RM struggles: Knowledge, knowledge and competencies, a two-step quality approach by (Gurel, Anil & Tevfik, 2016) have indicated that experiences for RM staff is complicated and needs to be knowledgeable and competent to meet these issues. Gurel et al., (2016) correctional data from fourteen RM via interviews and eight respondents in the FGD indicated problems and capacity to increase the efficiency of RM. Further, the revenue manager's qualifications and dedication are fundamental for RM implementation (Abad et al., 2019). Although RM knowledge, skills, and expertise substantially affect the aspects of the performance of hotels, there is inadequate evidence of the relationship between the variable and financial performance, which this study seeks to explore.

Reviewed RM studies show that RM techniques in the hospitality industry are vital for the future because RM has a substantial crucial part to play (Mehmet & Lan, 2016). There is also a helpful link between RM techniques, especially income forecasting (Duffy & Whitfield, 2013), social networks (Sirsi & Varini, 2012), pricing proceedings (Noone & Mattila, 2009), forecast demand (Haensel & Koole, 2011), and hotel performance. Nevertheless, the previous studies inadequately explored RM techniques, such as the automated processes of RM, RM's competencies, perspectives, and ethical issues, and their influence on the financial performance of hotels.

### **2.2.3.3 Revenue Management Systems and their effects on hotel financial performance**

The various RM systems and tools that hoteliers can use to regulate their clients' income in hotels are categorized into four that support revenue management: daily routine monitoring, processes followed by leading factors, and client categorization (Poutier & Legohérel, 2010). Hotels implementing RM systems are superior to those not existing in declining interest situations, according to research that used a 3-star database (Ortega, 2016). Where there is price and capability competition, the data have shown that RM practices are productive in increasing occupancies. RM

systems can improve income, affecting their fluctuating economic and financial situations; however, there is little empirical evidence to link these aspects.

A revenue management system is reached by managing a specific item every night occupied in a hotel room (Gallego & Van-Ryzin, 1997). The linear and non-linear control methods of RM systems have been identified. While predetermined linear generates more foreseeable earnings by controlling visitor residence comparison with standard RM approaches up to 2.9 percent (Weatherford 1995). The non-linear programming function produces outstanding solutions for control (Zhang & Weatherford, 2016). While the identified control methods impact hotel finances, there is a need for empirical evidence on the application of these control methods in Kenyan hotels.

Information and data: Revenue forecasts demand data in an excessive hotel RM system, mainly consumer information (Morag, 2013). The RM system is electronic software that gathers data on; price rates, occupancy levels, and hotel room income in recent years or seasons (Maëla, 2015). Time series in the repository are considered when predicting hotel reservations and maximizing occupancy and profits (Carlsruhe & Poutier, 2010). Four primary sources of sufficient RM data have been identified (Martinez-Pardo, 2017). The sources include hoteliers calling their rivals to seek their tariffs; they utilize GDSs to determine the prices of their competitors for the different goods and services and adjust their prices. It may also employ external data suppliers who routinely monitor reputable sites of rivals to obtain information about the hotel. In addition, the definitive source is internet sites that provide their customers with essential details (Martinez-Pardo, 2017). There is little evidence on the source of RM data and information, its application, and its connection to financial performance in Kenyan hotels, hence the need for an investigation.

Revenue management software (RMS) are globally approved RM software system with strategically valuable information integrated for hoteliers (Maëla, 2015). However, the software is

costly to hotels and demands professionals to upgrade their hotel amenities. Carlson Rezidor Hotel Group has increased its income by managing demand and optimizing prices. The group employed JDA Software to boost revenue, predicted a 2-4 percent rise in revenue and faced competition in the hotel operating in different economic realities (Pekgün et al., 2013). Another proven model could predict utilizing records of hotel revenues and increasing or decreasing payments. That model may differentiate current and long-standing RM demand targets and fix values (Padhi & Aggarwal, 2011). Other techniques to maximize room revenues created practical income expansion ideas; the program included advancements and forecast approaches that handle grouped bookings with connected factors, bookings, seasonal changes, no-show patterns, and duration of vacation for clients (El-Gayar et al., 2010). Few studies have explored the applicability of this RM software in Kenyan hotels, hence the need for this study and its effects on the financial performance of hotels.

RM Pricing tools: the value discount, return policy, dynamical pricing, behavior pricing, pricing fences, plus other mechanisms with an influence on room rates, although this depends on the price regulations, organization of the hotel, hotel levels, and presentations (Ivanov & Zhechev, 2012). Prices guaranteed and dynamic rates are the utmost frequently used and widely examined RM price-setting approaches in the hospitality sector (Ivanov & Zhechev, 2012; Choi & Kimes, 2002). When dynamic rates are applied, service provisions in hospitality facilities might be provided using various rates. High prices irrationally surpass the capacity or standard of the products or services they are tied to. Consequently, every price should reflect the product or service standard that has been guaranteed (Anuwichanont, 2011).

Further, by billing its customers for such rooms, hotels utilize differential pricing. Pricing strategies could be ascribed to price differentials for multiple parts of the hotel market. For

instance, consumers on official business are less responsive to hotel pricing because they may pay more excellent prices than vacation clients (Ivanov & Zhechev, 2012). The Pricing barriers in hospitality facilities are conditions in which superficial products and services are sold. These comprise visitor features like government officials or group members, time of residence, terms for payment, modification, cancellations, and length of stay (Kimes, 2010). The price gates may prevent customers from using low-cost goods and services (Bell & Zhang, 2010). Therefore, the requirements for pricing a fence should be shown to clients while booking a reservation. Therefore, hotels continuously monitor the index of rivals and the average daily rate for pricing precision to certify that prices are exact and may be maintained (Adedipe, 2018). Many star-rated hotels in Kenya have price regulations founded on statistics from Kenya Tourism Board, but there is a limited empirical link to their effects on the financial performance of hotels.

The non-pricing tools are related to hotel capacity management and internal procedures such as overbooking, inventory levels, controlled stay time, and rooms. Capacity planning and overbookings are classic RM non-pricing methods (Koide & Ishii, 2005; Talluri & VanRyzin, 2006; Van-Ryzin & Karaesmen, 2004). Overbooking is an intensively studied method compared to the organized length of stay, which is only restricted in the study (Ivanov & Zhechev, 2012). In conclusion, RM systems significantly impact hotels' performance (Ortega, 2016). There is a need to determine if non-pricing tools are contextual-based, why hotels update the RM systems and the effects of the non-pricing on financial performance.

The literature has identified a relationship between revenue management aspects and specific hotel performance indicators. Such indicators of hotel performance include; room revenue, room occupancy, hotel operating revenue, holdings, and room rates, among others (John, 2011; Stanovčić, Moric, Laković, & Peković, 2015; Tang, 2011). However, there is an investigation of

such aspects of RM as RM implementation, RM techniques, and RM systems have a linkage and effects hotel financial performance. Therefore, it is proposed that RM practices which are RM policies and implementation, RM techniques, and RM systems, link and influence the hotels' financial performance.

#### **2.2.4 Mediation role of revenue management practices on the relationship between determinants of revenue management and the financial performance of hotels**

Selmi and Chaney's (2018) research defined RM as a precise long-term orientation that is considered the norm, and the procedures that enhance those norms that RM leads to higher performance in organizations. Through a proposed two-dimensional REMANOR metrics where RM orientation (RMO) was the first step, it investigates RMO's impact on the performance hotel sector in French. According to the findings, RMO appeared to mediate the link between market orientation and hotel performance; however, there is little empirical evidence on the mediation of determinants of revenue management like size, location, room rates of the hotels, and factors like seasonality and technology towards financial performance.

Another study established that Airbnb's existence had affected hotels in the Helsinki region, with specific populations ranging from hostels to five-star accommodations (Fissha & Shrestha, 2017); the study sought to examine whether Airbnb's existence has affected hotels in the Helsinki region and whether Airbnb and hotels have competing interests. If so, how has it been affected by hotel occupancy, pricing, and revenue? Six hotel managers were interviewed in a qualitative study using half-structured interviews. The findings revealed that marketing of hotel rooms increased occupancies levels and raised RevPAR, hence hotel performance. Despite the findings, the study sample size was small and inadequate in exploring other determinants of revenue management and the mediation role of RM.



Ndung'u (2017) investigated the impact of RM, expense managerial aspects, asset management, and liability on the financial performance of establishments listed as non-financial on the Nairobi Stock Exchange (NSE). Of a sample of 164 high-ranking managers, mainly from accounts in 41 non-financial organizations, only 80 responded to questionnaires. The study adopted descriptive and inferential nature and discovered that RM improved firm financial performance and that firms used a variety of revenue management practices to improve financial performance, including revenue projections, timing, revenue recognition, and earnings shifting. The study also discovered that better expense managerial practices, including recognizing reserves, expenses, and inventory, and reducing general costs, affect the financial performance of these organizations. The study was in the non-hotel industry and non-financial institutions; hence need to find out if the same applies to the hotel industry.

Cherono (2019) investigated the impact of revenue managerial practices on the profitability of star-rated facilities within Nairobi County in Kenya. According to the study, cash projections and controlling liquidity influence the financial performance of start-rated facilities. On the other hand, cash flow positively influences the statistically insignificant influence on the start-rated hotels' financial performance. Murigu, Kiragu, and Kiai (2018) studied the effects of working capital management practices on the financial performance of hotels in Nyeri, Kenya. The study was founded on liquidity theory and used a descriptive research design. The researcher collected data using a semi-structured questionnaire. Data were collected from 65 respondents and analyzed, revealing that cash flow management practices positively and significantly impacted hotel financial performance. While both studies linked revenue managerial practices and working capital management to profitability in Nairobi and Nyeri counties in Kenya, the current study seeks to

explore determinants of revenue management not captured and extend the study to various star-rated hotels across various regions in Kenya.

Guadix, Cortés, Onieva, and Muuzuri (2010) established technological innovations/management and their influence on the development of RM strategies, and the findings revealed that each step forward in technology management resulted in more advanced RM capabilities. Among the outcomes were high efficiency, high occupancy, and greater yields. Testing actual data revealed that the system enhanced its application for real-world situations, resulting in efficient and innovative remedies for managing hotel reservation systems. It was therefore construed that technological management impacts revenue management, which impacts greater yields in terms of performance. This study revealed that technological innovations are a determinant of revenue management and further act as an intervention to better yields; however, other determinants such as seasonality and environmental dynamism and their effects were not explored hence the need for the current study.

In conclusion, few studies have hypothesized a link and effects between some determinant variables and some aspects of RM practices and those of financial performance. There is little empirical evidence from the reviewed studies that have explored the mediation role of RM practices on revenue management determinants and hotels' financial performance. The current study proposed and explores the mediation role of RM practices on the relationship between the determinants of revenue management and hotel financial performance in Kenya.

### **2.3 Gaps of knowledge**

There is a gap in the literature on limited studies that have illuminated the development and endorsement of RM practices in the hotel sector, especially in Kenya. The few studies identified have been founded on the theories such as Resource-Based-View grounded theory, Transaction-Cost-Economics theory, and theory of systems (Basak & Grace, 2015; Mehmet, 2015; Nanishka, 2015; Tanpanuwat, 2011). Research founded on contingency theory when determining the determinants of revenue management are just scarce. This study developed the propositions on determinants of revenue management and financial performance of hotels fully guided by contingency theory. The identification of revenue management practices was guided by dynamic pricing and hedonic pricing models, while an intervention tool and a link towards the relationship of the two aspects were based on a theory of change. It was hypothesized that a link exists between determinants of revenue management, RM practices, and their effects on hotel financial performance.

Secondly, the reviewed literature indicates that only a few studies on RM have been conducted in Kenya; most RM research was conducted in other countries (Fissha & Shrestha, 2017; Luo & Lam, 2017; Gabriele, 2015; Mašić, 2013; Stanovčić et al., 2015). The hotel sector in developed countries has successfully adopted RM in its operations. Further, other sectors that are gainfully using RM include; airlines, theme parks, and travel agencies (Higbie et al., 2009; Baldigara & Koić, 2015; Grace & Basak, 2015; Cindy & Seoki, 2009); In terms of the application of RM practices, there is scanty empirical evidence on the application and adoption of RM practices in Kenyan hotels. Hence, the need to seal the gap.

Thirdly, revenue management practices are vital for revenue maximization and successful hotel facilities (Zeng, Liu, & Zhang, 2016). Contingency-based determinants influence RM, for instance, hotel location, type of facility, cleanliness, room rate, pricing, hotel size, number of

rooms, and cleanliness, among others (Al Saleem & Al-Juboori, 2013; Hong, 2010; Sungjin, Gong, John, & Mengkai, 2018). Further, more influence has been necessitated by both internal and external determinants like political factors, exchange rates, economic status, intensive competition among classified facilities, dominant seasonality, stopovers, length of the stay, volatility, uncertainty, and events (Ramjeesingh et al., 2010; Raymond, 2001). While these factors affect revenue management, there is little empirical evidence from Kenyan hotels on the link and the effects of determinants of revenue management on the practices of revenue management. Hence, the proposition that determinants of revenue management have a linkage and effects on the practice of RM in star-rated hotels In Kenya.

Fourthly, the reviewed literature has identified a relationship between aspects of revenue management and performance (John, 2011; Stanovčić et al., 2015; Tang, 2011). Limited literature and empirical evidence exist on the link between RM practices and the financial performance of hotels in Kenya. Therefore, it is proposed that RM practices influence the financial performance of star-rated hotels in Kenya.

The study's background portrays how revenue management practices positively impact the hotel industry's occupancy and performance (Kimes, 2003; Rouse, Maguire, & Harrison, 2010). Determinants like location make hotels desirable and may convince investors to continue operating their business or intensify their investments (Ramjeesingh, Wright, & Hayle, 2010). Identifying and understanding if revenue management practices have any significant link and effects on hotel financial performance will facilitate proper strategic planning and necessitate effective hotel management.

Given the substantial impact of the hospitality industry on developing economies, research on RM practices in hotels in emerging regions is still missing. The literature review findings, as

featured above, illuminate gaps in applied theory, gaps in the area of study, gaps in determinants of revenue management, and gaps in the linkage and effects between revenue management, practices, and hotels' financial performance, more so in Kenyan hotels. Ultimately, the majority of research on hotel RM focuses on theoretic advancement. The current study aimed to close the knowledge gap by investigating the determinants of revenue management and how they influence RM practices and the financial performance of Kenyan hotels. This study employed a quantitative method and targeted a more significant representative from the hotel sector, as recommended by (Chia-Jung, Kuo-Sheng, & Yueh-Ying, 2012), to comprehensively answer the research questions.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

The chapter presents procedures and approaches used for this study. They include research design, study area, target population, sample and sampling methods, data collection and measurement, validity and reliability, diagnostics for quantitative data, data analysis, and presentation.

#### **3.1 Research Approach**

Three main approaches to research – qualitative, quantitative, and mixed- differ based on research paradigms, investigation tactics, and study methodologies (Collis & Hussey, 2009). The choice of the general technique depends on the inquiry tactics and particular procedures for data gathering, analysis, and interpretation by the researchers. In addition, the research problem at hand, the researcher's experience, and the intended audience all influence the methodological choice (Creswell, 2009). Therefore, this study employed a quantitative method based on the mentioned concerns. This study used its primary objective to study the determinants of revenue management practices and their effects on the hotel's financial performance. The survey subjects were revenue managers from star hotels, who gave their perspectives. In addition, the study collected numerical data utilizing questionnaires evaluated using descriptive, inferential statistics, and structural equation modeling. The study results yielded information that researchers may generalize to allow forecasts of revenue management strategies in hotels.

#### **3.2 Research design**

This study used a survey research design, specifically a cross-sectional, to collect data and make inferences about a population of interest at one point in time. Cross-sectional surveys have been described as snapshots of the populations about which they gather data (Lavrakas 2008). A survey may offer specific information on most facets of the population, allowing totals for smaller

geographic regions or unusual demographic groups. A questionnaire may be used to collect data, analyze and amend the data, and assess the data's vulnerability to various kinds of inaccuracy. The survey method aims to offer comprehensive insights into the degree of RM practices in Kenyan hotels, including the hotel's various practices on RM implementations. Close attention to the minor details may reveal connections between the essential variables in Kenya's hotel RM practices.

### **3.3 Study area**

Kenya, officially the Republic of Kenya, is a country in Eastern Africa. At 580,367 square kilometers (224,081 sq mi), it is the world's 48th largest country by area. With a population of more than 47.6 million in the 2019 census, Kenya is the 29th most populous country in the world (KNBS, 2019). Kenya's capital and largest city are Nairobi, while its oldest, second largest city, and first capital is the coastal city of Mombasa. Kisumu City is the third-largest city and an inland port on Lake Victoria. Other significant urban centers include Nakuru, Eldoret, and Meru. As of 2020, Kenya is the third-largest economy in sub-Saharan Africa after Nigeria and South Africa. Star-rated hotels are distributed across the entire country. For this study, the country was segmented into regions where star-rated hotels are found. These regions include; greater Nairobi, south rift, coast, western, eastern, north rift, central, and Mt. Kenya. The study units were star-rated hotels as classified by the Tourism Regulatory Authority of Kenya and shown in the distribution table summarized in table 3.3.1 below.

**Table 3.3.1 Distribution of hotels across various regions in Kenya**

<b>Regions</b>	<b>Greater Nairobi Region</b>	<b>Coast region</b>	<b>South Rift</b>	<b>Western</b>	<b>Eastern</b>	<b>Central &amp; Mt. Kenya</b>	<b>North Rift</b>	<b>Total</b>
<b>No. of star-rated hotels</b>	60	49	48	15	06	26	11	<b>215</b>

*Source: Tourism regulatory Authority, (2021)*

### **3.4 Target Population**

The study targeted population was star-rated hotels in Kenya, with 215 star-rated hotels across Kenya as classified by Tourism Regulatory Authority (TRA, 2021). Targeting star-rated facilities were necessary because they have vast ways of standardizing procedures and operations. Revenue management practices have many application possibilities in classified star-rated hotels, for instance, accommodation provision of their main product. Further, the scale of operation in star-rated hotels qualifies them for RM strategies, which are pretty expensive in non-star-rated hotels (Odawa, 2017). The Tourism Regulatory Authority classification register lists classified hotels nationally (TRA, 2021), as shown in Appendix IV.

### **3.5 Sample size**

The star-rated Kenya’s classified hotels were the research's units of analysis. The study used modification for the Cochran formula for sample size calculation in smaller populations to get the sample size for this study (Glen, 2021).



$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

**Equation 1: Sample Size Formula**

Where  $n$  is the new, adjusted sample size

$n_0$  is Cochran's sample size recommendation equivalent to 385

$N$  is the population size

$$n = \frac{385}{1 + \frac{(385 - 1)}{1}} = 138$$

**Equation 2: Sample Size calculation**

### 3.6 Sampling procedure

Sampling is the process of selecting some individuals for a study in such a way that they represent the large group from which they were selected (Ogula, 2005). This study adopted a probability sampling procedure, precisely simple random sampling. The researcher first prepared a sampling frame of all-star-rated hotel participants to conduct a simple random sample. From this list, the sample is drawn using a random number table so that each person or item has an equal chance of being selected (Kanupriya, 2012). Hence, this study was administered to 138 revenue managers from a sample of 138 star-rated hotels selected randomly across various regions in the country, as reflected in *table 3.6.1 below*. One hundred thirty-eight (138) hotels participated nationwide in the survey.; (39 hotels in Nairobi and its environs; 31 on the coast; 31 in South rift and 10 in Western, 4 in the Eastern, 16 in Central and Mt. Kenya, and 7 in North Rift) The respondents were people with good knowledge of revenue management practices and activities in their respective hotels

and the sector as a whole. The survey was administered through a structured, self-administered questionnaire, and responses were aggregated and analyzed. Data collection took place between March to June 2021.

**Table 3.6.1 Sample Size**

<b>Regions</b>	<b>Greater Nairobi Region</b>	<b>Coast region</b>	<b>South Rift</b>	<b>Western</b>	<b>Eastern</b>	<b>Central &amp; Mt. Kenya</b>	<b>North Rift</b>	<b>Total</b>
<b>Target star-rated hotels</b>	60	49	48	15	06	26	11	<b>215</b>
<b>Sample size hotels</b>	39	31	31	10	4	16	7	<b>138</b>

*Source: Author compilation, (2021)*

### **3.7 Data collection and the research instrument tool**

The questionnaire was the ideal method for this exercise. The structured questionnaires were used to collect data from study participants. Thus, the questionnaire was minimized to the RM-related easy-to-comprehend questions that permitted the researcher to define each hotel's determinants of RM practices and financial performance. The researcher adapted most parts of the questionnaire to bring meaning to this study; for instance, section A has two questions about the respondent. Section B contains hotel internal determinants of revenue management items ranging from (B1 to B9) modified from (Sainaghi, 2010; Ivanov & Ayas, 2017). At the same time, section C contains hotel external determinants of revenue management items ranging from (C1 to C5) modified from (Awang et al., 2008). Section D comprises revenue management practices items ranging

from (D1.1 to D4.10) modified from (Miricho, 2013). Section E comprises hotel financial performance items (E1 to E5); financial measures were developed using a mix of the financial status questionnaire for - Princeton University (Princeton University, 2015; Aras, Buyusalvaric, & Akmese, 2018; Wadongo, 2014). Most of the pre-existing questions have been extensively tested at the time of first use, and they also help shed light on the extent to which particular questions can accurately measure one's concept of interest. The questions were modified to improve their reliability and validity to meet the current study's needs. The questions were close-ended, and most of the items were measured using the Likert Scale as respondents chose one option that best aligned with their view, as shown in the attached *Appendix I*. Closed-ended questions can be answered quickly without consuming much time in such a study with several items. They do not need to think much and write the answers in their own words. The researcher sought to understand the reasons and thoughts underlying different mindsets during the current study (Wang, Chen, Lee, & Tsai, 2013).

### **3.8 Pre-testing of the study instrument**

A pre-test of the study instrument is a comparatively minor test of amplitude to determine the suitability of the practices and techniques set for use on a massive level (Porta, 2008). Its goal is to see if a procedure can be carried out using a method intended for a much larger study (Leon, Davis, & Kraemer, 2011). Pretesting was used in the current study to fine-tune the questionnaire structure and uncover biases and errors, which was done using 32 participants. To achieve a power of 80% when detecting question readability, complexity, timeliness, topic relevancy, question flow, survey structure, or other difficulties participants may encounter with instrument items, 32 participants are recommended if the prevalence of the problem is 0.05 (Perneger, Courvoisier, Hudelson, & Gayet-Ageron, 2015).

The researcher next sought analytical and practical assessments of the survey from 32 experts composed of 22 revenue managers and 10 others, including 2 research associates, 2 supervisors, 2 peers, a hotel policy manager, a member of the Tourism Regulation Authority, a member of Tourism Professional Association, and a hotelier with ten years of practice in the hotel sector. The pre-test study participants were selected randomly and notified that they would be taking part in a pretest, and their input was sought. Further, the researcher solicited participants' thoughts on administering the survey. They stated that the self-administered questionnaire was more straightforward and took less time. The original survey instruments sent for the pretest comprised 155 items; following the pretest findings, the questionnaire was polished, shortened, restructured, and modified after the pretest and suggestions. The study kept only 135 items. The revenue managers and hotels participating in the pretest study were not involved in the final survey.

### **3.9 Data screening, Data Analysis, and Presentation**

#### **3.9.1 Data Screening**

Data screening was performed using IBM-SPSS software to identify and correct input errors. Missing Value Analysis was used to address concerns caused by incomplete data. Little's Missing Completely At Random (MCAR) chi-square statistics were made for this data set to see if values with a p-value of 0.050 were significant. Multiple imputations using maximum likelihood approximated the missing values since it was the least biased method (David-Garson, 2012). In SPSS, the skew and kurtosis tests were done to test the data normality and outliers. Acceptable values of skewness fall between  $-3$  and  $+3$ , and kurtosis is fitting from a range of  $-10$  to  $+10$  when utilizing SEM (Brown, 2006). Further, Mardia's multivariate Kurtosis ( $P < 0.5$ ) was used for outliers and multivariate normality (Arbuckle, 2020). Bootstrapped unbiased parameters estimates and significance levels were reported according to the recommendations of (David-Garson, 2012).

According to Little and Rubin's (2019) recommendations, the author performed a missing value analysis. The data are Missing Completely At Random (MCAR) when a variable's pattern of missing values is independent of patterns within the data set and observed values for other variables (Rosenthal, 2017). The chance of missing in this condition is the same in all cases. When data are MCAR, the missing process is random, and the missing is said to be ignorable. Missing values do not affect model parameters such as correlation and regression coefficients so they can be ignored. Little's MCAR test is used, and the non-significant  $\chi^2$  value indicates that the data is MCAR. The study utilized the MCAR test and the missing values charts to identify patterns and determine how much data was missing. Locate the missing values; check whether there are missing values in pairs of variables and see if data values are extreme. According to the results of the statistically significant Little's Missing Completely At Random (MCAR) test ( $X^2=115.849$ ,  $DF = 107$ ,  $SIG = .0271$ ), it is clear that the missing data was not generated at random.

Researchers have traditionally dealt with missing data by using either listwise deletion (missing values are ignored in all computations; troublesome in small sample sizes) or pairwise deletion (ignored just for calculations involving that variable; can result in a singular covariance matrix) (Kline, 1998). Data imputation approaches (mean, regression, or maximum likelihood) have been the best method for estimating missing values in recent years (Garson, 2012).

The output of an incomplete data model is compared to the output of a complete data model. In this study, complete information maximum likelihood (FIML) estimation was found to be more appropriate for estimating missing values than other ad hoc methods. This theory-based approach produces efficient, consistent, and asymptotically unbiased estimates (Little and Rubin, 2002; Arbuckle, 2011; Byrne, 2006; Hoshima and Bentler, 2009; Schumacker and Lomax, 2004). This method produces more reliable estimations of missing values, notably when missing values are

not at random. This study used multiple imputations with maximum likelihood to estimate missing values since it had the most negligible bias. Also, the chi-square difference test was used (Byrne, 2006). Scholars advocate a maximum of 2 to 10 imputations; however, this number can vary depending on the nature of the missing data. In particular, as the amount of missing data grows, more imputations are required to represent the missing data adequately. If the missing values on an item are less than 10% (MCAR), 5 imputations will usually suffice to represent the missing values. However, if missing values are high (e.g., >50% MCAR), then as many as 40 imputations may be necessary (Graham, Olchowski, & Gilreath, 2007; Rosenthal, 2017).

*Figure 3.8.1.1* summarizes all the missing values. The variables chart below shows that 99.07 percent of the total variables present their values. The instances graph reveals that 136 (99.27 percent) of the total cases had no missing value for a variable. According to the Values chart, all 14 795 (cases x variables) have complete data with no missing values. *Figure 3.8.1.3* shows a missing value patterns chart with two patterns: pattern one featuring no missing data and pattern two featuring missing values on a few variables. As expected, this dataset is monotonic, meaning no data imputation is required because of the small number of non-missing data points. *Figure 3.8.1.3*, the missing pattern frequency bar chart, shows that nearly all of the cases in the set of data fall into pattern one. This pattern is seen in circumstances with few missing values, as shown in the missing value patterns chart in *Figure 3.8.1.2*. Even though no variables had missing data over the acceptable maximum of 5%, the missing data was not entirely random.

### Overall Summary of Missing Values

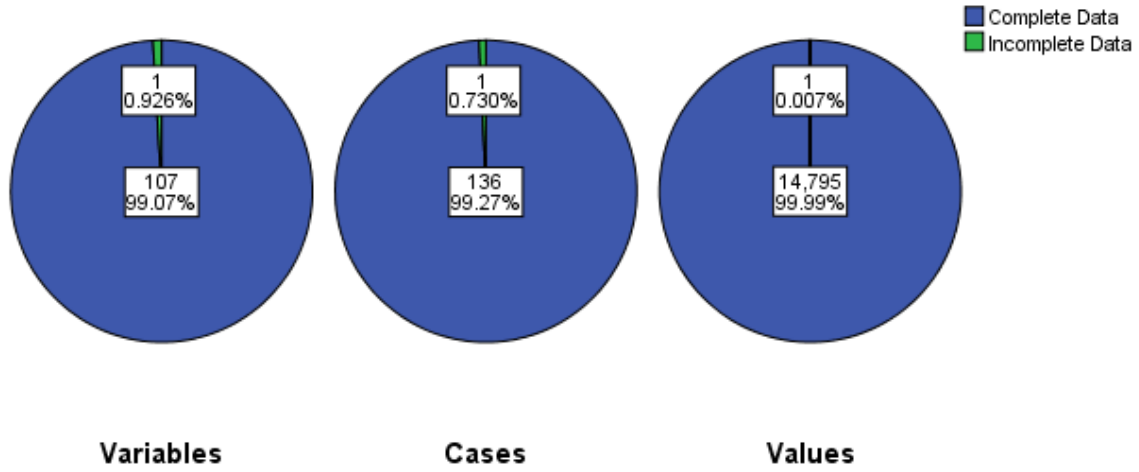


Figure 0:1 Summary of the missing values

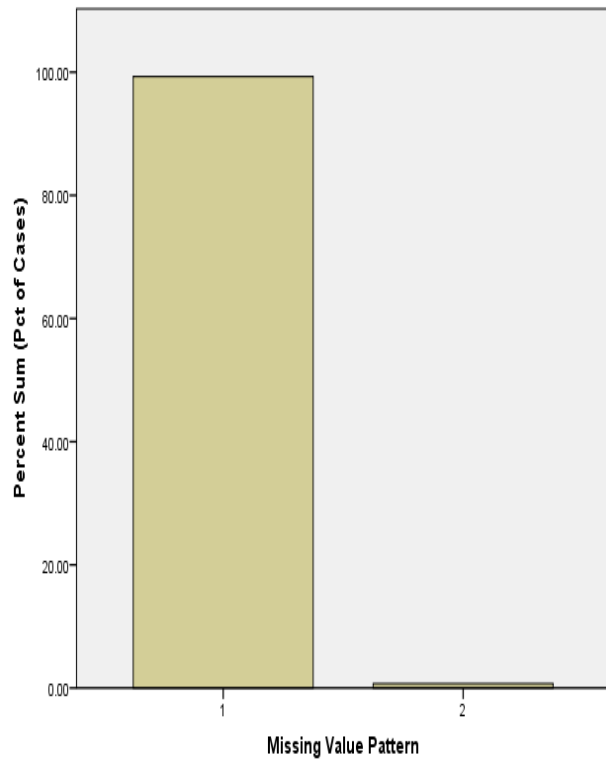
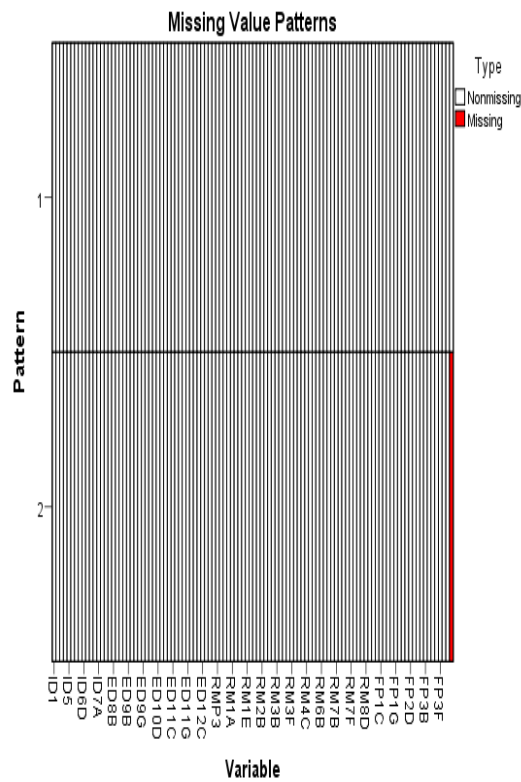


Figure 0:2 Missing value pattern

Figure 0:3 Missing values patterns

### 3.9.2 Multivariate outliers and normality

The researcher examined the model's normality and outliers using AMOS (Analysis of a Moment Structures version 27). According to some researchers, outliers should be removed, or raw data should be transformed (Bollen, 1989; Yuan et al., 2000). However, these approaches jeopardize the findings' validity (loss of observations, information and model power). Gao et al., (2008), the preceding approaches in the SEM produce additional outliers and nonlinearity, do not improve overall model fit, but have a significant impact on parameter estimates. *"The pursuit of a multivariate normal distribution through the deletion of observations should be actively weighed against the loss of model power and generalisability in interpreting the results"* (Gao et al., 2008, p.116). Simulation studies show that the AMOS 'bootstrapping' function can be used to evaluate the stability of parameter estimations when the multivariate normality assumptions are violated (Garson, 2012; Arbuckle, 2011; Cheung and Lau, 2008). Mardia's coefficient of multivariate kurtosis can be used to assess multivariate normality. A Mardia's coefficient  $>8$  indicates divergence from a normal distribution (Esposito-Vinzi et al., 2010).

*Table 3.8.2.1* below provides the findings of the normality test. At  $p < 0.05$ , the data suggest plausible univariate outlying cases. The model's skewness, kurtosis, and Mardia Multivariate normality (MMN) score demonstrated that it achieved univariate normality (MMN=7.436 C.R.=4.533, Garson, 2012). When using SEM, skewness and kurtosis values are in the acceptable range of between -3 and + 3, and kurtosis should be between -10 and + 10 (Brown, 2006).



*Table 0.1: Assessment of normality*

Variable	Skew	c.r.	Kurtosis	c.r.	Variable	skew	c.r.	Kurtosis	c.r.
<b>ED12</b>	-.173	-.828	-.751	-1.795	<b>RM6</b>	-.952	-4.551	.165	.394
<b>ED11</b>	-.051	-5.023	.352	3.619	<b>RM5</b>	.121	5.358	-.743	-1.774
<b>ED10</b>	-.630	-7.788	.467	4.672	<b>RM4</b>	-.176	-.841	.014	.033
<b>ED9</b>	.959	9.359	.633	3.183	<b>RM3</b>	-.537	-2.567	-.174	-.415
<b>ED8</b>	-.254	-1.215	-.803	-1.919	<b>RM2</b>	-.109	-.523	-.307	-.734
<b>ID7</b>	.007	.034	-.689	-1.647	<b>RM1</b>	-.354	-1.690	-.473	-1.129
<b>ID6</b>	.025	.121	-.436	-1.042	<b>FP6</b>	.690	-2.265	.172	.412
<b>ID5</b>	.663	7.945	1.376	3.287	<b>FP5</b>	-.963	-1.551	.165	.394
<b>ID4</b>	.012	.055	1.017	-2.431	<b>FP4</b>	.421	5.358	-.743	-1.774
<b>ID3</b>	.308	6.252	-.288	-.689	<b>FP3</b>	-.033	-.158	-1.287	-3.075
<b>ID2</b>	.800	8.602	1.735	2.146	<b>FP2</b>	.716	-3.419	1.146	2.737
<b>ID1</b>	.170	.814	-.974	-2.326	<b>FP1</b>	-.195	-.930	-.495	-1.183
<b>RM8</b>	-.955	-4.564	.311	.742	<b>Multivariate</b>			7.436	4.533
<b>RM7</b>	-.893	-4.265	.172	.412					

**Key**

Internal determinants: ID1: Star rating, ID2:hotel location, ID3:chain affiliation, ID4:years of operations, ID5:last refurbishment, ID 6: Number of hotel rooms, ID 7: Room prices, ID 8: Market orientation
External determinants: ED 1: Seasonality, ED 2: Technology changes, ED 3: Environmental complexity, ED 4: Uncertainty factors, ED 5: General environmental dynamism
RM Practices: RM 1 General practices, RM2: RM implementation, RM3: RM techniques, RM 4: RM team, RM 5: Social media integration, RM 6: RM data and information RM 7: Pricing techniques, RM 8: Non-pricing techniques
Financial performance: FP1: Profitability, FP2: Solvency, FP3: Liquidity, FP4: Efficiency, FP5: Valuation of the hotel; FP6: general financial performance

### **3.9.3 Validity and reliability analysis**

Validity is the degree to which study findings accurately reflect the phenomenon (Mugenda 2008). When an instrument is proven valid, the study's results can be trusted (Golafshani, 2003). Face validity, content validity, convergent validity, discriminant validity, and criterion validity are all types of quantitative research validity (Hair et al., 2010). Firstly, face validity usually is the superficial look of valid measurement (Grinnell, 2001). It tests whether the measure "on its face" appears to be a fair representation of the construct. If an instrument's conceptual domain coverage is adequate, it is said to have content validity. Evidence for content validity can only be logical and subjective instead of statistical evidence (Bailey, 1994; Hair et al., 2010). The content validity was ensured by having items representing the different constructs supported by a systematic literature review (Grinnell, 2001). The construct validity of study tools is determined by how the tool evaluates the constructs expected to be measured (Trochim, 2006). The validity of these constructs was guaranteed by including many more items attempting to address various aspects of the constructs as was reasonably feasible. Incorporating many items that are not correlated in the questionnaires guaranteed adequate measurement of the construct of the variables studied.

The questionnaire for data collection relied heavily on previous studies and conceptual frameworks. As a result, the items in the questionnaire reflect previous revenue management practices, determinants of revenue management, the financial performance of hotels, and the Kenyan hotel environment. The survey instrument was also subjected to the consensus of academic experts and researchers for the necessary assistance and modification to serve practical applications (Al-Muallem, Elzubeir, Roberts, & Magzoub, 2016).

The reliability testing to check that it consistently and reliably produces reliable outcomes when measuring the desired parameters using the Cronbach Coefficient Alpha method using SPSS. In

testing the internal consistency of the study instrument, this well-known formula was used to estimate how reliable the tool was (Poovalingam & Docrat, 2011). The pretest study's reliability coefficient alpha was 0.7, which is good but indicates that the questionnaire needed to be improved, which was done before the final data collection. *Table 3.9.4.1* shows reliability results for the final instrument; the reliability coefficient alpha was at least 0.775 for all the variables. The higher the reliability coefficient, the better the study questionnaire, and values above 0.8 are considered good indicators, while values above 0.7 are considered acceptable (Sekaran & Bougie, 2009). Following the pre-test results, the research instrument was revised and ready for use by the primary participants of this study. The study instrument was improved in overall quality, and this enhanced the instrument's overall reliability.

After data collection, the convergent and discriminant validity of the extracted variables were assessed using average variance extracted (AVE), maximum shared squared variance (MSV), and composite reliability (CR). To show convergent validity, the AVE must be greater than 0.5, and the CR must be greater than the AVE. MSV for each construct should be smaller than AVE to meet discriminant validity (Ahadzadeh et al., 2015). The value  $>0.7$  was regarded as acceptable for CR and maximum reliability (Max H reliability), which replaces Cronbach's alpha coefficient in structural equation modeling (Sharif Nia et al., 2019). AVE is often overly rigorous, and reliability can be proved just by CR (Malhotra & Dash, 2011). An AVE of less than 0.50 implies validity issues (Fornell & Larker, 1981; Gaskin & Lim, 2016; Hair et al., 2010). The individual constructs' convergent and discriminant validity were tested using composite reliability and average variance recovered (Fornell & Larker, 1981; Hair et al., 2010).

The results in *table 3.9.3.1* and *table 3.9.3.2* below revealed that all of the components' composite reliability was  $>0.8$ , and they were all greater than AVE, indicating that all of the constructs in the

model met the convergent validity criteria. Furthermore, all of the constructs' MSV values are less than AVE, indicating that discriminant validity was achieved. Based on the results, all the constructs in this model do not exhibit validity concerns. The model fit tests reveal that the Normed Fit Index NFI=0.961 indicates the convergent validity of the model. A scale indicates solid convergent validity with a value greater than 0.90 (Bentler and Bonett, 1980). A scale greater than 0.90 indicates excellent convergent validity (Bentler and Bonett, 1980). The CR and maximum reliability (Max H reliability) scores are both >0.7, which is considered satisfactory and supports the Cronbach alpha test results on construct reliability. As a result, there are no dependability issues with any of the constructions in this model.

*Table 03.1: Validity and reliability analysis*

	<b>CR</b>	<b>AVE</b>	<b>MSV</b>	<b>MaxR(H)</b>	<b>External determinants</b>	<b>internal determinants</b>	<b>Financial performance</b>	<b>RM practices</b>
<b>External determinants</b>	0.830	0.558	0.456	0.868	<b>0.747</b>			
<b>Internal determinants</b>	0.810	0.540	0.437	0.934	0.999**	<b>0.735</b>		
<b>Financial Performance</b>	0.775	0.538	0.411	0.795	0.859***	0.893***	<b>0.733</b>	
<b>RM practices</b>	0.874	0.507	0.497	0.918	0.869***	0.886***	0.962***	<b>0.712</b>

**Table 0.3.2: Validity analysis of lower and upper limits for CR & AVE**

	CR	AVE	Lower 95% CR	Upper 95% CR	Lower 95% AVE	Upper 95% AVE	<u>Key</u>
<b>External Determinants</b>	0.830	0.558	0.667	0.876	0.446	0.694	CR: Composite Reliability.
<b>Internal determinants</b>	0.810	0.540	0.718	0.878	0.434	0.651	AVE: Average Variance Extracted
<b>Financial performance</b>	0.775	0.538	0.620	0.889	0.435	0.576	MSV: Maximum Shared Variance
<b>RM practices</b>	0.874	0.507	0.762	0.933	0.414	0.640	MaxR (H): Maximal Reliability

Internal determinants: ID1: Star rating, ID 6: Number of hotel rooms, ID 7: The room price, ID 8: Market orientation
External determinants: ED 1: Seasonality, ED 2: Technology changes, ED 3: Environmental complexity, ED 4: Uncertainty factors, ED 5: General dynamism
RM Practices: RM1: RM 1 General practices, RM2: RM implementation, RM3: RM techniques, RM 4: RM team, RM 5: Social media integration, RM 6: RM data and information RM 7: Pricing techniques, RM 8: Non-pricing techniques
Financial performance: FP1: Profitability, FP2: Solvency, FP3: Liquidity, FP4: Efficiency, FP5: Valuation of hotel

### **3.9.4 Confirmatory Factor Analysis and proposed models**

Confirmatory Factor Analysis (CFA) was used to verify the measurement model underpinning a complete structural equation model. The researcher tested the measurement model; it is a model without causation arrows that underpins a full structural equation model after evaluating the structural model (Kline, 1998). CFA is a statistical method for determining whether or not observed variables have a factor structure. This analysis method can test a hypothesis defining a link between observed variables and their underlying construct (Suhr, 2006). The factor analysis validates the number of primary factors of the factor loadings, that is, the patterns of unit-factor connection, and helps determine how tests are scored in the analysis (Brown & Moore, 2012).

The basis for using Covariance Based-SEM over partial least squares (PLS) path analysis because it ensures model parsimony with unbiased approximations that benefit from bootstrapping, fitting models metrics, and modifications indexes similar to entire SEM modeling techniques (David-Garson, 2012). CB-SEM has rarely utilized strategies in management science research (Ferreira & Otley, 2010). Bagozzi and Yi, (2012) affirm that when using CB-SEM, both concept and theory development require the ability to operationalize hypothesized latent constructs and associated indicators, which is only possible with SEM. Moreover, structural models can be complex and interactive effects can be assessed when using CB-SEM. When CB-SEM is executed, the error terms are modeled for each indicator, and loadings of the individual indicator are obtained. It eliminates indicators with significant error terms and low loadings, thus improving the quality of the modeled latent constructs. Specifically, the confirmatory factor analysis (CFA) stage of CB-SEM allows all latent constructs to co-vary mutually and thereby permits quantitative assessment of both convergent and discriminant validity for each construct.

Moreover, the congeneric covariance model optimizes all constructs' correlations simultaneously (Bagozzi & Yi, 2012; Hair et al., 2010; Wang & Wang, 2012). CB-SEM requires 5-10 observations per indicator, which makes the sample size requirements significant even for relatively simple models. All CB-SEM models involve mediation, including a mediation effect when a third variable intervenes between two related constructs (Hair, Gabriel, & Patel, 2014).

CB-SEM is considered suitable for this study as; it grows out of and serves purposes similar to multiple regression but in a more powerful way that considers multiple latent independents, each measured by multiple indicators. Further, latent dependents also have multiple indicators, modeling mediators as causes and effects, modeling interactions, nonlinearities, correlated independents, measurement error, and correlated error terms (David-Garson, 2012). The goodness of fit tests establishes valid models (Arbuckle, 2020). To reflect multiple criteria, Jaccard, Wan, and Jaccard (1996) highly suggest using a minimum of three fit tests, at least one from every category in the first three classes registered below. Kline, (1998) advises a minimum of four tests: Goodness-of-Fit Indexes, Chi-square, Comparative Fit Index or Normed Fit Index, Root Mean Square Residual and Non-Normed Fit Index. Correlation structures must also be revealed to assess the model's paths for their strength (Jaccard, Wan & Jaccard, 1996).

The modeling included the proper procedures: verifying the measurement models through unidimensionality analysis, validity analysis, reliability analysis with CFA, and ensuring the structural equation model fits through the path analysis by checking the proposed linkage. Unidimensionality refers to the presence of just a single construct underpinning a collection of metrics or indicators (Hair et al., 2010). Measurement models were proposed for each construct, while CFA was performed for unidimensional data. A comparative fit index of at least 0.90 indicated that the suggested models were unidimensional, as recommended (Hair et al., 2010).



Then, the analysis of moment structures was also used to estimate convergent and discriminant validity. Convergent validity is the extent to which various methods for measuring constructs are similar or directly linked with other strategies that hypothetically would be identical to it (Hair et al., 2010). The extent to which a measure differs from measures that hypothetically ought not to be comparable to it is known as the discriminant validity of the measure. The Normed Fit Indexes (NFI) were used to establish the convergent validity of the models. A scale indicates solid convergent validity with a value greater than 0.90 (Bentler and Bonett, 1980). It was determined that the proposed model's remaining indicators were reliable by performing a Confirmatory Factor Analysis.

The composite scores have a fair mean and variance estimate based on estimated parameters based on the presented complete data and the implied values for missing information assuming the observed data (Little & Rubin, 2002). Those indications that did not load significantly on a factor as indicated while cross-loading on other factors were discarded as a refinement. The factor loadings, which indicate the correlation coefficients between observable variables and common latent factors, were determined during the first run measurement. For a sample size of 138, a significant factor loading value of 0.45 is required (Hair et al. 2006). All observed variables with low factor loadings were eliminated to improve the model. The CFA models are shown in *figure 3.9.4.1 and figure 3.9.4.2* below. *Figure 3.9.4.1* depicts a CFA model in which all factors were considered, whereas *figure 3.9.4.2* depicts a CFA model in which observed variables with insignificant factor loading were removed. As a result, the latent variable internal hotel determinants had the most observed variables that were unimportant to the model, resulting in the elimination of four items, while the latent variable RM practices lost one. As a result, these factors were deleted, and the model improved, as seen by model fit indexes against *figure 3.8.3.2*, which

match Hu and Bentler's (1999) cutoff criteria for combining measures; CFI>0.95 and CMIN/DF >1 but < 3 and the RMSEA<0.06.

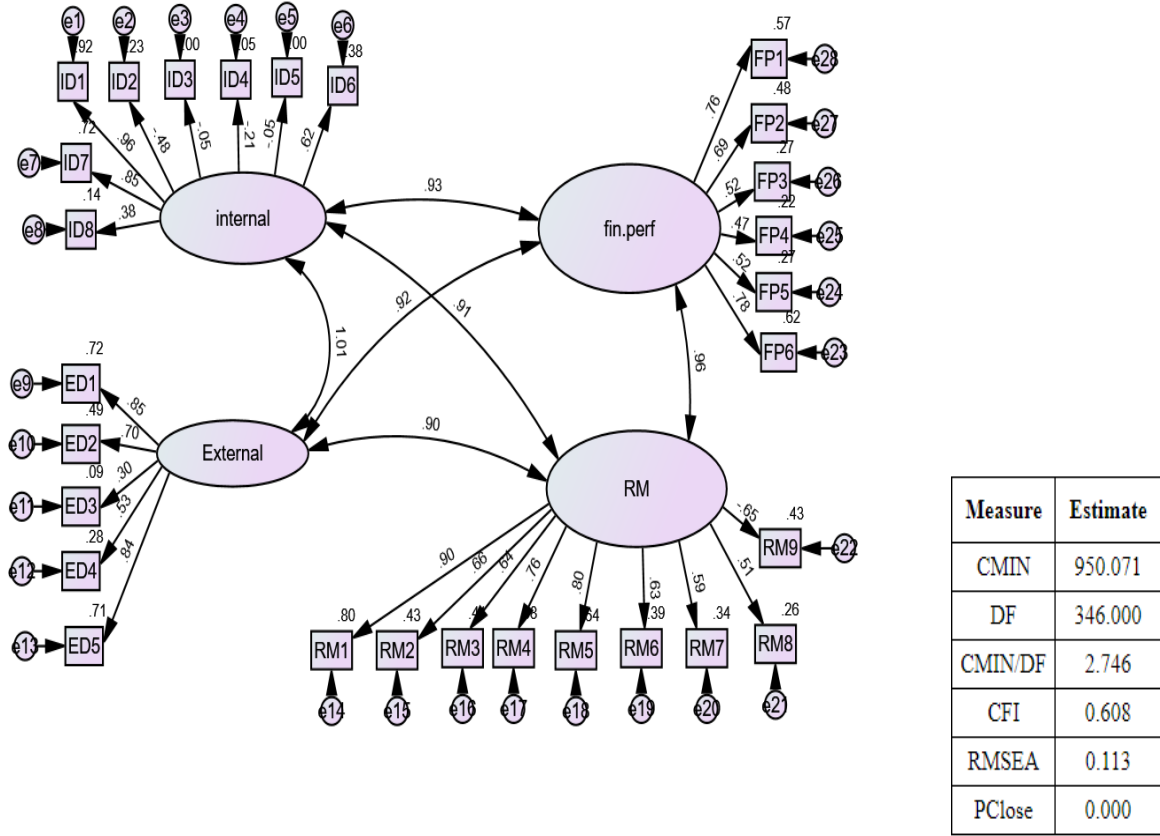
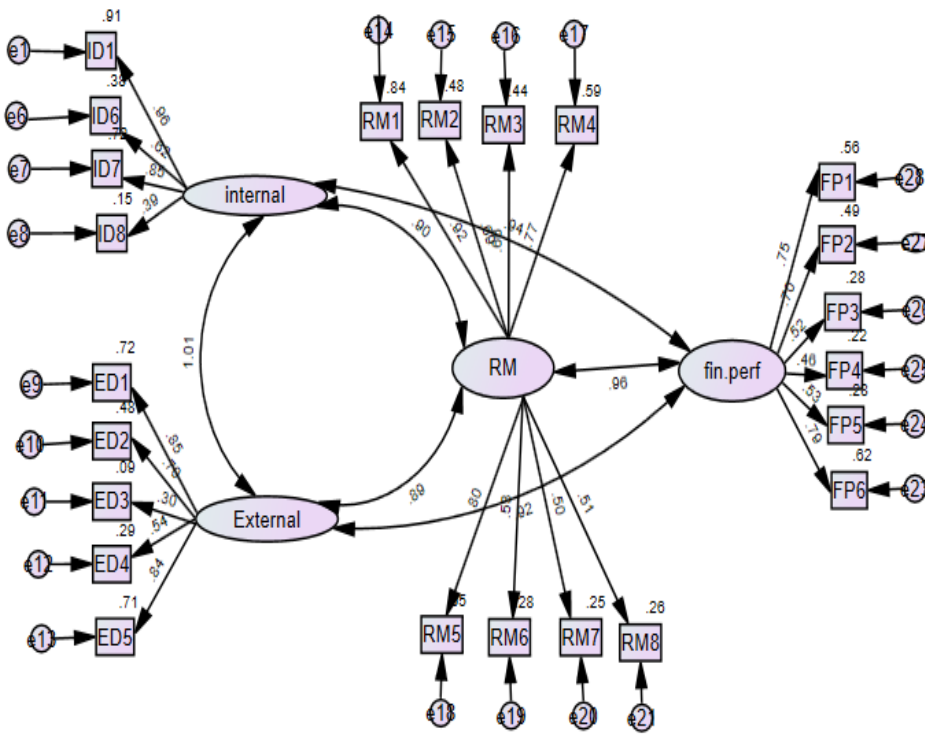


Figure 0:1: Proposed CFA model for all the latent and observed variables

KEY for the proposed CFA model

Internal determinants: ID1: Star rating, ID 6: Number of hotel rooms, ID 7: The room price, ID 8: Market orientation
External determinants: ED 1: Seasonality, ED 2: Technology changes, ED 3: Environmental complexity, ED 4: Uncertainty factors, ED 5: General environmental dynamism
RM Practices: RM1: RM 1 General practices, RM2: RM implementation, RM3: RM techniques, RM 4: RM team, RM 5: Social media integration, RM 6: RM data and information RM 7: Pricing techniques, RM 8: Non-pricing techniques
Financial performance: FP1: Profitability, FP2: Solvency, FP3: Liquidity, FP4: Efficiency, FP5: Valuation of hotel



Measu re	Esti mate
CMIN	543.06
DF	226.00
CMIN/D F	2.403
CFI	0.936
RMSEA	0.02

**Figure 0:2: CFA model after dropping observed variables with insignificant factor loadings**

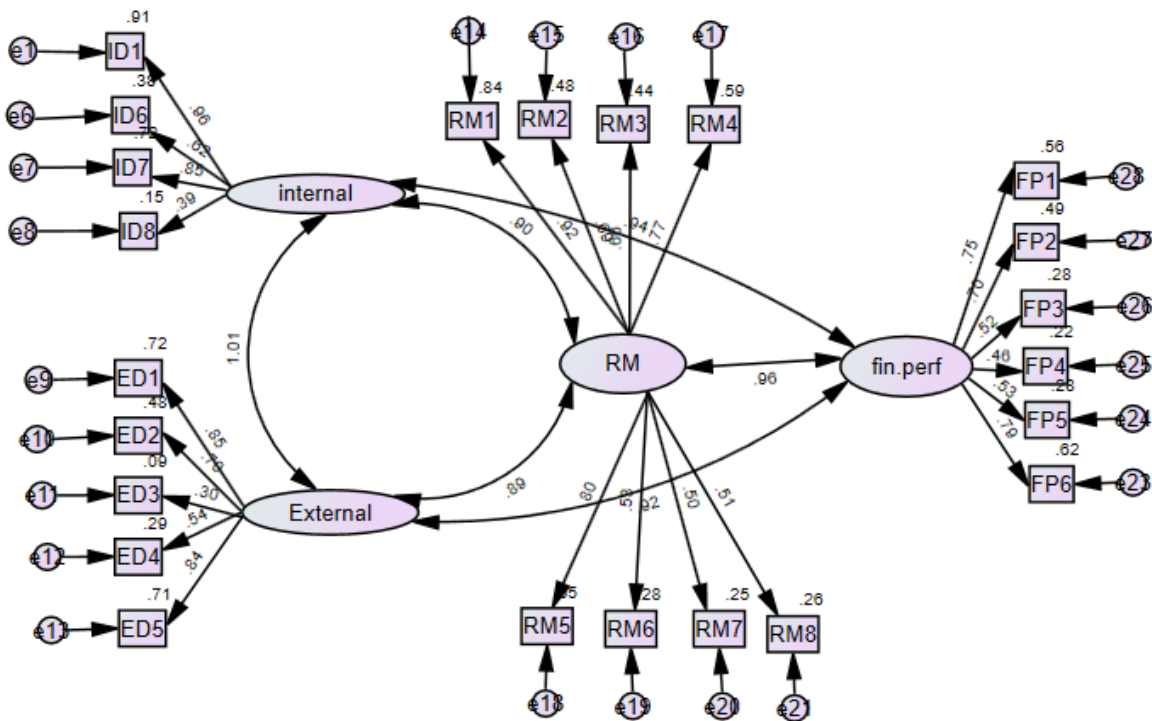
\* Hu and Bentler (1999), "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives") recommend combinations of measures. A combination of CFI>0.95 and CMIN/DF between 1 & 3 and the RMSEA<0.06 is satisfactory.

Key for the CFA model

Internal determinants: ID1: Star rating, ID 6: Number of hotel rooms, ID 7: The room price, ID 8: Market orientation
External determinants: ED 1: Seasonality, ED 2: Technology changes, ED 3: Environmental complexity, ED 4: Uncertainty factors, ED 5: General environmental dynamism
RM Practices: RM1: RM general practices, RM2: RM implementation, RM3: RM techniques, RM 4: RM team, RM 5: Social media integration, RM 6: RM data and information RM 7: Pricing techniques, RM 8: Non-pricing techniques
Financial performance: FP1: Profitability, FP2: Solvency, FP3: Liquidity, FP4: Efficiency, FP5: Valuation of hotel, FP6 General financial performance

### 3.9.5 Uni-dimensionality

Each factor underwent a confirmatory factor analysis to determine whether or not the constructs given in the conceptual framework were unidimensional before a measurement model was chosen. If the model is well-fitted, the chi-square values should be insignificant. The model is rejected if the chi-square value is less than or equal to 0.05 (Arbuckle, 2011). Among the other significant model fit tests recommended by Rao, Miller, and Rao (2011) are the relative chi-square (2/df ratio) 2.0, CFI 0.998, RFI 0.650, NFI 0.996, and TLI 0.780, IFI 0.998 and the RMSEA 0.09, p.000). Model fit cutoff criteria indicate that CFI should be at least 0.95 (Browne & Cudeck, 1993). The final measuring model displayed in *figure 3.9.5:1* below consists of 23 latent components that reflect unidimensionality and are evaluated for validity and reliability. The overall fit indices for the model are chi-square ( $\chi^2$ ) =5.95 (3 df) p=0.085 relative chi-square ( $\chi^2$ /df ratio=1.783) CFI=0.978, RMSEA=0.037, NFI=0.961, after the specification of linkages between various components of the dependent variables. These values reveal that the model does a good job of replicating the data. The researcher considered the model a good fit for the data based on these model fit indices; hence, it was accepted. All 23 latent variables' CFI values are higher than 0.90, indicating unidimensionality in the data set.



**Figure 0:1: Final CFA model for the study**

\* Hu and Bentler (1999), "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives") recommend combinations of measures. A combination of CFI>0.95 and CMIN/DF between 1 & 3 and the RMSEA<0.06 is satisfactory.

Key for the final CFA model

Internal determinants: ID1: Star rating, ID 6: Number of hotel rooms, ID 7: The room price, ID 8: Market orientation
External determinants: ED 1: Seasonality, ED 2: Technology changes, ED 3: Environmental complexity, ED 4: Uncertainty factors, ED 5: General dynamism
RM Practices: RM1: RM 1 General practices, RM2: RM implementation, RM3: RM techniques, RM 4: RM team, RM 5: Social media integration, RM 6: RM data and information RM 7: Pricing techniques, RM 8: Non-pricing techniques
Financial performance: FP1: Profitability, FP2: Solvency, FP3: Liquidity, FP4: Efficiency, FP5: Valuation of hotel, FP6 General financial performance

### **3.9.6 Hypothesis and models testing**

The author related several fit indices for various measured models to see the most accurate one. Significant chi-square coefficients were an indicator of poor model fit; thus, significant chi-square values should not be found in the well-fitted model. The models are rejected if the chi-square value is less than 0.05 (Arbuckle, 2011). For an acceptable model, the Relative chi-square values should be between 2:1 and 3:1. According to Kline (1998), some three or fewer are acceptable. The Confirmatory Fit Index compares the current model's fit to a null model, which supposes the model's latent variables are uncorrelated (Arbuckle, 2011).

Confirmatory Fit indexes range from 0% to 100%. A CFI coefficient of 1.0 or higher indicates a good fit (Fan, Thompson & Wang, 1999). To be considered acceptable, the CFI should be greater than or equal to 0.90. The NFI measures how the study model fits data better than the stated null hypothesis. NFI coefficients between 0.90 and 0.95 are considered acceptable, while values below 0.90 indicate the necessity to re-specify the measured models (Arbuckle, 2011). The root means the square error of approximation is a discrepancy per degree of freedom. RMSEA values of less than 0.05 or equal to 0.05 indicate that the model is considered well-fitted. Though, there is a variation as to acceptable RMSEA values. For instance, Hu and Bentler (1999) suggest that a good model fit is defined as an  $RMSEA < 0.09$  value. According to David-Garson (2012), an RMSEA value of 0.08 or less indicates a logical approximation error. Models are frequently modified using modification indices to obtain an acceptable fit, and this should be done with caution with a hypothetical justification (Hoyle, 1995).

### **3.10 Ethical considerations**

An informed consent, privacy, anonymity, and confidentiality policy were followed throughout the research (Richards & Swchwart, 2002). Following the guidelines, the researcher requested

consent from the participants without using coercive power, intimidation, or corruption to get them to participate (Cherry 2014).

### **3.10.1 Protocol**

The researcher's permission for data collection and approvals was granted by Maseno University School of Graduate Studies and the Ethical Review Committee (MUERC), both of Maseno. Then, the researcher progressed to the field with a research permit from the National Council for Science Technology and Innovation (NACOSTI), specific hotels for data collection. At the hotels, the researcher sought permission by handing over applicable authorization letters from the University and other relevant authorities. During the encounter, the researcher familiarized himself with the hotel facilities, made some introductions, informed the hotel management of the purposes of the study, and scheduled arrangements for data collection. Further, the researcher familiarized and acquainted with the targeted respondents. Upon completing this study, a thesis copy will be deposited to the Kenya National Council for Science, Technology and Innovation and Higher Education Loans Board Scholarship Committee.

### **3.10.2 Confidentiality**

The respondent's information was only used for academic purposes. The respondent's identity and the hotel where the data was collected will not be revealed in the questionnaire or during the data analysis. The information gathered was not disclosed to any organizations or utilized inappropriately by the hotel where it was obtained.

### **3.10.3 Anonymity**

The study participants were not supposed to specify their identity, the workstation, the department, or the hotel they work in during the data collection exercise. The characters of all considered cases in the study were coded, and true identity was not revealed during data analysis.

#### **3.10.4 Informed Consent**

As a result, the respondents were made aware of the study, its goal, and the requirement for data collection. The researcher's request for data gathering was met with appropriate authorization documents from the university and other entities. Once access is allowed, the researcher validates that all reasonable constraints for contact duration, data source handling, time, and other related documentation have been met. In case of acceptable variation in the conditionality meeting, a consensus was made with the hotel's management.

#### **3.10.5 Potential Benefits**

There was no financial benefit from participating in this survey as a respondent. On the other hand, benefits came from the new knowledge gained from the study's findings. The benefits accrue to the hospitality industry in the long run once the study addresses policy gaps in the hospitality industry.

#### **3.10.6 Potential discomfort, harm, Inconveniences, injuries, or risks**

The respondent was required to participate by filling out the questionnaire in their free time to avoid incurring losses of working hours required in productivity for their hotels. The respondent and hotel's identity were not disclosed, and collected data from respondents and hotels was unanimous and shall not be used in any other manner that can pose a risk or harm to the participants but for pure academics.

#### **3.10.7 Voluntarism**

The respondents' willingness to partake in this research and their disengagement from it was voluntary. Respondent consent was gained by signing a contract to participate in the research once the study's goal was fully described. On the other hand, respondents could withdraw from the study at any moment.



## CHAPTER FOUR

### RESULTS AND DISCUSSIONS

The chapter introduces the findings of the study and their discussions under various sections, including response rate, internal hotel determinants, external hotel determinants, the practice of revenue management, revenue management systems, findings on the financial performance of hotels, testing of mediation, and linkages through regression, missing values, confirmatory factor analysis, structural equation models for linkages of various variables, path analysis, multivariate outliers, normality & bootstrapping and conclusion.

#### 4.1 Descriptive statistics

This section presents descriptive statistics, including percentages, frequencies, means, and standard deviations of the individual set of observed variables measuring internal determinants, RM practices, and financial performance.

##### 4.1.1 Response Rate

A sample of 138 responded. After cleaning the data, it was realized that one questionnaire was far more than 50% insufficient, as recommended by (Trench 2013). The total number of valid respondents was 137. The response rate per region is summarized in table 4.1.1.1 below.

*Table 4.1.1.1: Response rate per region*

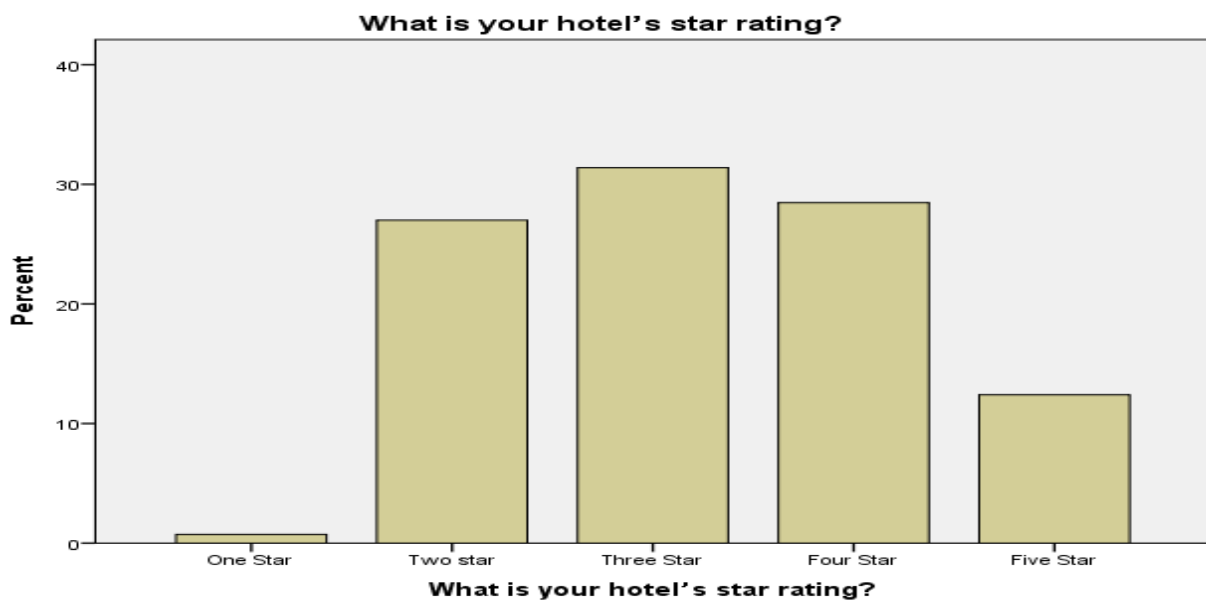
Region	Frequency	N Percent
NAIROBI	38	27.7
WESTERN	10	7.3
COAST	31	22.6
CENTRAL	16	11.7
NORTH RIFT	07	5.1
SOUTH RIFT	31	22.6
EASTERN	4	2.9
<b>Total</b>	<b>137</b>	<b>100.0</b>

#### 4.1.2 Internal determinants of revenue management in star rated hotels

The major internal determinants of revenue management identified include; type of hotel, rating, location, ownership, affiliation, size, financial structure, age, innovation, and location (Agiomirgianakis, Magoutas, & Sfakianakis, 2012; Kaminski & Smith, 2016).

##### 4.1.2.1 Star rating of hotels

The majority of respondents for this study, 31.4%, were for three-star establishments, then four-star hotels about 28.5% and two-star hotels 27%. Only 12.4 percent and 0.7 percent for five-star and one-star hotels, respectively, as shown in *figure 4.1.2.1 below*. The four, three, and two-star rated hotels are highly represented and form the majority in the distribution of hotels in Kenya.

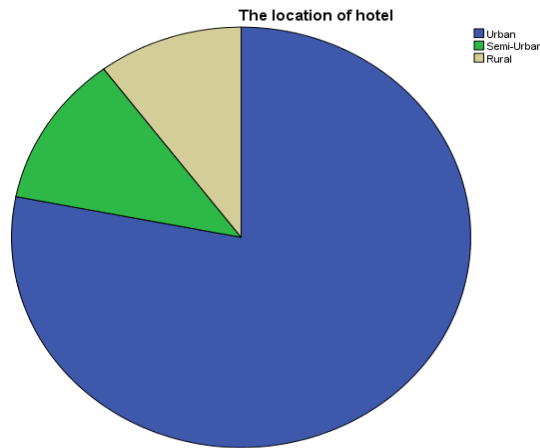


*Figure 4.1.2:1 star rating of hotels*

##### 4.1.2.2 Location of hotels

*Figure 4.1.2.2 below* shows that about 78.1 percent of the classified facilities are in town setups, while 11.7 percent are in peri-urban areas and 10.2 percent are in rural areas. The location of hotels

in urban areas could be due to proximity to social amenity facilities near airports, conference facilities, and the availability of infrastructural networks.



*Figure 4.1.2:2: A pie chart showing location of the hotel*

#### 4.1.2.3 Belonging of the hotel

The summary of the responses reflected in *figure 4.1.2.3* below indicates that 77.4 percent of classified hotels are independent, and just 22.6 percent are chain affiliated. This may be attributed to restrictive agreement laws that do not apply to independent hotels. Further, independent hotels can individualize their properties because there are no strict brand guidelines. They can use innovative solutions and test various sales methods that chain hotels are prohibited from using.



*Figure 4.1.2:3: Pie chart showing the belonging of the hotel*

#### 4.1.2.4 Period of existence of the hotel

The study did not have an a priori anticipation regarding this effect due to the assorted influence age of the hotel on hotel financial performance. The bar chart summary in *figure 4.1.2.4* below shows how long the hotels have existed; just 9.5 percent of hotels are less than five years old, while 15.3 percent are over 21 years old. About 74.2 percent of hotels have existed for 6-20 years, and it is probably because of the hotel industry's potentiality to grow, and once the hotel establishes, it can weather the upcoming challenges. Further, younger hotels are typically modern and likely to execute new operating technologies and services that may easily attract many clients, particularly those with higher purchasing power.

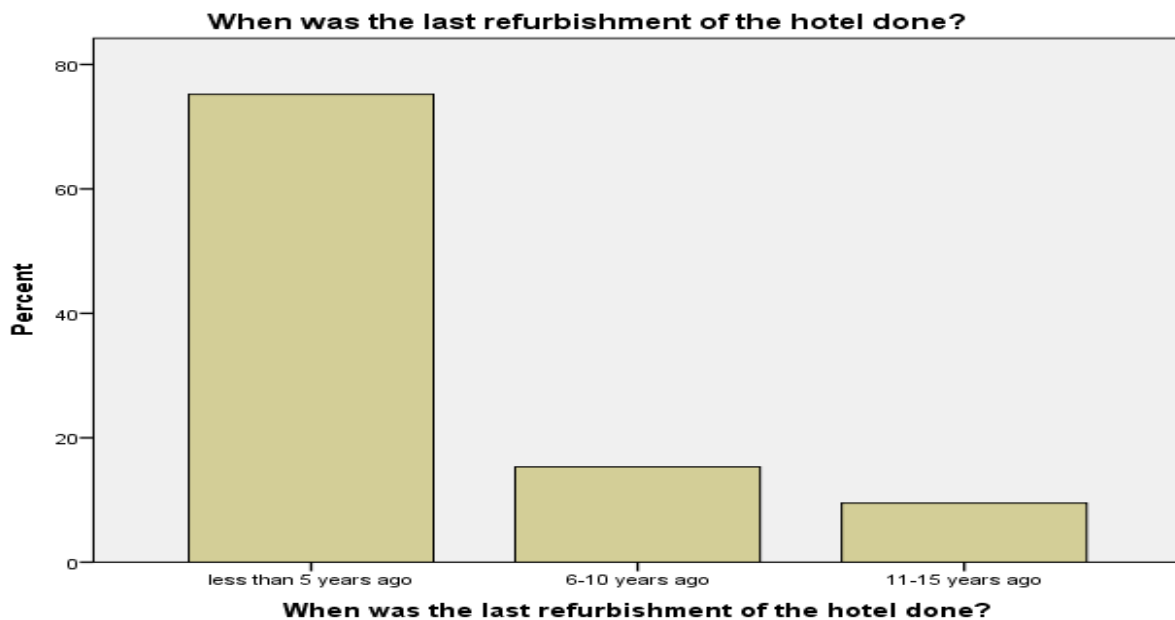


*Figure 4.1.2:4: Period of existence of the hotel*

#### 4.1.2.5 Last refurbishment

Figure 4.1.2.5 below portrays 75.2 percent of hotels refurbished within the last five years. About 15.3 percent did it 6-10 years ago, while 9.5% did it 11-15 years ago. No hotel has registered

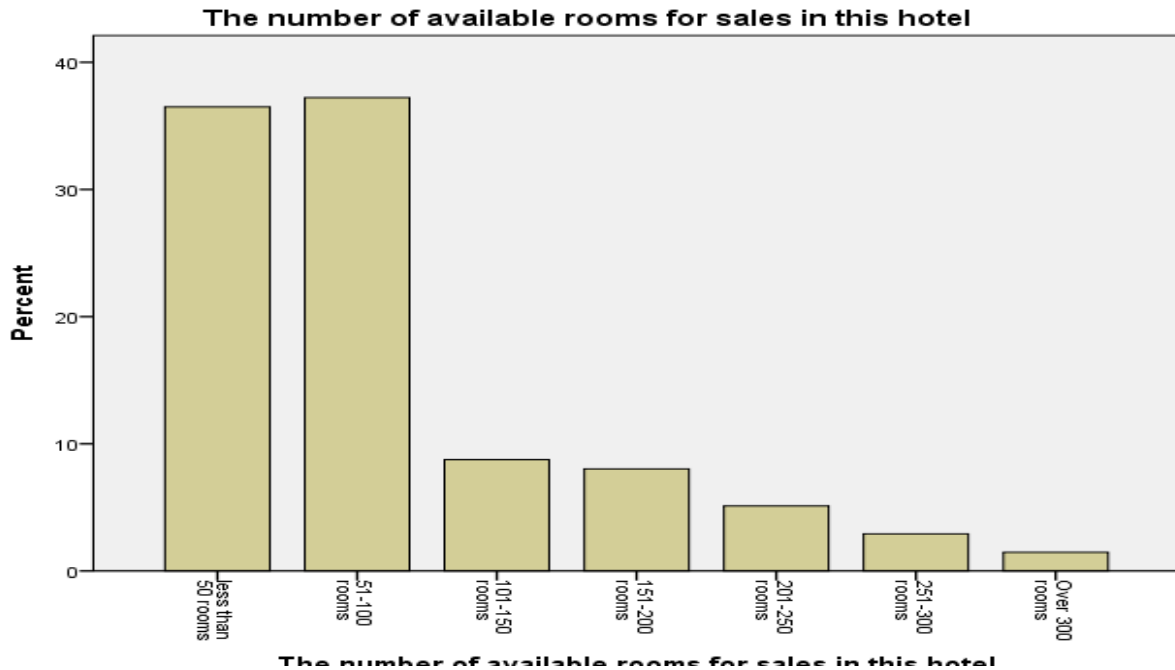
refurbishment for longer than 15 years since its establishment. Refurbishment not only does a renovation for a hotel but allows repositioning it, better reputation scores, and substantial hotel refreshers. Refurbishment is how hotels differentiate themselves from their competitors (Turner, & Hesford, 2019). Hotel renovations recommend that hotels refurbish between 5 to 7 years (International Society of Hospitality Consultants (ISHC), 2015).



*Figure 4.1.2:5: Last refurbishment of the hotel*

#### 4.1.2.6 Number of rooms in the hotel

Because of the nature of the standardized service, a sizeable manageable number of rooms is appropriate for star-rated hotels. *Figure 4.1.2.6* below indicates that 36.5 percent have 1 to 100 rooms and 37.2 percent between 50 and 100. Few hotels had above 300 rooms, about 1.5 percent. In more categories, 101-150 rooms roughly 8.8 percent, 151-200 rooms; about 8.0 percent, 201-250; about 5.1 percent while 251-300 rooms; about 2.9 percent.



**Figure 4.1.2:6: Number of available rooms**

#### **4.1.2.7 Room prices and market orientation of the hotels**

Table 4.1.2.1 below shows room costs and market orientation. For example, hotels have high and low seasons. More than half of hotels have two categories of local and foreign prices for their clients. It is related to the nature of the services and the global consumer target market. The hotel rooms have varying discounts for various market segments discovered. They also have set fixed prices that they review over time, varying depending on the market segment. Hotels cut their prices when occupancy is low. The hotel's focus is on customers and addressing their requirements. There is a process of acquiring information and quickly communicating it to clients to satisfy their preferences. The finding supports that market orientation significantly influences business performance (Agarwal et al., 2003; Sampaio et al., 2019).

**Table 4.1.2.1: Room prices and market orientation of the hotel**

	N	Frequency in Percentages					Mean	Std. Deviation
	Statistic	Strongly Disagree	Disagree	Average	Agree	Strongly agree	Statistic	Statistic
Room prices are fixed until the subsequent reviews.	137	2.2%	8.8%	32.8%	37.2%	19.0%	3.62	.964
The hotel has low-season and high-season prices.	137	0%	7.3%	22.6%	38.7%	31.4%	3.94	.914
The hotel uses local and foreign visitor prices.	137	5.1%	19.7%	17.5%	23.4%	34.3%	3.62	1.278
Room prices vary according to the market being quoted.	137	0.7%	23.4%	43.8%	23.4%	8.8%	3.16	.909
Room prices are fixed with different discounts to different recognized market segments.	137	1.5%	24.8%	38.0%	25.5%	10.2%	3.18	.972
When occupancies are low, this hotel lowers the prices	137	0%	11.7%	26.3%	16.8%	45.3%	3.96	1.091
Market orientation for this hotel is customer oriented	137	0%	5.8%	36.5%	38.0%	19.7%	3.72	.848
The hotel caters to the wants and needs of its clientele	137	0%	0%	18.2%	65.0%	6.8%	3.99	.594
Hotel practices the following; gathering & dissemination data quickly in response to present and future client's needs & preferences	137	0%	2.2%	29.9%	51.1%	16.8%	3.82	.727
Valid N (listwise)	137							

### 4.1.3 External determinants of revenue management in star rated hotels

The external determinants of revenue management identified include seasonal changes and changes brought about by technology, diverse geographies, environmental complexity factors, and market structures (Abrate & Viglia, 2016; Soohyang, Hee-Chan, & Seul, 2016).

### 4.1.3.1 Seasonality

Table 4.1.3.1 below shows the mean for seasonality changes and their influence on hotels. Seasonality variations were also discovered to have an impact on hotels. The hotels experience low and high seasons (M=3.99, SD=.907). Also, seasonal fluctuations in clientele affect hotels (M=4.18, SD=.815). Moreover, research reveals that hotels can forecast seasonal changes (M=3.90, SD=.789). Overall, seasonal fluctuations significantly impact hotel reservations (M=3.33, SD=1.362). The findings support that seasonality affects each hotel differently (O'Mahony et al., 2008). Further, it inevitably affects hotel revenue growth and performance (Chiutsi & Mudzengi, 2017; Chung, 2009).

**Table 4.1.3.1: Seasonality**

seasonality changes	N	Strongly Disagree	Disagree	Average	Agree	Strongly Agree	Mean Statistic	Std. Deviation Statistic
Hotel experiences low and peak customer seasons	137	0%	4.4%	28.5%	31.4%	35.8%	3.99	.907
Hotel is affected by seasonal fluctuations of clients	137	0%	0.7%	23.4%	32.8%	43.1%	4.18	.815
The hotel can be able to predict seasonal fluctuations	137	0%	3.6%	25.5%	48.2%	22.6%	3.90	.789
Seasonal fluctuations of clients affect bookings/reservations of this hotel heavily	137	10.9%	19.7%	23.4%	17.5%	28.5%	3.33	1.362



#### 4.1.3.2 Technological changes

The results shown in table 4.1.3.2 below of technological changes revealed that hotels had implemented technological advances in their daily procedures (M=4.31, SD=2.66), which has improved hotel operations (M=3.97 SD=.757). Technological advancements are crucial in information collection (M=3.83, SD=.854), following pricing (M=3.82, SD=.842), predicting (M=3.82, SD=.901), and have boosted the efficiency of hotels (M=3.88, SD=1.025). The findings affirm that the involvement of new technology improves its application in real-world scenarios, leading to an efficient and innovative way of handling hotel reservation systems (Guadix et al., 2010). Further, technological advancements create an encouraging environment for business (Morag, 2013).

**Table 4.1.3.2 Technological changes**

<b>Technological changes</b>	<b>N</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Average</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Mean</b>	<b>Std. Deviation</b>
	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>
The hotel has adopted technological innovations in its operations	137	0%	0%	21.9%	46.0%	32.1%	4.31	2.656
Technological changes have improved operations in this hotel	137	0%	2.9%	21.2%	51.8%	24.1%	3.97	.757
Technological innovations adopted are vital in gathering information	137	1.5%	4.4%	24.1%	49.6%	20.4%	3.83	.854
The innovations are used in trailing prices	137	0%	5.1%	30.7%	41.6%	22.6%	3.82	.842
The innovations are used in forecasting	137	0.7%	8.0%	22.6%	46.0%	22.6%	3.82	.901
Technological changes have increased hotel efficiency	137	2.2%	7.3%	24.1%	33.6%	32.8%	3.88	1.025
Valid N (listwise)	137							

#### 4.1.3.3 Environmental complexity factors

The study's findings in *table 4.1.3.3* below demonstrated that environmental complexity elements significantly impacted hotel operations. This category considers the concentration of business competitors in the surrounding area (M=2.75, SD=.511) and the geographic concentration of targeted clients (M=2.75, SD=.543). Labor availability (M=2.39, SD=.546), product and service variety (M=2.60, SD=.562), and the hotel's position (M=2.80, SD=.456). The results support the argument that environmental complexity influences hotel operations (Njoroge, Kinuu, Ongeti & Kasomi, 2016).

**Table 4.1.3.3: Environmental complexity factors**

Environmental factors	complexity N	Statistic				Mean Statistic	Std. Deviation Statistic
			Lowly	Moderately	Highly		
The concentration of competitors within this location	137	3.6%	17.5%	78.8%	2.75	.511	
The concentration of target customers in a region.	137	2.2%	48.2%	49.6%	2.47	.543	
Availability of labor	137	2.9%	55.5%	41.6%	2.39	.546	
Variety of products& Services provided by the hotel	137	3.6%	32.8%	63.5%	2.60	.562	
The geographic location of the hotel	137	2.2%	16.1%	81.8%	2.80	.456	
Valid N (listwise)	137						

#### 4.1.3.4 Uncertainty factors

*Table 4.1.3.4* below presents findings of uncertainty factors with influence on hotels. Client's room rates changes (M=2.48, SD=.583), labor availability changes (M=2.14, SD=.583), Variations in demand for visitor rooms (M=2.88, SD=.373), and changes in competitive strategies by competitors (M=2.55, SD=.605) were identified as uncertainty factors likely to influence hotel operations. Regulatory service changes (M=2.35, SD=.589), changes in consumer service and preferences (M=2.47, SD=.569), pandemic fear, and market structures (M=2.35, SD=.589). The

findings show that the hotel sector has been plagued by instability, susceptibility, economic unpredictability, fear-based oppression, political unpredictability, and pandemics for a long time (Awang et al., 2008; Oaten et al., 2015).

**Table 4.1.3.3: Uncertainty factors**

<b>uncertainty factors</b>	<b>N</b>				<b>Mean</b>	<b>Std.</b>
	<b>Statistic</b>	<b>Lowly</b>	<b>Moderately</b>	<b>Highly</b>	<b>Statistic</b>	<b>Deviation</b>
						<b>Statistic</b>
Changes in visitor room rates	137	4.4%	43.1%	52.6%	2.48	.583
Changes in labor availability	137	24.1%	38.0%	38.0%	2.14	.778
Changes in demand for guest rooms	137	1.5%	9.5%	89.1%	2.88	.373
competitive tactics changes by competitors	137	5.8%	32.8%	61.3%	2.55	.605
regulatory service changes and activities	137	5.8%	53.3%	40.9%	2.35	.589
customers' tastes, preferences changes	137	3.6%	46.0%	50.4%	2.47	.569
Oppression by fears and Pandemics	137	0%	20.4%	79.6%	2.80	.405
Changes in market structures	137	2.9%	10.9%	86.1%	2.83	.447
Valid N (listwise)	137					

#### **4.1.3.5 Environmental dynamism**

Generally, the environmental dynamism factors that influence hotels, as shown in *Table 4.1.3.5* below, include; regulatory frameworks (M=5.03, SD=.962), social-economic settings (M=4.74, SD=.932), political stability and security aspects (M=4.64, SD=.999), and technology environment effects (M=4.97, SD=1.014). The findings support that environmental dynamism significantly influences organizations' operations (Akgün et al., 2008).

**Table 4.1.3.4: Environmental dynamism**

General dynamism	environmental	N	Frequency				Mean	Std. Deviation
			Rarely	Occasionally	Frequently	Very Frequently		
Political and security aspects (e.g., politics, violence, elected leaders)		137	12.4%	37.2%	24.8%	25.5%	4.64	.999
Social and economic aspects (e.g., population, inflation, crime, disasters)		137	8.0%	35.0%	31.4%	25.5%	4.74	.932
Regulatory aspects (e.g., laws, regulations, policies)		137	8.0%	20.4%	32.1%	39.4%	5.03	.962
Technological aspects (e.g., ICT, innovations)		137	8.8%	26.3%	24.1%	40.9%	4.97	1.014
Valid N (listwise)		137						

**4.1.4 The extent of application of RM practices in star-rated hotels**

To find out the extent of adoption of revenue management practices in star-rated hotels in Kenya. The study sought reasons for RM practices, the extent of the revenue manager’s expertise, RM policies in place and their implementation, RM techniques, the presence of the RM team and ethical values of the team, RM pricing, and non-pricing techniques.

**4.1.4.1 RM practice and reasons for the practice**

The findings presented in *table 4.1.4.1* below reveal that the extent of revenue management implementation in star-rated establishments was (M=2.96, SD=.989). About 40.9 percent have entirely operationalized RM practices in their facilities; consequently, about 59.1% of hotels are not compliant with RM practices, which could be one reason for the dismal performance. Also, respondents had some expertise on RM and its importance in their facilities (M=2.61, SD=.894). Further, in terms of the expertise of revenue managers, 9.5% have basic skills, 38% have

intermediate skills, 35.8% are experts, and 16.8% are advanced-level skills. Gurel et al. (2016) assert that RM experiences for staff are complicated; hence, employees need to be knowledgeable and competent to meet these issues. Further, the revenue manager's specifications and commitments are fundamental for RM implementation (Abad et al., 2019).

**Table 4.1.4.1: The practice of RM in Kenyan hotels**

Formal Application of RM in hotels	N	I have heard about RM but do not understand the meaning				Mean Mean Statistic	Std. Deviation Std. Statistic
		I never heard of RM	Intermediate Level	Expert	Advanced Level		
Is revenue management (RM) practiced in your hotel?	137	5.8%	32.8%	20.4%	40.9%	2.96	.988
The extent of respondent expertise on RM		Basic Level	Intermediate Level	Expert	Advanced Level	Mean Statistic	Std. Statistic
Rate the extent of your expertise in RM	137	9.5%	38.0%	35.8%	16.8%	2.61	.894

#### 4.1.4.2 Reasons for practicing RM in Kenyan hotels

Table 4.1.4.2 below shows the respondents' reasons for practicing RM in the Kenyan hotels were to forecast the development of the hotel (M=3.47, SD=.916), reduce costs (M=3.50, SD=.994), improve yield (M=3.50, SD=.841), and generate revenue (M=3.67, SD=1.072). The results uphold that revenue management generates more revenue than traditional restaurant methods (Karmarkar & Dutta, 2011). Further, study findings uphold that revenue management is now growing toward profit optimization and the associated notion of RM strategy (Anderson & Xie, 2010; Higbie et al., 2012).

**Table 4.1.44.2: Reasons for practicing RM in Kenyan hotels**

Why RM is practiced	N	Strongly Disagree	Disagree	Average	Agree	Strongly Agree	Mean	Std. Deviation
Predict the growth of the hotel	137	2.2%	13.1%	29.92%	45.3%	9.5%	3.47	.916
Improves yield	137	2.9%	12.4%	18.2%	65.0%	1.5%	3.50	.841
Reduces costs	137	2.2%	9.5%	40.1%	29.2%	18.2%	3.50	.994
Generates revenue	137	9.5%	12.4%	28.5%	29.9%	27.0%	3.67	1.072
Valid N (listwise)	137							

#### 4.1.4.3 RM Policy and Implementation

The RM policy and implementation summary findings presented in *table 4.1.4.3* below established that hotels use RM policies (M=3.45, SD=.985) and have hired RM implementers (M=3.47, SD=.993). The hotels' RM teams can handle RM challenges (M=3.69, SD=.999). There is integrating information technology with RM practices (M=4.26, SD=.993). RM information is readily available to guests (M=4.42 SD=1.241). Use of pricing tools (M=4.20 SD=.976). Use of non-pricing tools (M=4.58 SD=1.160). The summary of the findings reveals that some RM activities are happening in the Kenyan hotel industry though only 40% of hotels have fully actualized RM practices, which could be attributed to adverse effects of the abovementioned determinants. To manage revenues, most hotels use non-pricing tools like room availability guarantee, capacity management, control of the length of stay, and management of overbookings. The results support the assertions that adopting innovative reservation and RM policies enhances hotel operations (Kimes et al., 2010; Hernandez, 2015). The results affirm that RM implementation

and channel management control mechanisms to manage revenue (Koide & Ishii, 2005; Ivanov & Zhechev, 2012).

**Table 4.1.4.3: RM policies and implementation**

	N							Mean	Std. Deviation
RM Policies & Implementation	Statistic	Strongly Disagree	Disagree	Average	Agree	Strongly Agree	Statistic	Statistic	Statistic
Application of RM policies	137	07%	18.2%	32.1%	33.6%	15.3%		3.45	.985
Somebody in charge of revenue management implementation	137	2.9%	12.4%	34.3%	35.6%	15.3%		3.47	.993
Induction of new employees on RM policies	137	1.5%	16.8%	33.6%	32.1%	16.1%		3.45	.999
RM policies are used in making decisions	137	3.6%	7.3%	33.6%	43.1%	12.4%		3.53	.932
Financial controllers oversee the implementation of RM policies	137	1.5%	19.0%	27.0%	39.4%	13.1%		3.44	.992
The management support implementation of RM policies to the core.	137	2.2%	12.4%	32.8%	29.2%	23.4%		3.59	1.047
RM policies help manage the finances of this hotel	137	2.2%	13.9%	25.5%	34.3%	24.1%		3.64	1.062
Valid N (listwise)	137								

#### 4.1.4.4 RM techniques

Table 4.2.4.4 below presents findings of RM techniques; price optimization tools (M=4.49, SD=.965) are standard in star-rated hotels where RM techniques are employed. Dynamic pricing tool (M=4.46, SD=.891), demand forecasting (M=4.69, SD=1.027), and revenue forecasting

(M=4.35, SD=.801). Sinsou and Rannou, (2005) identified that marketing and pricing tools, reservation computerization, and Global Distribution Systems (GDS) that assist hotels to do demand and revenue forecasting aided the growth of Revenue Management (Poutier & Legohérel, 2010).

**Table 4.1.4.4: RM techniques**

RM techniques	N	Frequency					Mean	Std. Deviation
		Very rarely	Rarely	Occasionally	Frequently	Very frequently		
Revenue forecasting	137	0%	12.4%	37.2%	24.8%	25.5%	4.35	.801
Dynamic pricing tool	137	0%	8.0%	35.0%	31.4%	25.5%	4.46	.891
Price optimization tool	137	0%	8.0%	20.4%	32.1%	39.4%	4.39	.965
Demand forecasting	137	0%	8.8%	26.3%	24.1%	40.9%	4.69	1.027
Valid N (listwise)	137							

#### 4.1.4.5 RM team and ethical issues

The revenue management group was skilled and knowledgeable (M=3.85, SD=1.007), and they have the right attitude for the profession (M=3.79, SD=.950) presented in table 4.1.4.5 below. RM is capable of dealing with RM problems (M=3.68, SD=.904). The team involved in RM activities has a high integrity level (M=3.88, SD=.835), but there are isolated instances of unethical behavior (M=3.96, SD=.966). The findings support that creating the revenue manager qualification and dedication are fundamental variables for RM implementation (Abad et al., 2019). While Gurel et al. (2016) assert that RM operations are challenging, staff should be knowledgeable and competent to deal with these issues.



**Table 4.1.4.5: RM team**

	N		Strongly Disagree	Disagree	Average	Agree	Strongly Agree	Mean	Std. Deviation
<b>RM team</b>	Statistic							Statistic	Statistic
RM team is knowledgeable and skilled	137		0.7%	8%	30.7%	27.0%	37.0%	3.85	1.007
RM team can handle RM challenges	137		0%	8.8%	34.5%	35.3%	21.2%	3.69	.904
RM employees have the right attitude for their Job.	137		0%	9.5%	29.2%	34.3%	27.0%	3.79	.950
RM team is a team of integrity	137		0%	4.4%	28.5%	42.3%	24.8%	3.88	.835
We rarely handle RM unethical issues	137		0%	7.3%	25.5%	31.4%	35.7%	3.96	.966
Valid (listwise)	N 137								

#### **4.1.4.6 Integration of social media activities in RM**

Integration further presents new practices that generate higher income in establishing the social media process adapts to RM (Sirsi & Varini, 2012). *Table 4.1.4.6* below shows that hotels have incorporated social media in RM undertakings (M=4.26, SD=.993), and social media has been adopted to deal with customer booking issues (M=4.31, SD=.897). In contrast, social media incorporation has enhanced the hotel's performance (M=4.18, SD=.964). The findings support that as hotels adopt more and more internet-based procedures, hoteliers can choose all of them or anyone. They are more likely to run through RM (Noone, Rohlf, & McGuire, 2011).

**Table 4.1.4.6: Integration of social media in RM**

<b>Social media integration</b>	<b>N</b>	<b>Very Rarely</b>	<b>Rarely</b>	<b>Occasionally</b>	<b>Frequently</b>	<b>Very Frequently</b>	<b>Mean</b>	<b>Std. Deviation</b>
Social media integration on RM activities	137	2.9%	18.2%	41.6%	24.8%	12.4%	4.26	.993
Integration of social media contributes to the performance of your hotel	137	4.4%	16.8%	43.8%	26.3%	8.8%	4.18	.964
The hotel has embraced social media in handling guests' issues connected to RM, bookings, & pricing	137	2.2%	13.9%	43.1%	32.1%	8.8%	4.31	.897
Valid (listwise)	N 137							

**4.1.5 Revenue management systems**

The results present RM systems used in Kenyan star-rated hotels, their sources, the RM data and information contained in these systems, pricing and non-pricing techniques used in these systems

**4.1.5.1 RM systems used in Kenyan hotels**

The results presented in *table 4.1.5.1* below show that about 74.5 percent of star-rated establishments have or interact with revenue management (RM) systems and sub-systems; according to the findings, few hotels may use one or two RM software. About 35% of people rely

on in-house systems, and 27% use centralized systems. About 33.6% of other hotels have contracted with corporate centers for RM service, while 45.3% have outsourced the service to a third party. About 62.8 percent of hotels employ a mix of strategies. In addition, 73 percent of hotels had automated revenue collection systems.

Further, according to research, seventy-six percent of companies have integrated RM software. Additionally, their revenue centers have been integrated with the RM software that has been implemented. Among the RMS used are Amadeus RMS, Trust, Delphi, Elkatra, Erbrasoft, Frequency-Opera, Ideas, and Hotel runner, to name just a few. Strategic information useful to hotel managers is programmed into RMS (Torch, 2015), a widely accepted piece of RM software. The software is expensive for hotels to implement and necessitates experts to make it work in hotel facilities. Hotels have different preferences based on their needs, affordability, and usefulness of RM systems. For the above reasons, hotels have implemented various RMS systems in Kenya.

**Table 4.1.5.1: RM systems used in Kenyan hotels**

RM systems	N	Yes	Percentage	No	Percentage
Hotels operate RM systems	137	102	74.5%	35	24.5%
RM systems are mostly Hotel own in-house	137	48	35%	89	65%
The hotel uses Automation revenue collection	137	100	73%	37	27.0%
The hotel has Contracted RM service from Corporate	137	46	33.6%	91	66.4%
Hotels use centralized systems	135	37	27.4%	98	72.6%
The hotel uses a combination (mixed) of these strategies	137	86	62.8%	51	37.2%
The hotel has Outsourced this Function to a third party	137	62	45.3%	75	54.7%
The hotel use integrated RM soft-wares.	137	105	76.6%	32	23.4%
Integration of all revenue centers to RM software	137	105	76.6%	32	23.4%
Valid N (listwise)	133				

#### **4.1.5.2 RM data and information**

*Table 4.2.5.2* below presents RM data; hotel customers receive RM data on room price changes and hotel reservation circumstances (M=4.42, SD=1.241). For stringent cancellation policies, hotels offer lower rates (M=4.30, SD=1.190). The hotel provides negligible price reductions (M=4.49, SD=.987). Most hotel charges different prices for goods that customers perceive as other, such as weekday and weekend price changes (M=4.42, SD=1.276). The customer is not informed of any changes made to their reservation terms. The findings support that real challenges should be resolved by RM staff to achieve their goal (Cetin et al., 2016). RM System inputs are required for income predictions (Morag, 2013). Most hotels use archival data to optimize hotel occupancies, bookings, forecasting, and reaping financial rewards (Wang et al., 2015).

**Table 4.1.5.2: RM data and information**

RM and Information	N	Very Rarely	Rarely	Occasionally	Frequently	Very Frequently	Mean	Std.
								Deviation
	Statistic							Statistic
Established RM information regarding prices and booking.	137	8.8%	13.1%	24.1%	33.6%	20.4%	4.42	1.241
Hotel insignificant price discounts in exchange for cancellation	137	3.0%	4.6%	30.7%	43.1%	8.8%	4.39	.987
Discounts in reservation rates in exchange for stricter cancellation	137	9.5%	13.9%	25.5%	38.0%	13.1%	4.30	1.190
Changes in reservations terms without informing the clients	137	9.5%	14.6%	21.2%	27.0%	27.7%	4.47	1.329
There are various prices for goods perceived by customers as different	137	10.3%	13.9%	17.5%	38.7%	19.5%	4.42	1.276
Valid (listwise)	N 137							

### 4.1.5.3 Pricing techniques

Some of the most widely used RM pricing tools are highlighted here, and they influence hotel prices, although this depends on pricing guidelines, the hotel's structure, extent, and performance (Ivanov & Zhechev, 2012). The results presented in *table 4.2.5.3* below indicate that hotels use rate fences (M=4.31, SD=1.026) and price discrimination (M=4.23, SD=1.105) as pricing techniques. Lowest price guarantee and dynamic pricing (M=4.39, SD=1.045, M=4.20, SD=.976), respectively. More than 2,000 hoteliers in the InterContinental Group use these techniques, demonstrating their significance in the hotel industry as a valuable strategy currently being used (Koushik et al., 2012).

**Table 4.1.5.3: RM pricing devices**

RM Pricing tools	N	Statistic						Mean	Std. Deviation
			Very Rarely	Rarely	Occasionally	Frequently	Very Frequently		
Dynamic & behavioral pricing,	137		6.6%	12.4%	43.1%	30.7%	7.3%	4.20	.976
The erection of rate fences,	137		5.8%	13.1%	36.5%	33.6%	10.9%	4.31	1.026
Price discrimination,	137		8.0%	15.3%	35.0%	29.2%	12.4%	4.23	1.105
Lowest price guarantee	137		5.1%	15.3%	27.0%	40.9%	11.7%	4.39	1.045
Valid (listwise)	N 137								

### 4.1.5.4 Non-pricing devices

Further, the findings in *table 4.1.5.4* show that the use of non-pricing strategies such as management of capacity (M=4.69, SD=1.160), control of overbookings (M=4.58, SD=1.076), stay control length (M=4.39, SD=.988), there is a guarantee of a room (M=4.50, SD=1.023). The

outcome affirms the usage of RM non-pricing devices as a well-researched tool (Karaesmen, & Van-Ryzin, 2004; Koide & Ishii, 2005; Talluri & VanRyzin, 2006).

**Table 4.1.5.4: Non-pricing devices**

<b>Non-pricing devices</b>	<b>N</b>	<b>Very Rarely</b>	<b>Rarely</b>	<b>Occasionally</b>	<b>Frequently</b>	<b>Very Frequently</b>	<b>Mean</b>	<b>Std. Deviation</b>
Room availability guarantee	137	4.4%	8.0%	39.4%	29.9%	18.2%	4.50	1.023
Overbookings	137	4.4%	10.9%	28.5%	35.0%	21.2%	4.58	1.076
Capacity management,	137	3.6%	12.4%	27.7%	23.4%	32.8%	4.69	1.160
Length of stay control	137	2.9%	13.1%	40.1%	29.2%	14.6%	4.39	.988
Valid (listwise)	N 137							

#### **4.1.5.5 Summary of RM practices**

The findings revealed that revenue management is practiced in Kenyan hotels though not as 100% (M=3.5347, SD=.8203). The aspects under consideration included revenue management policy and implementation (M=3.509, SD=.8326), RM techniques (M=4.473, SD=.71208), Revenue management team ((M=3.834, SD=.727), integration of social media with RM (M=4.25, SD=.7635), Then, RM systems RM data and information (M=4.40, SD=1.066), pricing devices (M=4.279, SD=.877, non-pricing devices (M=4.54, SD=.861). Varini and Sirsi, (2012) suggested novel techniques that hotels are likely to be part of the hotel RM practices, such include; embrace internet-based processes like computer-generated networking, social networking, and online survey and reviews (Noone et al., 2017)

#### **4.1.6 Assessment of Financial performance of star-rated hotels**

The following parameters were measured to assess the financial performance of the star-rated hotel: the profitability of hotels, solvency, and liquidity of hotels, efficiency, and valuation of the hotels.

##### **4.1.6.1 Profitability of the hotel**

*Table 4.1.6.1* below shows the hotels' profitability results and a gross increase in profit (M= 3.86, SD= 0.842). The hotels generated more revenue (met the revenue target, M=2.45, SD=8.48). There were increased net profit margins (M=2.59, SD=0.862). The hotels were able to break even (M=3.24, SD=1.337), Substantial returns were generated for the hotel shareholders (M=3.47, SD=1.409), There was a higher return on assets (M= 3.48, SD=1.323). Most hotels never met their revenue target and net profits either, and the findings reaffirmed that most hotels in Kenya might not be making profits hence poor financial performance (Kipruto & Kaplelach, 2019). The findings support that hotels must consider room occupancies, average daily rates (ADR), and other performance indicators to accomplish high levels of profitability (Cheng, 2013; Kim, Cho, & Brymer, 2013). Moreover, to track, evaluate and assess the financial health, financial performance frameworks; liquidity, profitability, solvency, valuation, and efficiency (Ivanov, 2014; Fissha & Shrestha, 2017; Stobierski, 2020; Wadongo, 2010).



**Table 4.1.6.1: Profitability of the hotel**

	N	Strongly Disagree	Disagree	Average	Agree	Strongly agree	Mean Statistic	Std. Deviation Statistic
Gross profit increased	137	5.1%	26.3%	47.4%	19.7%	1.5%	3.86	.842
The hotel generated more revenue (met the revenue target)	137	39.4%	59.1%	0.0%	1.5%	0.0%	2.45	.848
There were increased net profit margins	137	38.0%	56.9%	2.2%	2.2%	.7%	2.59	.862
The hotel was able to break even	137	26.3%	41.6%	13.9%	9.5%	8.8%	3.24	1.337
Substantial returns were generated for the hotel shareholders	137	25.5%	27.0%	17.5%	24.8%	5.1%	3.47	1.409
There were higher returns on assets	137	21.2%	30.7%	21.2%	23.4%	3.6%	3.48	1.323
Valid N (listwise)	137							

#### 4.1.6.2 Solvency of the hotel

Table 4.1.6.2 below shows the solvency of the hotel; there were low debts compared to equity (M=3.47, SD=1.201). Low debt led to high returns (M=3.88, SD=1.151) and a low percentage of hotel assets financed by debt (M=3.76, SD=1.076). The hotel has a high property base (M=3.51, SD=1.132), and the business is financed by owners' funds (M=3.60, SD=1.120). The hotel can pay its interest on outstanding debt obligations (M=3.47, SD=1.231). These findings confirm that the biggest and most indebted hotels and, therefore, have high-interest expenses that negatively affect their performance and vice versa are also authentic (Alarcón & Masperra, 2015). Further, hotels in Kenya operate under reduced debts (Kipruto & Kaplelach, 2019). An increase in debt size may increase borrowing costs and reduce financial performance (Tan, 2017).

**Table 4.1.6.2: Solvency of the hotel**

	N	Strongly disagree	Average	Strongly agree	Mean	Std. Deviation		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic		
There were low debts compared to equity	137	15.3%	46.0%	15.3%	18.2%	5.1%	3.47	1.201
Low debt led to high returns	137	12.1%	24.1%	36.5%	2.2%	0.0%	3.88	1.151
The low percentage of hotel assets as financed by debt	137	13.9%	20.4%	39.4%	24.1%	2.2%	3.78	1.076
The hotel has a high property base	137	20.2%	27.7%	29.9%	19.0%	3.2%	3.51	1.132
Owner's funds finance the hotel business	137	21.2%	27.7%	29.9%	19.0%	2.2%	3.60	1.120
The hotel can pay its interest on outstanding debts obligations	137	27.0%	19.0%	31.4%	20.4%	2.2%	3.47	1.231
Valid N (listwise)	137							

#### 4.1.6.3 Liquidity of the hotel

The findings affirm through liquidity theory that flow management practices positively and statistically significantly influence the financial performance of hotels (Murigu, Kiragu, & Kiai, 2018). *Table 4.1.6.3* below shows the liquidity of the hotel, which meets its short-term obligations using most of the liquid assets (M=3.90, SD=0.868). The hotel can pay its expenses without receiving any additional cash in-flow (M=2.53, SD=0.908). The period between cash outflow and cash inflow is short (M=2.66, SD=0.926). The last two aspects are an indication that working capital impacted the liquidity ratios of Star Hotels. Regarding current ratios, most hotels were experiencing cash flow issues, which may have resulted in an inability to pay creditors on time (Kipruto & Kaplelach, 2019).

**Table 4.1.6.3: Liquidity of the hotel**

	N	Strongly disagree	disagree	Average	Agree	Strongly agree	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
The hotel meets its short-term obligations using most of the liquid assets	137	7.3%	25.5%	46.0%	21.2%	2.2%	3.90	.868
The hotel can pay its expenses without receiving any additional cash inflow	137	37.2%	59.1%	0.7%	2.2%	0.7%	2.53	.908
The period between cash outflow and cash inflow is short.	137	35.7%	56.9%	2.9%	2.9%	1.5%	2.66	.926
Valid N (listwise)	137							

#### 4.1.6.4 The efficiency of the hotel

Table 4.1.6.4 below shows that hotel takes a shorter period to collect money owed by customers (M=3.31, SD=1.344). The hotel takes a shorter period to pay short-term debts (M=3.53, 1.420). The hotel can generate more sales from its fixed assets (M=3.55, SD=1.323). Hotel equipment and inventory are used efficiently (M=3.51, SD=1.213). Hotel equity is used efficiently to benefit hotels (M=3.93, SD=1.161). The hotel takes a shorter period to collect money owed by customers (M=3.82, SD=1.086). Previous findings affirmed that technical efficiency contributes to hotel financial performance (Ben-Aissa, & Goaid, 2014).

**Table 4.1.6.4: Efficiency of the hotel**

	N	Strongly Disagree	Disagree	Average	Strongly Agree	Agree	Mean Statistic	Std. Deviation Statistic
The hotel takes a shorter period to collect money owed by clients	137	24.8%	41.6%	14.6%	10.2%	9.5%	3.31	1.344
The hotel takes a shorter period to pay short-term debts	137	24.1%	26.3%	18.2%	25.5%	5.8%	3.53	1.420
The hotel can generate more sales from its fixed assets	137	19.7%	29.9%	21.9%	24.1%	4.4%	3.55	1.323
Hotel equipment and inventory are used in an efficient way	137	14.6%	44.5%	16.8%	18.2%	5.8%	3.51	1.213
Hotel equity is used efficiently for the benefit of hotels.	137	13.1%	21.9%	24.8%	37.2%	2.9%	3.93	1.161
Valid N (listwise)	137							

#### **4.1.6.5 Valuation of the hotel**

Table 4.1.6.5 below shows the status of the valuation of the hotel; the hotel collected more revenue in the last financial year (M=3.82, SD=1.082). The hotel had a high total value (M=3.55, SD=1.137). The hotel aims to generate more earnings in the coming years (M=3.54, SD=1.294). The study supported Stephen-Rushmore and Rubin, (1984) approval of the income capitalization approach as a primary valuation method and cemented the valuation frameworks for the hospitality business to measure financial performance (Nilsson, Harris, & Kett 2001).

**Table 4.1.6.5: Valuation of the hotel**

	N	Strongly Disagree	Disagree	Average	Agree	Strongly agree	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
The hotel collected higher revenue last financial year.	137	13.9%	19.0%	38.7%	26.3%	2.2%	3.82	1.086
There was a high total value of the hotel (Assets-liabilities =high value).	137	19.7%	27.7%	30.7%	19.0%	2.9%	3.55	1.137
The hotel is aiming to generate more earnings in the coming few years.	137	25.6%	18.2%	31.4%	21.9%	2.9%	3.54	1.249
Valid N (listwise)	137							

#### **4.1.6.6 Summary of findings on hotel financial performance**

The findings on hotel financial performance show that most hotels use profitability, solvency, liquidity, valuation, and efficiency to evaluate their financial performance. There were low scores of below-average witnessed on the profitability and liquidity aspect of the hotel performance, meaning that hotels experienced low levels of profitability and could not manage to settle short-term liabilities on time. There was a high score mean above 3.5 out of 5 on the solvency, efficiency, and valuation of hotels, indicating that most hotels can service long-term debts and obligations; they are efficient in their operations regarding financial obligations and are further valued above average in terms of their financial performance.

#### **4.2 Hypotheses and model testing**

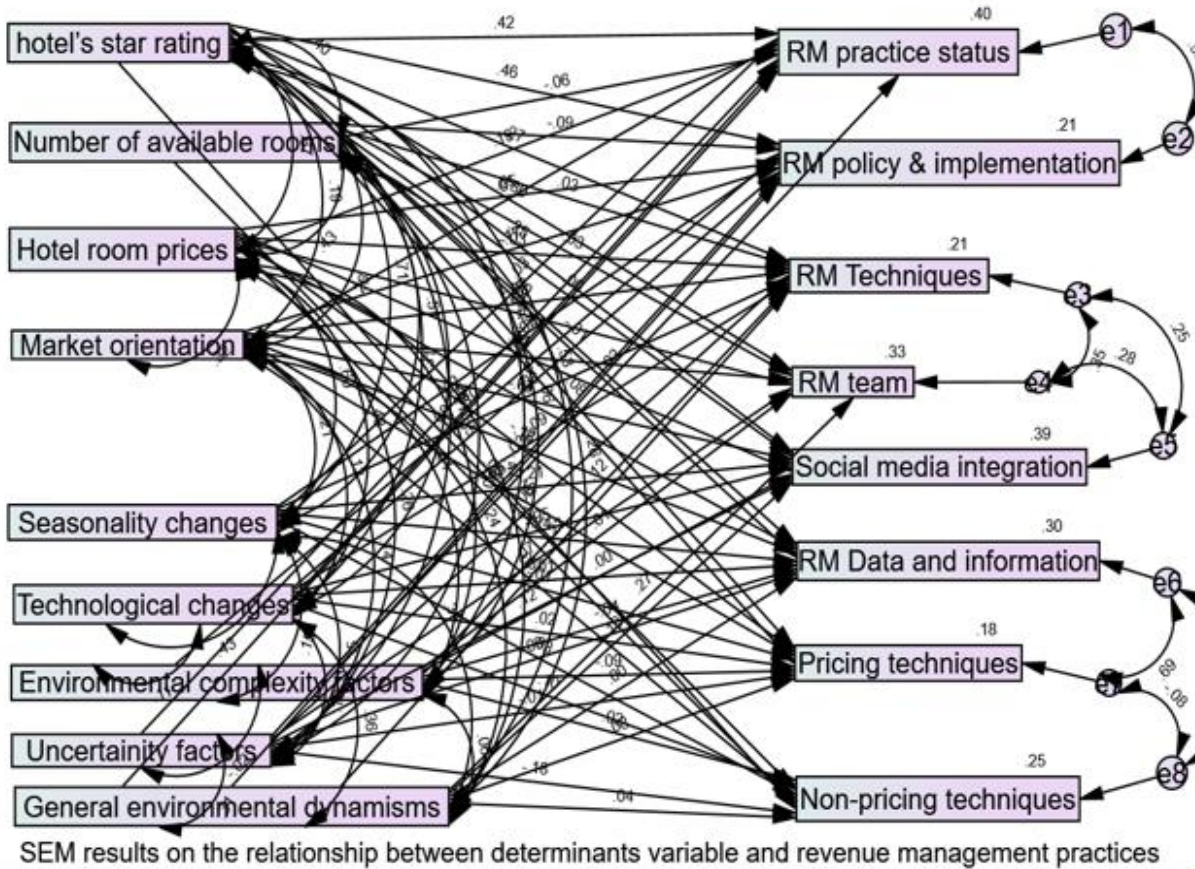
To achieve the study objectives, a statistical hypothesis test was conducted using the structural equation model and chi-square model tests. It is a method for determining whether to "accept" or "reject" a statistical hypothesis. A two-sided significance level of less than or equal to 0.05 is significant in this investigation. Three different pairings were scrutinized to test an association

between RM practices, financial performance, and determinants of RM. The study tested four linkages: the independent and dependent variables directly, those between the independent variable and the mediator indirectly, and those between the mediator and the dependent variable directly. The composite hypothesis is summarized in the section that follows.

#### **4.2.1 Model 1: SEM model 1 on the relationship between the determinants of revenue management and their effects on revenue management practices in star-rated hotels**

A structural equation model was tested to achieve objective one. The results are presented in *figure 4.2.1.1* below, which indicates that determinants of revenue management explain a variation in RM practices as follows the status of RM practice (40.1%), RM techniques (20.6%), RM policy and implementation (20.9%), Pricing techniques (17.6%), RM team (33.2%), RM social media integration (38.5%), non-pricing techniques (25.1%) and RM data and information (29.7%). The model results chi-square=68.328 (23df) p=.064 CFI=.952 RMSEA=.045 NFI=.983 indicating that the model fit or the data was acceptable (Arbuckle, 2020). Hence the hypothesis that, ***H<sub>01</sub>: There is no statistically significant link between the determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya was rejected.***

Chi-square=68.328(23df) p=.064 CFI.952 RMSEA=.045 NFI .983



*Figure 4.2.1:1: SEM results on the linkage between determinants and revenue management practices*

#### 4.2.1.1 Star rating of hotels and RM practices

The results revealed that the star rating of hotels has a significant positive linkage and effects with the following aspects of RM practices; RM status of practice (B=.338, p=.02), RM policy and implementation (B=.413, P=.001), RM data and information (B=.606, p=.001), RM pricing techniques (B=.353, p=.002), RM team (B=. 215 p=.003), RM social media integration (B=.189, p=.016), RM tools (B=.214 p=.024). The finding support that star rating positively impacts RM (Wang, Tian, Li & Hu, 2013). Further, hotel classification and affiliation to the chain are the

variables for successful revenue management (RM) adoption in urban hotels (Abad et al., 2019). Star-rated hotels' RM practices effectively raise occupancies (Ortega, 2016).

#### **4.2.1.2 Hotel prices and RM practices**

Hotel prices had a substantial negative association with RM pricing tools ( $B = -.244$ ,  $p = .016$ ), meaning if the room rate is high, it affects the forecasting and demand of the rooms. There was a significant positive correlation with RM non-pricing techniques ( $B = .433$ ,  $p = .006$ ), revealing that the room prices influence capacity planning and bookings (Koide & Ishii, 2005; Talluri & VanRyzin, 2006; Van-Ryzin & Karaesmen, 2004). However, there was established an insignificant relationship between hotel prices and RM techniques ( $B = .01$ ,  $p = .096$ ), RM policy and implementation ( $B = .02$ ,  $p = .093$ ), RM team ( $B = .01$ ,  $p = .37$ ), RM data and information ( $B = .254$ ,  $p = .185$ ), and RM social media integration ( $B = .01$ ,  $p = .344$ ).

#### **4.2.1.3 Market orientation and RM practices**

Further, the results demonstrated that market orientation positively correlated with RM policy and implementation ( $B = .30$ ,  $p = .03$ ) and RM status of practice ( $B = .267$ ,  $P = .050$ ); previous findings do not substantiate these findings. However, an insignificant association between market orientation RM techniques ( $B = -.11$ ,  $p = .34$ ), RM social media integration ( $B = -.26$ ,  $p = .82$ ), RM pricing techniques ( $B = .17$ ,  $p = .27$ ), RM team ( $B = .12$ ,  $p = .34$ ), RM data and information ( $B = .260$ ,  $p = .130$ ), and RM non-pricing techniques ( $B = .00$ ,  $p = .53$ ). This confirms that there is an indirect link between market orientation and some aspects of RM that produces a degree of elucidated variance (Jeffrey & Barden, 2000a).

#### **4.2.1.4 Available hotel rooms and RM practices**

Further, the results revealed an insignificant link with all aspects of RM practices; such as RM techniques ( $B = .02$ ,  $p = .68$ ), RM policy and implementation ( $B = -.05$ ,  $p = .33$ ), RM data and



information ( $B=-.007$ ,  $p=.907$ ), RM pricing techniques ( $B=-.05$ ,  $p=.34$ ), RM team RM ( $B=-.02$ ,  $p=.63$ ), social media integration ( $B=-.01$ ,  $p=.89$ ), and RM non-pricing ( $B=.041$ ,  $p=.423$ ). The findings affirm that available rooms indirectly link guest rooms with revenues (Sainaghi, 2011). Significant relationships between the hotel's available rooms and RM status of practice ( $B=.018$ ,  $P=.001$ ) though not confirmed by previous studies, it can be deduced that the more rooms available in a hotel, the better the chances are for a hotel to practice RM.

#### **4.2.1.5 Seasonality and RM practices**

Seasonality and the following aspects of RM practices were found to have but a significant negative relationship with RM data and information ( $B=-.397$ ,  $p=.040$ ), RM social media integration ( $B=-.03$ ,  $p=.02$ ), and insignificant relationships with RM techniques ( $B=.02$ ,  $p=.14$ ), RM policy and implementation ( $B=-.14$ ,  $p=.36$ ), RM pricing techniques ( $B=-.02$ ,  $p=.89$ ), and RM non-pricing techniques ( $B=-.03$ ,  $p=.75$ ). Therefore, the findings confirmed that seasonality has some implications on hotels' performance due to the misshaped systems that cause substitute methods of using commodities in the hospitality sector (Chiutsi & Mudzengi, 2017; Chung, 2009)

#### **4.2.1.6 Technological changes and RM practices**

Revealing that hotels that have computerized RM have expanded efficiency since it creates an increase in percent change (Kimes, 2010). Moreover, the study found that there is a significant link between technological advancements and social media integration ( $B=.048$ ,  $p=.045$ ); RM policy and implementation ( $B=.03$ ,  $p=.005$ ), RM data and information ( $B=.23$ ,  $p=.006$ ), RM pricing techniques ( $B=.04$ ,  $p=.005$ ), RM team RM ( $B=-.05$ ,  $p=.03$ ), and RM non-pricing techniques ( $B=.12$ ,  $p=.023$ ). Though, insignificant links were established with other RM practices components: RM tools ( $B=-.095$ ,  $p=.224$ ).

#### **4.2.1.7 Environmental complexity and RM practices**

The findings revealed a significant negative link between the hotel's environmental complexity and RM pricing techniques ( $B=-.29$ ,  $p=.025$ ) but insignificant relationships with aspects of RM practices: RM tools ( $B=-.3$ ,  $p=.13$ ), RM policy and implementation ( $B=.36$ ,  $p=.11$ ), RM data and information ( $B=-.172$ ,  $p=.54$ ), RM team ( $B=.05$ ,  $p=.77$ ), social media integration ( $B=-.04$ ,  $p=.84$ ), and RM non-pricing techniques ( $B=.11$ ,  $p=.62$ ). Previous findings could not be confirmed or contrasted. However, it was evidenced that environmental complexity influences the hotel business, and the relationship and effects were inadequately examined in Kenya's hotel industry (Njoroge, Kinuu, Ongeti & Kasomi, 2016).

#### **4.2.1.8 Uncertainty factors and RM practices**

The hospitality sector is categorized by a delayed period of susceptibility, the unpredictability of the economy, instability of political situations, oppression based on fear, and pandemics (Simon, Harry & Katharine, 2015). The results confirmed an insignificant negative relationship between uncertainty factors with aspects of RM practices with RM tools ( $B=-.4$ ,  $p=.015$ ) and RM pricing techniques ( $B=-.11$ ,  $p=.006$ ), but an insignificant link with RM policy and implementation ( $B=.25$ ,  $p=.44$ ), RM team RM ( $B=.12$ ,  $p=.63$ ), social media integration ( $B=.20$ ,  $p=.43$ ), RM data and information ( $B=-.460$ ,  $p=.240$ ), and RM non-pricing techniques ( $B=.479$ ,  $p=.14$ ).

#### **4.2.1.9 Environmental dynamism and RM practices**

The results revealed a significant positive linkage between general environmental dynamics and the following aspects of RM practices: RM techniques (B=.246, p=.007), RM policy and implementation (B=.02, p=.008), RM team (B=.274, p=.001) revealing that environmental dynamism significantly influences the hotel RM application and operations (Akgün et al., 2008). However, there was no relationship with RM pricing techniques (B=.11, p=.37), social media integration (B=.16, p=.06), RM data and information (B=-.001 p=.994), and RM non-pricing techniques (B= -.03, p=.80).

Further, the determinants of revenue management correlated with aspects of revenue management practices. The regression weights as (Beta) at two-tailed significance (p) levels are in *table 4.2.1.1* below.

**Table 4.2.1.1: Regression Weights: (Determinants and RM practices model)**

	RM status of practice		RM Techniques		RM Policy & implementation		Pricing techniques		RM team		RM Social media integration		RM data & information		Non-pricing techniques	
	R <sup>2</sup> = 40.1%		R <sup>2</sup> = 20.6%		R <sup>2</sup> = 20.9%		R <sup>2</sup> = 17.6%		R <sup>2</sup> = 33.2%		R <sup>2</sup> = 38.5%		R <sup>2</sup> = 29.7%		R <sup>2</sup> = 25.1%	
Predictors	Beta	P Value	Beta	P Value	Beta	P Value	Beta	P Value	Beta	P Value	Beta	P Value	Beta	P Value	Beta	P Value
Star rating	.338	.001	.214	.024	.413	.001	.353	.002	.215	.003	.189	.016	.606	.001	.033	.771
Hotel room prices	-.034	.447	.007	.959	.015	.925	-.244	.160	.092	.365	.079	.344	.254	.185	.433	.006
Market orientation	.267	.050	-.114	.342	.301	.031	.181	.273	.045	.341	-.063	.819	.260	.130	.090	.528
Available rooms	.018	.881	.018	.681	-.049	.327	.052	.338	-.013	.629	-.002	.889	-.007	.907	.041	.423
Seasonality	.038	.774	.190	.139	-.141	.359	-.020	.898	-	-	.266	.020	-.397	.040	-.026	.869
Technological Environmental complex.	.018	.003	.095	.004	.030	.005	.028	.747	-	-	.048	.045	.006	.846	.119	.225
Un-certainty factors	.075	.707	.294	.129	.357	.114	-.275	.025	.034	.774	-.012	.841	-.172	.537	.113	.623
Environment dynamism	.082	.761	-.394	.015	.247	.438	-.058	.006	.222	.632	.416	.431	-.460	.240	-.479	.140
	.092	.331	.246	.007	.022	.838	.103	.365	.274	.001	.143	.062	-.001	.994	.028	.796

Source: Author compilation, (2021)

Further, the regression analysis in *table 4.2.1.2* below tests the link and effect between determinants of revenue management and RM practices. The ( $R^2=0.228$ , Sig. 0.05) was found. The determinants of revenue management account for 22.8% of the variation in RM practices, an indication that the star rating, market orientation, application of new technologies drive revenue operations in hotels for competitive advantage, and factors like competitors, unstable economic and market conditions hinder the fruitful adoption of revenue management practices. Hence, this confirms that the technology, seasonality, and unpredictability rates in the environment considerably influence the revenue management practices in hotels (Awang et al., 2008).

**Table 4.2.1.2: Regression model 1 summary of the linkage between determinants of revenue management and RM Practices**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.478 <sup>a</sup>	.228	.223	4.22064		
<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.062	2.599		7.718	.000
	Internal and external hotel determinants	.818	.129	.478	6.320	.000

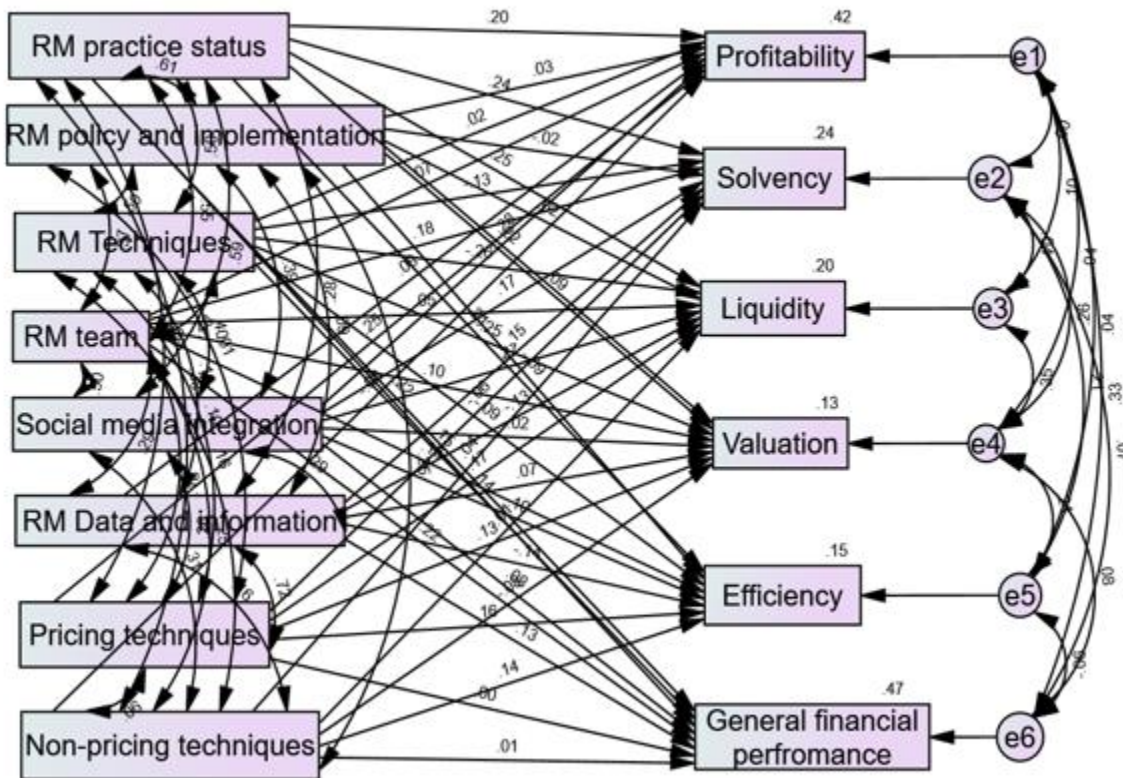
**a. Dependent Variable: RM practices**  
**b. Predictors: (Constant), Internal and external hotel determinants**

**4.2.2 Model 2: SEM Model 2 on the linkage and effects between revenue management practices and hotel financial performance**

A structural equation model was tested to achieve objective two, which aimed to investigate the link and effect between RM practices and hotel financial performance. The results in *figure 4.2.2.1* reveal that RM practices explain variation in hotel financial performance as follows, profitability (42.1%), solvency (24.2%), liquidity (20.0%), valuation (13.2%) and efficiency (15.0%), general financial performance (46.7%). The model results chi-square=3.005 (2df) p=.223 CFI=.998

RMSEA=.0320 NFI=.996, indicating that the model fit for the data was acceptable (Arbuckle, 2020). Hence, the hypothesis that **H0<sub>2</sub>**: *There is no statistically significant link between the revenue management practices and their effects on the financial performance of star-rated hotels in Kenya was rejected.*

**Standardized estimates |chi-square=3.005 (2df) p=0.223 CFI=.998 RMSEA=.0320 NFI=.996**



SEM results on the relationships between RM practices on financial performance

**Figure 4.2.2:1: SEM results on the linkage between RM practices and financial performance**

#### 4.2.2.1 RM policy and implementation and financial performance

The findings demonstrate significant correlations between RM policy and implementation with profitability (B =.132, P =.008); valuation (B =.177, P =.039); efficiency of the hotel (B=.011, P =.005) and general financial performance (B =.128, P =.005). The findings attest that If RM

policies are correctly implemented and operationalized, the losses from inappropriate implementation can be reduced (Lieberman, 1993). Reservation policies help financial managers function hotels to assess and improve hotel performance in terms of systems and procedures (Nanishka, 2015).

#### **4.2.2.2 Status of RM practice and financial performance**

The status of practice has been shown to have a significant relationship with profitability (B=.198, p=.05); solvency (B=.224, P =.042); liquidity of hotel (B=.249, p=.04), and overall financial performance (B=.192, p=.026) an affirmation that successful implementation of RM and booking procedures can boost hotel revenues (Kimes et al., 2010).

#### **4.2.2.3 RM team and financial performance**

Gurel, Anil & Tevfik, (2016) indicated that experiences for the RM team are complicated, and they need to be knowledgeable and competent to meet RM issues. Indeed, the revenue manager's qualifications and dedication are fundamental for RM implementation, which may translate to better financial prospects (Abad et al., 2019). The findings revealed that RM team had a significant link with profitability (B=.073, p=.002), solvency (B=.187, p=.001), and efficiency (B=.224, p=.032), and general financial performance (B =.144, P =.006).

#### **4.2.2.4 RM pricing techniques and financial performance**

RM Pricing techniques like the value discount, return policy, dynamical pricing, behavior pricing, pricing fences, and other mechanisms influence performance, although this depends on the price regulations, hotel organization, hotel levels, and presentations (Ivanov & Zhechev, 2012). The findings of the study affirmed that by revealing that there was a significant relationship between RM pricing techniques and profitability (B=.226, P=.001), solvency (B=.214, P=.010), liquidity

( $B=.119$ ,  $P=.007$ ), and hotel valuation ( $B=.170$ ,  $P=.013$ ) efficiency ( $B=.216$ ,  $p=.013$ ) and general financial performance ( $B=.003$ ,  $P=.001$ ).

#### **4.2.2.5 RM techniques and financial performance**

There was a significant association between RM techniques and profitability ( $B=.028$ ,  $P=.015$ ), solvency ( $B=.138$ ,  $P=.043$ ), liquidity ( $B=.278$ ,  $P=.002$ ), valuation ( $B=.286$ ,  $P=.004$ ), and general financial performance ( $B=.211$ ,  $P=.008$ ). There is an established helpful link between RM techniques, especially income forecasting (Duffy & Whitfield, 2013), social networks (Sirsi & Varini, 2012), pricing proceedings (Noone & Mattila, 2009), forecast demand (Haensel & Koole, 2011), and hotel financial performance.

#### **4.2.2.6 RM social media integration and financial performance**

There was a significant linkage between RM social media integration with profitability ( $B=.294$ ,  $P=.002$ ), solvency ( $B=.167$ ,  $P=.001$ ), liquidity ( $B=.353$ ,  $P=.001$ ), and efficiency ( $B=.192$ ,  $P=.044$ ). Integration of RM in Social media may significantly influence the performance of hotels, and it is a sign that digitalizing RM is an essential consideration for hotels while determining how goods, services, and prices are designed (Sirsi & Varini, 2012).

#### **4.2.2.7 RM data and information and financial performance**

Four primary sources of good RM data sources include hoteliers calling their rivals to seek their tariffs; they utilize GDSs to determine the prices of their competitors for the different goods and services and adjust their prices. It may also employ external data suppliers who routinely monitor reputable sites of rivals to obtain information about the hotel. In addition, the definitive source is internet sites that provide their customers with essential details (Martinez-Pardo, 2017). The findings have revealed a significant correlation between RM data and information with profitability ( $B=.060$ ,  $P=.003$ ), solvency ( $B=.108$ ,  $P=.022$ ), and hotel valuation ( $B=.134$ ,  $P=.040$ ).



The findings affirm that RM data is crucial when predicting hotel reservations and maximizing occupancy and profits (Carlsruhe & Poutier, 2010).

#### **4.2.2.8 RM non-pricing techniques and financial performance**

The non-pricing tools are related to hotel capacity management and internal procedures such as overbooking, inventory levels, controlled stay time, and rooms. While the findings were significant and they neither contrasted nor affirmed previous findings but revealed a significant relationship between RM non-pricing techniques with profitability ( $B=-.070$ ,  $P=.018$ ), solvency ( $B=.211$ ,  $p=.015$ ), and hotel efficiency ( $B=.188$ ,  $p=.034$ ) and general financial performance ( $B =.007$ ,  $P =.003$ ).

Further, the regression results of weights (*RM practices and financial performance*) beta and two-tailed significance ( $p=.05$ ) significance levels of the above model are presented in *table 4.2.2.1* below.

**Table 4.2.2.1: Regression weights - RM practices and financial performance star-rated hotels**

	Profitability R <sup>2</sup> =46.7%		Solvency R <sup>2</sup> =24.2%		Liquidity R <sup>2</sup> =20.0%		Valuation 13.2%		Efficiency R <sup>2</sup> =15.0%		General financial performance 46.7%	
	B	P value	B	P value	B	P value	B	P value	B	P value	B	P value
RM policy & implementation	.032	.008	-.062	.539	.115	.137	.177	.039	.011	.005	.128	.005
Status of RM practice	.198	.050	.224	.042	.249	.044	.232	.087	.246	.093	.192	.026
RM Team	.073	.002	.187	.001	.110	.217	.169	.085	.224	.032	.144	.006
RM Tools	.028	.015	.138	.043	.278	.002	.286	.004	-.098	.360	.211	.008
RM social media integration	.294	.002	.167	.001	.353	.001	.077	.410	.192	.044	.071	.348
RM data and information	.060	.003	.108	.022	-.113	.062	.048	.472	.134	.040	.083	.179
RM Pricing techniques	.226	.001	.214	.010	.199	.007	.170	.037	.216	.013	.003	.001
RM non-pricing techniques	-.070	.018	.211	.015	.026	.728	-.049	.555	.188	.034	.007	.003

**Source: Author compilation (2021)**

Further analysis through regression testing of the link between RM practices and hotel financial performance (b), and the results, as shown in *table 4.2.2.2* below, shows that there was one ( $R^2=0.564$ , sig. 0.05), implying that RM practices account for 56.4 percent of hotel financial performance variability. The findings back up (Ortega 2016), indicating that RM systems from a dataset from rated hotel chains effectively increase occupancies than making more significant alterations. In addition, according to Guadix et al. (2010), advances in management technologies lead to a more complex revenue generation business capability, with performance measures such as efficiency rate, occupancy, and yield.

**Table 4.2.2.2: regression model 2 summary of the linkage between RM practices and hotel financial performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.751 <sup>a</sup>	.564	.561	2.11085
<b>Coefficients<sup>a</sup></b>				
		<b>Unstandardized Coefficients</b>	<b>Standardized Coefficients</b>	
<b>Model</b>		<b>B</b>	<b>Beta</b>	<b>T</b>
1 (Constant)		-5.946		-4.292
RM practices		.500	.751	13.218
		1.386		.000
		.038		.000

**a. Dependent Variable: Financial Performance of hotels**

**b. Predictors: (Constant), RM Practices**

#### **4.2.3 Model 3: SEM model 3 on the linkage and effect between the determinants of revenue management and financial performance**

A structural equation model was tested to achieve objective three, establishing a link and effects between determinants of RM and financial performance. *Figure 4.2.3.1* below presents results that show that the determinants of revenue management explain the variation in hotel financial performance as follows profitability (30.5%), solvency (45.5%), liquidity (17.2%), valuation (20.2%) and efficiency (25.8%) and general financial performance (26.6%). The model results chi-square=2.261 (1df) p=.133 CFI=.998 RMSEA=.018 NFI=.997, indicating that the model fit for

the data was acceptable (Arbuckle, 2020). Hence the hypothesis that **Ho3: There is no statistically significant relationship between the determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya was rejected.**

Chi-square=2.261 (1df) p=0.133 CFI=.998 RMSEA=.018 NFI=.997

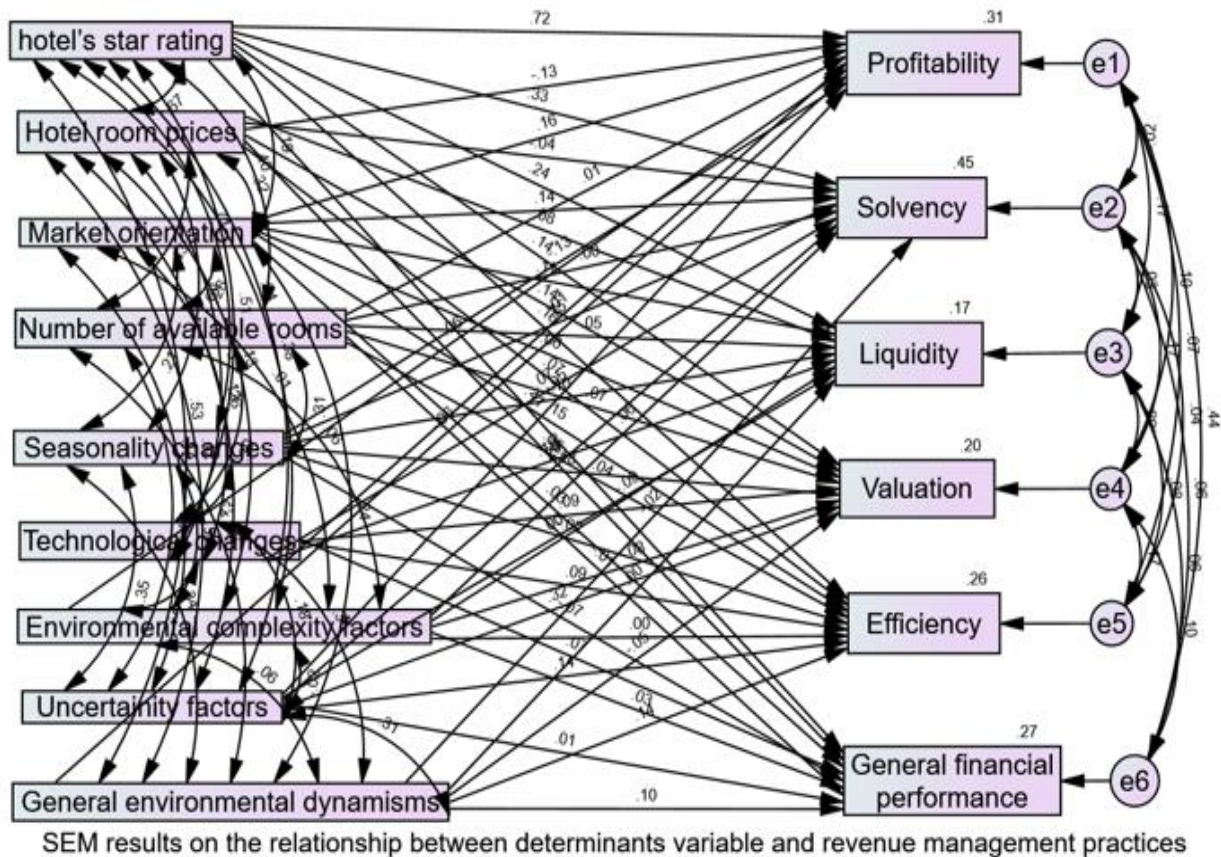


Figure 4.2.3:1: SEM results on determinants and hotel financial performance

#### 4.2.3.1 Star rating and financial performance

Star rating had a significant linkage with all the parameters of the financial performance of hotels profitability (B=.572, P=.001); solvency (B=.557, P=.001); liquidity (B=.228, P=.001); valuation (B=.107, P=.006); efficiency (B=.094, P=.001) and general financial performance (B=.287, P=.002). The findings postulate that it may be true that every other star rating permits the hotel to

raise prices by 25% to 36%, which may translate to better financial performance (Adam & Tomasz, 2017).

#### **4.2.3.2 Market orientation and financial performance**

Market orientation had significant relationship with profitability ( $B=.260$ ,  $p=.024$ ) solvency ( $B=.467$ ,  $p=.001$ ), liquidity ( $B=.217$ ,  $p=.043$ ), and efficiency of hotel ( $B=.322$ ,  $p=.022$ ). The findings affirm that hotels with international orientations boost their performance by introducing fresh productivity expertise (Bernard & Jensen, 2004). Foreign travelers are believed to stay longer and spend more money; hence, increasing the number of reservations by attracting overseas guests is a good idea (Rosenbaum & Spears, 2006). Global client orientation influences business proceeds and is more prolific than domestic market-oriented hotels receiving international clientele (Bernard & Jensen, 1999; Wagner, 2005).

#### **4.2.3.3 Hotel room prices and financial performance**

Hotel room prices had a significant relationship with profitability ( $B=.174$ ,  $p=.007$ ); valuation of the hotel ( $B=.233$ ,  $p=.043$ ). The probability of hotels making higher profits when they have charged their room optimum is high. However, there was an insignificant relationship with other financial performance parameters, which could not be confirmed or contrasted.

#### **4.2.3.4 Available rooms and financial performance**

There was a significant relationship between the number of available room sales ( $B=-0.012$ ,  $p=0.005$ ) and profitability. The hotel's size significantly influences its profitability (Barros & Mascarenhas, 2005; Chen & Tseng, 2005; Israeli, 2002; Rodriguez & Cruz, 2007). Further, Claver-Cortés et al. (2007) showed that the size of a hotel could positively impact hotel profitability by giving it a competitive edge.

#### **4.2.3.5 Seasonality and financial performance**

Seasonality had a significant negative linkage with profitability ( $B=-.176$ ,  $p=.041$ ), liquidity ( $B=-.159$ ,  $p=.023$ ), and a valuation of the hotel ( $B=-.282$ ,  $p=.011$ ) and an insignificant relationship with other parameters. During peak seasons, hotel occupancies are high and may generate more revenue, while during low seasons, the vice versa is true. The hotel sector has turning points characterized by high and low season that affects operations and are linked to the periods when increases in occupancy rates change to lower occupancy levels and consequently fall occupancies which automatically affects financial performance (Tang, 2011).

#### **4.2.3.6 Technological changes and financial performance**

Technological changes had a significant positive linkage with profitability ( $B=.060$ ,  $p=.050$ ), solvency ( $B=.183$ ,  $p=.028$ ), liquidity ( $B=.209$ ,  $p=.010$ ), and efficiency of the hotel ( $B=.130$ ,  $p=.044$ ). Technological changes effectively and efficiently combined in the hotel business can yield better financial performance.

#### **4.2.3.7 Environmental complexity and financial performance**

There were significant negative relationships between environmental complexities with profitability ( $B=-.162$ ,  $p=.005$ ), liquidity ( $B=-.299$ ,  $p=.013$ ), and hotel valuation ( $B=-.268$ ,  $p=.026$ ).

#### **4.2.3.8 Uncertainty factors and financial performance**

Uncertainty factors had a significant negative connection with profitability ( $B=-.162$ ,  $p=.035$ ), valuation ( $B=-.215$ ,  $p=.038$ ), and efficiency of the hotel ( $B=-.754$ ,  $p=.042$ ) but an insignificant negative relationship with other parameters. The findings affirm that the hotel sector has turning points that affect occupancy rates and control risks linked to this uncertainty and volatility, which

are when occupancy rates increase to lower occupancy levels and consequently fall occupancies (Tang, 2011).

#### **4.2.3.9 Environmental dynamism and financial performance**

While environmental dynamics had a significant negative linkage with profitability ( $B=-.067$ ,  $p=.041$ ), valuation of the hotel ( $B=-.060$ ,  $p=.027$ ), and efficiency of the hotel ( $B=-.173$ ,  $p=.033$ ), but insignificant relationship with other parameters of financial performance.

Further, *table 4.2.3.1* below presents Regression Weights: (Determinants of revenue management and financial performance of hotels model) beta at ( $p=0.05$ ) significance levels.

**Table 4.2.3.1: Regression Weights: (Determinants of revenue management and financial performance of hotels model)**

	Profitability R <sup>2</sup> =30.5%		Solvency R <sup>2</sup> =45.5%		Liquidity R <sup>2</sup> =17.2%		Valuation 20.2%		Efficiency R <sup>2</sup> =25.8%		General financial performance R <sup>2</sup> =26.6%	
	B	P value	B	P value	B	P value	B	P value	B	P value	B	P value
Star rating	.572	.001	.557	.001	.228	.001	.107	.106	.094	.161	.287	.002
Hotel room prices	.174	.007	.085	.524	.151	.157	.233	.043	.096	.412	.058	.659
Market orientation	.260	.024	.467	.001	.217	.043	.095	.493	.322	.022	.042	.715
Available rooms	.006	.005	-.052	.231	.025	.572	.047	.319	.020	.671	-.004	.928
Seasonality	-.176	.041	-.094	.087	-.159	.023	-.282	.011	-.110	.329	-.085	.507
Technological changes	.006	.050	.183	.028	.209	.010	.119	.175	.130	.044	.066	.416
Environmental complexity	-.162	.005	.080	.679	-.299	.013	-.268	.026	.007	.977	.085	.655
Un-certainty factors	-.162	.035	.884	.725	.025	.874	-.215	.038	-.754	.042	.043	.867
Environmental dynamism	-.067	.041	.004	.967	.024	.786	-.060	.027	-.173	.033	.103	.253

**Source: author compilation, (2021)**



Further, regression analysis showing the connection between as presented in determinants of revenue management and financial performance ( $R^2=0.209$ , Sig. 0.05), the results in table 4.2.3.2 below indicating that determinants of revenue management explain 20.9% of the variability in financial performance. The findings support that determinants of revenue management have a significant linkage with aspects of financial performance (Sainaghi, 2011).

**Table 4.2.3.2: Regression model 3 of the regression between determinants of revenue management variable and hotel financial performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.457 <sup>a</sup>	.209	.203	2.84419		
<b>Coefficients<sup>a</sup></b>						
		<b>Unstandardized Coefficients</b>	<b>Standardized Coefficients</b>			
<b>Model</b>		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>	<b>T</b>	<b>Sig.</b>
<b>1 (Constant)</b>		<b>1.863</b>	<b>1.752</b>		<b>1.063</b>	<b>.289</b>
<b>Internal and external determinants</b>		<b>.521</b>	<b>.087</b>	<b>.457</b>	<b>5.966</b>	<b>.000</b>
<b>a. Dependent Variable: Financial Performance of Hotels</b>						
<b>b. Predictors: (Constant), Internal and external hotel determinants</b>						

**4.2.4 Model 4: SEM model 4 on the mediation role of RM practices on the relationship between determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya**

A structural equation model was used to test three mediations through (*a. RM policies, implementation, and practice, b. RM techniques, c. RM systems*) to achieve objective four, which aimed at testing test mediation role of RM practices management on the linkage between determinants of revenue and financial performance of hotels. The final test was a full SEM model on the linkage between determinants of revenue management on RM practices and the financial

performance of hotels. The SEM tested the model's defined paths and the indirect effects similarly. The method is equivalent to the regression method for measured and continuous variables. Furthermore, the SEM analysis approach gives model fit information, which indicates how well the anticipated mediational model fits the data. Because attenuation of associations is a potential concern in mediation testing, the SEM technique can solve this issue by removing measurement errors from estimating the relationships among the variables when latent variables are included (Newsom, 2020).

#### 4.2.4.1 Mediation through RM policies, implementation, and practice

The first test on whether RM policies, implementation, and practice mediate the relationship between determinants of revenue management and financial performance was done via SEM, as displayed in *figure 4.2.4.1* below.

Standardized estimates |chi-square=207.273 (114df) p=0.133 CFI=.998 RMSEA=.0364 NFI=.998

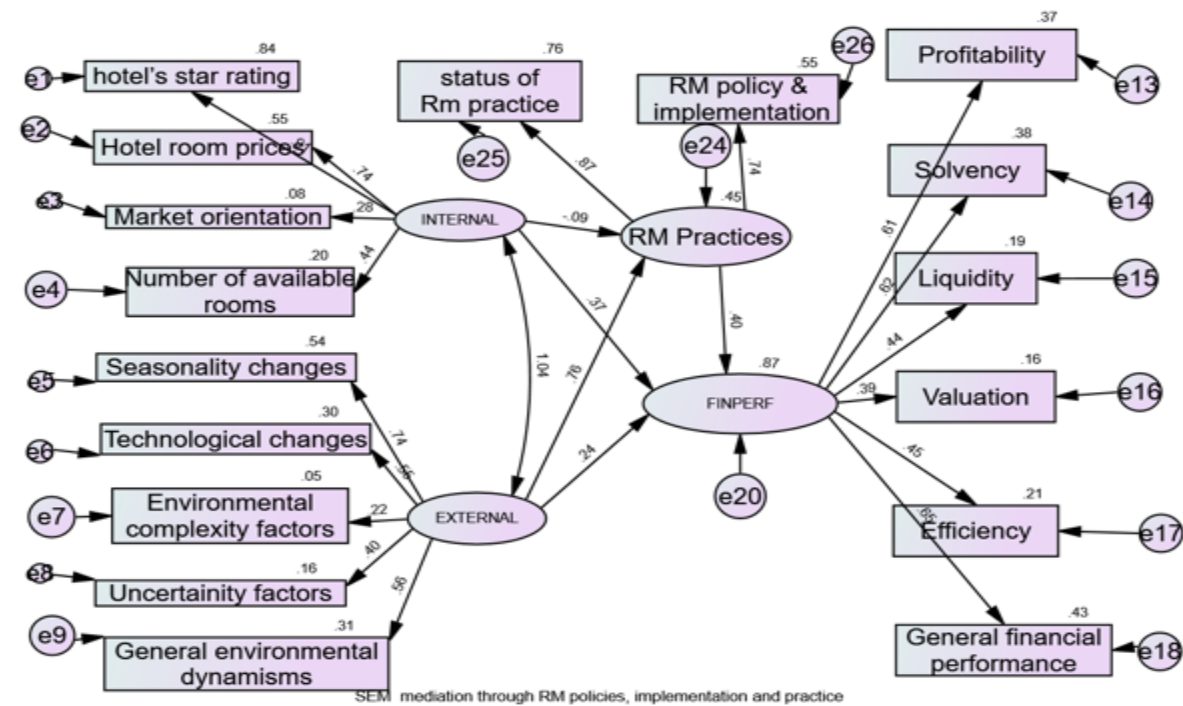


Figure 4.2.4.1: SEM mediation through RM policies, implementation, and practices

Regression weights showing the direct and indirect effects and their significance were extracted, as displayed in *table 4.2.4.1* and *table 4.2.4.2*. The findings reveal that the regression weights between determinants of revenue management (*Internal and external*) and RM (*policies, status of practice, and implementation*) practices as (B=-.065, p=.001; B=.336, p=.029); then, regression weights of determinants of revenue management and financial performance as (B=.182, p=.050; B=.285, p=.001); the regression of RM (*policies, implementation*) practices and financial performance (B=.271, p=.001). For this case, the regression weights of determinants were significant at p=.05.

Further, the results displayed in *table 4.2.4.2* indicate that standardized regression weights in the indirect effects were; external determinants of revenue management (B.307, p=.017) and internal determinants of revenue management (B-.035, P=.003). For a conclusion that mediation exists, the independent variable, mediator, and dependent variable must have a significant partial correlation. An indirect correlation must exist between the dependent and independent variables via a mediator, and their standardized regression weights of indirect effects must be significant. Hence based on the findings, there is partial mediation between determinants of revenue management and financial performance via mediator RM policies, implementation, and practice. Partial mediation maintains that the mediating variable accounts for some, but not all, of the relationship between the independent and dependent variables. Partial mediation implies that there is not only a significant relationship between the mediator and the dependent variable but also some direct relationship between the independent and dependent variables (Maxwell, Cole, & Mitchell, 2011). Though such mediation results affirm that, indeed, some determinants like Revenue management Orientation (RMO) appear to mediate the link between market orientation and hotel performance (Selmi & Chaney's, 2018), while market orientation increases occupancies levels and raised

revenues hence boosting hotel performance (Fissha & Shrestha, 2017). The findings attest that RM reservation policies help financial managers function hotels to assess and improve hotel performance in terms of systems and procedures (Nanishka, 2015).

**Table 4.2.4.1: Regression weights (extracts) for mediation through RM policies**

				Estimate s	SE	CR	P
RM implementation & practice	policies, & <---	Internal		-.065	.683	-.095	.001
RM implementation practice	policies, & <---	External		.336	1.584	.844	.029
Financial Performance	<---	Internal		.182	.301	.606	.050
Financial Performance	<---	External		.285	.660	.431	.001
Financial Performance	<---	RM implementation	(policies, )	.271	.089	4.051	.001

**Table 4.2.4.2: Regression weights (extracts) of direct, indirect, and standardized indirect effects of mediation through RM policies, implementation, and practice**

	Direct effects	Indirect effects	Standardized Indirect Effects	P value
	FINANCIAL PERFORMANCE	FINANCIAL PERFORMANCE	FINANCIAL PERFORMANCE	
External	.285	.362	.307	.017
Internal	.182	-.118	-.035	.003
RM practices	.271	.000	.000	....

#### 4.2.4.2 Mediation through RM techniques

The second test on whether RM techniques (RM tools, RM teams, and integration of social media in RM) mediate the relationship between determinants of revenue management and financial performance was done via SEM as shown in *figure 4.2.4.2 below*.

Standardized estimates |chi-square=236.688 (129df) p=0.315 CFI=.999 RMSEA=.036 NFI=.996

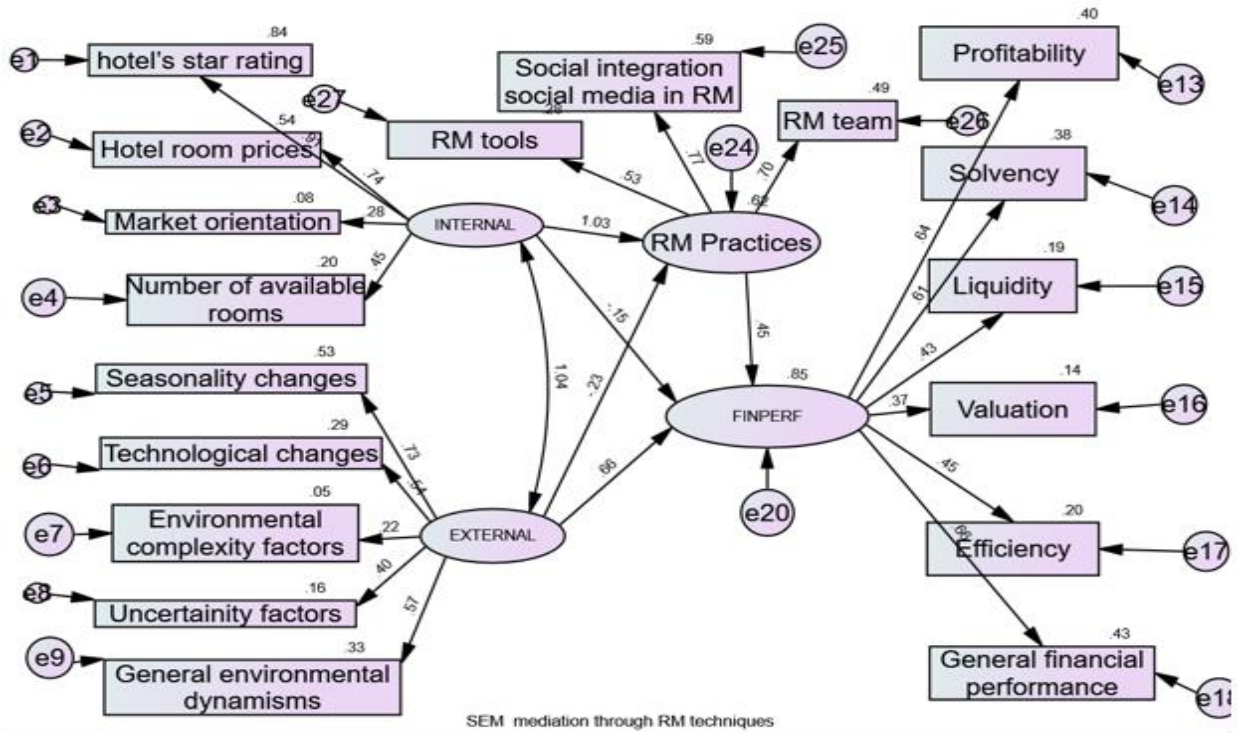


Figure 4.2.4:2: SEM mediation through RM techniques

Regression weights showing the direct and indirect effects and their significance were extracted, as displayed in table 4.2.4.3 and table 4.2.4.4. Determinants of revenue management (internal and external) and RM techniques ( $B=-.568$ ,  $p=.005$ ;  $B=-.289$ ,  $p=.020$ ). The determinants of revenue management and financial performance ( $B=-.074$ ,  $p=.015$ ;  $B=.765$ ,  $p=.006$ ). The RM techniques and financial performance ( $B=.406$ ,  $p=.037$ ). Further, the results displayed in table 4.2.4.4 indicate that standardized regression weights in the indirect effects were; external determinants of revenue management ( $B=.459$ ,  $p=.040$ ) and internal determinants of revenue management ( $B=-.101$ ,  $P=.008$ ). All the relationships were significant  $p=.05$ . For a conclusion that mediation exists, the independent variable, mediator, and dependent variable must have a significant partial correlation; then, an indirect correlation must exist between the dependent and independent variable via a mediator. Their standardized regression weights of indirect effects must be significant. Hence based on the findings above, there is partial mediation between determinants of revenue management and financial performance via mediator RM techniques. By adopting RM teams, RM techniques, and integration of social media into managerial practices, general operations costs are

reduced, affecting the financial performance of these organizations (Ndung'u, 2017). The findings affirm that managerial practices related to revenues significantly impact hotel financial performance (Murigu, Kiragu, and Kiai, 2018), and revenue managerial practices impact the profitability of star-rated facilities (Cherono, 2019).

**Table 4.2.4.3: Regression weights (extracts) for mediation through RM techniques**

			<b>Estimates</b>	<b>SE</b>	<b>CR</b>	<b>P</b>
<b>RM techniques</b>	<---	<b>Internal</b>	<b>.568</b>	<b>.448</b>	<b>1.268</b>	<b>.005</b>
<b>RM techniques</b>	<---	<b>External</b>	<b>-.289</b>	<b>.022</b>	<b>-.283</b>	<b>.020</b>
<b>Financial Performance</b>	<---	<b>Internal</b>	<b>-.074</b>	<b>.351</b>	<b>-.210</b>	<b>.015</b>
<b>Financial Performance</b>	<---	<b>External</b>	<b>.765</b>	<b>.841</b>	<b>.909</b>	<b>.006</b>
<b>Financial Performance</b>	<---	<b>RM Techniques</b>	<b>.406</b>	<b>.195</b>	<b>3.058</b>	<b>.037</b>

**Table 4.2.4.4: Regression weights (extracts) of direct, indirect, and standardized indirect effects of mediation through RM techniques**

	Direct effects	Indirect effects	Standardized Indirect Effects	P value
	FINANCIAL PERFORMANCE	FINANCIAL PERFORMANCE	FINANCIAL PERFORMANCE	
External	.765	.231	.459	.040
Internal	-.074	-.117	-.101	.008
RM practices	.406	.000	.000	....

#### **4.2.4.3 Mediation through RM systems**

The third test on whether RM systems, including three aspects (*the RM data and information, the RM pricing tools, and RM non-pricings tools*), mediate the relationship between determinants of revenue management and financial performance was done as displayed in *figure 4.2.4.3 below*.

Standardized estimates |chi-square=246.997 (129df) p=0.219 CFI=.999 RMSEA=.036 NFI=.996

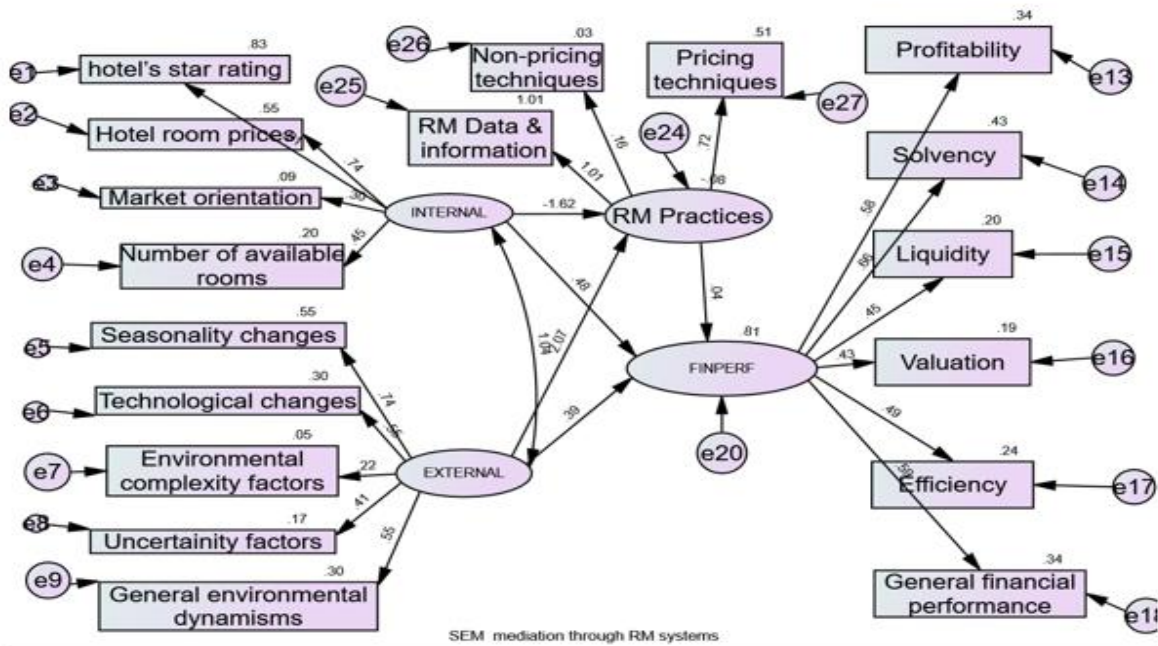


Figure 4.2.4:3: SEM mediation through RM systems

Regression weights showing the direct and indirect effects and their significance were extracted, as displayed in table 4.2.4.5 and table 4.2.4.6. Determinants of revenue management (Internal and external) and RM systems ( $B = -.103, p = .006$ ;  $B = .106, p = .001$ ); while, determinants of revenue management and financial performance are ( $B = .139, p = .007$ ;  $B = .457, p = .009$ ); while RM systems and financial performance ( $B = .176, p = .001$ ). Further, the results in table 4.2.4.6 indicate that standardized regression weights in the indirect effects were; external determinants of RM ( $B = .167, p = .002$ ) and internal determinants of RM ( $B = .037, P = .001$ ). For a conclusion that mediation exists, the independent variable, mediator, and dependent variable must have a significant partial correlation. An indirect correlation must exist between the dependent and independent variable via a mediator, and their standardized regression weights of indirect effects must be significant. All the relationships were significant  $p = .05$ . Hence there is partial mediation between determinants of revenue management and financial performance via mediator RM systems. The findings affirm

that technological innovations/management and their influence on the development of RM strategies, and the findings revealed that each step forward in technology management resulted in more advanced RM capabilities. The outcomes were high efficiency, high occupancy, and greater yields (Guadix, Cortés, Onieva, and Muuzuri, 2010).

**Table 4.2.4.5: Regression weights (extracts) for mediation through RM systems**

			Estimates	SE	CR	P
RM Systems	<---	Internal	.103	.608	.169	.006
RM Systems	<---	External	.106	.398	.791	.001
Financial Performance	<---	Internal	.139	.304	.457	.007
Financial Performance	<---	External	.457	.675	.676	.009
Financial Performance	<---	RM Systems	.176	.057	3.058	.***

**Table 4.2.4.6: Regression weights (extracts) of direct, indirect, and standardized indirect effects of mediation through RM systems**

	Direct effects	Indirect effects	Standardized Indirect Effects	P value
	FINANCIAL PERFORMANCE	FINANCIAL PERFORMANCE	FINANCIAL PERFROMANCE	
Internal	.139	.018	.167	.002
External	.457	.194	.037	.001
RM practices	.176	.000	.000	

The regression model results confirmed that hotels' financial performance was linked to determinants of revenue management, with revenue management practices as a mediator. *Table 4.2.4.7* below shows a link mediating RM practices to the determinants of revenue management and financial performance ( $R^2=0.577$ , sig. 0.05). When RM practices were introduced as a vector mediator in the model, the beta value for the determinants variable dropped to 0.127 from 0.457 (in the direct correlation); (*reference: regression model 3 table 4.2.4.2 in this study*). Thus, it can be concluded that revenue management practices mediate the connection



between determinants of revenue management and hotel financial performance. Hence, the hypothesis that  $H_4$ : Revenue management practices statistically do not significantly mediate the linkage between internal determinants and financial performance of star-rated hotels in Kenya was rejected.

**Table 4.2.4.7: Regression model 4 summary of RM practices as a mediator on the linkage between determinants and hotel financial performance**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.759 <sup>a</sup>	.577	.570	2.08831		
<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients	Std. Error	Standardized Coefficients	T	Sig.
1	(Constant)	-7.355	1.544		-4.764	.000
	RM practices	.459	.043	.690	10.790	.000
	Internal and external hotel determinants,	.145	.073	.127	1.982	.049
a. Dependent Variable: Financial Performance of hotels						
b. Predictors: (Constant), Hotel determinants, RM practices						

### 4.3 Covariances of determinants of revenue management

The four models tested had covariance of determinants, as in table 4.2.4.1 below. Environmental complexity is not correlated with available hotel rooms for sale, hotel room prices, seasonality, technological changes, uncertainty factors, environmental complexity, environmental dynamism, technological and market orientation, and all the other observable variables were correlating as suggested in the literature.

*Table 4.2.4.1: Covariance of determinants of revenue management*

			<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>
Star rating	<-->	Available rooms for sale	.579	.132	4.369	***
Hotel room prices	<-->	Available rooms for sale	.355	.077	4.608	***
Hotel room prices	<-->	Star rating	.395	.061	6.507	***
Market orientation	<-->	Star rating	.090	.042	2.130	.033
Seasonality	<-->	Star rating	.432	.064	6.748	***
Technological changes	<-->	Star rating	.393	.074	5.298	***
Environmental complexity	<-->	Star rating	.068	.025	2.707	.007
Star rating	<-->	Uncertainty factors	.086	.021	4.132	***
Star rating	<-->	Environmental dynamism	.372	.069	5.426	***
Market orientation	<-->	Available rooms for sale	.174	.061	2.883	.004
Seasonality	<-->	Available rooms for sale	.266	.077	3.462	***
Technological changes	<-->	Available rooms for sale	.327	.097	3.370	***
Environmental complexity	<-->	Available rooms for sale	.026	.035	.751	.453
Available rooms for sale	<-->	Uncertainty factors	.018	.027	.654	.513
Available rooms for sale	<-->	Environmental dynamism	.258	.088	2.920	.003
Market orientation	<-->	Hotel room prices	.089	.025	3.512	***
Seasonality	<-->	Hotel room prices	.209	.035	5.974	***
Technological changes	<-->	Hotel room prices	.191	.041	4.605	***
Environmental complexity	<-->	Hotel room prices	.022	.014	1.544	.123
Hotel room prices	<-->	Uncertainty factors	.034	.012	2.956	.003
Hotel room prices	<-->	Environmental dynamism	.171	.038	4.501	***
Seasonality	<-->	Market orientation	.061	.025	2.382	.017
Technological changes	<-->	Market orientation	.047	.032	1.466	.143
Environmental complexity	<-->	Market orientation	.001	.012	.103	.918
Market orientation	<-->	Uncertainty factors	.015	.009	1.631	.103
Market orientation	<-->	Environmental dynamism	.080	.030	2.687	.007
Technological changes	<-->	Seasonality	.199	.043	4.637	***
Environmental complexity	<-->	Seasonality	.026	.015	1.739	.082
Seasonality	<-->	Uncertainty factors	.047	.012	3.827	***
Seasonality	<-->	Environmental dynamism	.143	.038	3.733	***
Environmental complexity	<-->	Technological changes	.023	.019	1.245	.213
Technological changes	<-->	Uncertainty factors	.031	.015	2.101	.036
Technological changes	<-->	Environmental dynamism	.190	.049	3.910	***
Environmental complexity	<-->	Uncertainty factors	-.002	.005	-.284	.776
Environmental complexity	<-->	Environmental dynamism	.011	.017	.654	.513
Environmental dynamism	<-->	Uncertainty factors	.048	.014	3.408	***

#### **4.4 Results for testing the hypothesis**

The summary of the hypotheses explained the relationship between these variables. The findings support the hypothesized links between star rating and hotel financial performance.

Star rating positively impacts RM (Wang, Tian, Li & Hu, 2013). Moreover, star ratings strongly correlate with financial performance (Sainaghi 2011). Star-rated hotels' RM practices effectively raise occupancies rather than achieve significant performance (Ortega, 2016).

In addition, there was a well-established association between market orientation, RM practices, and hotel performance. Foreign visitors stay longer and spend more money, according to Rosenbaum and Spears (2006). As a result, market orientation toward international tourists can increase reservation rates. According to Bernard and Jensen (1999) and Wagner (1999), international service orientation determines hotel revenue. It is more productive than locally oriented hotels that can receive foreign customers (2005). An international orientation enhances the performance of hotels by providing new productivity skills and competencies (Bernard and Jensen, 2004).

There was an established link between available rooms for sale and some aspects of RM practice and financial performance. The findings contradict the notion that a higher number of available rooms for sale influences hotel profitability (Kim et al., 2013) but confirm Withiam (2000), who discovered a negative influence of a higher number of available rooms for sale-related performance.

Seasonality negatively affects RM practices and performance, and each hotel is affected by seasonality (Bergin-Seers, O'Mahony, Galloway, McMurray, & Lee, 2008). Seasonality affects hotel performance due to misaligned systems that substitute commodities in the hospitality sector (Chiutsi & Mudzengi, 2017; Chung, 2009).

Technological advancements are significantly associated with RM practices and financial performance, confirming that computerized RM imposes information gathering and elucidation for managers' use (Mala, 2015). Hotels that use automated RM practices improve efficiency and generate a 37.0 percent increase in financial performance (Kimes, 2010). Guadix et al. (2010) discuss new technological innovation management and its role in developing RM techniques; each technological advancement led to highly sophisticated RM capabilities. The outcomes incorporated high efficiency, high occupancies, and higher yields. As a result, technological advancements and growth have created an enabling environment for further RM growth (Morag, 2013).

Uncertainty factors negatively correlated with RM management practices and financial performance, whereas environmental dynamism had confirmed links with RM management techniques, the risk management team, and performance indicators. The findings confirm that the hotel sector is described by a delayed period of susceptibility, unpredictability, economic instability, political situations, fear-based oppression, and pandemics (Simon, Harry & Katharine, 2015).

There was a confirmed link between revenue management practices and financial performance indicators. The linkage confirmed that aspects such as the RM team contribute significantly to hotel financial performance indicators and that high-level RM skills appear to be increasingly crucial for enhancing hotel performance. Managers' higher level of RM expertise positively impacts hotel financial performance (Ben Aissa and Goaid, 2014). According to Campos et al. (2005), hotels that implement high-quality skill upgrading and approaches that reflect employees' areas of specialization are more critical than those that focus on production optimization. Hotel specifications must be reflected in education and training approaches.

Furthermore, a link was established between RM social media integration, RM data and information, and improved financial and overall hotel performance. This rapid integration of innovative devices, such as social networks and mobile instrument streams, has also impacted RM practice (Noone, McGuire, & Rohlfs, 2011; Sirsi & Varini, 2012).

There was a confirmed link between pricing and non-pricing techniques and hotel financial performance. This study confirms that revenue forecasting techniques, forecast tools, demand, and price procedures impact hotel performance (Duffy & Whitfield, 2013; Haensel & Koole, 2011; Noone & Mattila, 2009). Advanced pricing and revenue management advances add trillions of dollars to many companies' bottom lines that use current commodities and services and consumer groups (Cross, Cross, & Higbie, 2010). When appropriately used, revenue management systems (RM) directly produce about a 5-10% rise in sales and an advanced level of occupancies during low peaks in the business cycles of hotels (Morag, 2013).

## CHAPTER FIVE

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This thesis has hypothesized and verified models that describe how determinants of revenue management and revenue management practices influence the financial performance of Kenyan star-rated hotels. The following is the chapter's structure: contribution to knowledge gaps and study implications for policymakers and practitioners' research's limitations, future research ideas, and conclusion. Further, the chapter summarizes the findings and recommendations for future studies.

#### **5.1 Determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya**

This study found two critical types of determinants influencing revenue management. The internal and external determinants were investigated and found to influence star-rated hotels' revenue management practices and financial performance. The confirmatory factor analysis revealed that some determinants had low factor loading below the required standards; hence they were dropped. The dropped ones were the number of years in operations, hotel location, chain affiliation, and last refurbishment. Internal determinants found to have huge impacts include; star rating, available rooms, room prices, and market orientation. And the external determinants included; technology changes, seasonal variations, environment dynamism, environment complexity, and the uncertainty of the environment. The findings confirms to the internal determinants of revenue management identified by past research (Agiomirgianakis, Magoutas, & Sfakianakis, 2012; Kaminski & Smith, 2016), and external determinants of revenue management (Abrate & Viglia, 2016; Soohyang, Hee-Chan, & Seul, 2016).

This study established the link and effects of determinants of revenue management and RM practices of hotels in Kenya. The determinants of revenue management explain a variation in RM

practices as follows; status of RM practice (40.1%), RM techniques (20.6%), RM policy and implementation (20.9%), Pricing techniques (17.6%), RM team (33.2%), RM social media integration (38.5%), non-pricing techniques (25.1%) and RM data and information (29.7%). The model results chi-square=68.328(23df) p=.064, CFI=.952, RMSEA=.045, and NFI=.983. The model results indicated that the model fit or the data was acceptable (Arbuckle, 2020). Hence the hypothesis that, ***H<sub>01</sub>: There is no statistically significant link between the determinants of revenue management and their effects on revenue management practices in star-rated hotels in Kenya was rejected.***

Further, regression analysis results ( $R^2=0.228$ , Sig. 0.05) reveal that determinants of revenue management account for 22.8% of the variation in RM practices, an indication that the star rating, market orientation, application of new technologies drive revenue operations in hotels for competitive advantage, and factors like competitors, unstable economic and market conditions hinder the fruitful adoption of revenue management practices. Hence, this confirms that the technology, seasonality, and unpredictability rates in the environment considerably influence the revenue management practices in hotels (Awang et al., 2008). The findings support that determinants of revenue management star rating, market orientation, hotel classification, hotel prices, and affiliation to the chain are the variables for successful revenue management (RM) (Abad, et al., 2019; Jeffrey & Barden, 2000a; Wang, Tian, Li & Hu, 2013). Further, seasonality, technological changes, environmental uncertainty, complexity, and dynamism have implications for the practices of the RM in the hospitality sector (Chiutsi & Mudzengi, 2017; Chung, 2009). For instance, computerized RM has expanded the efficiency of RM operations (Kimes, 2010). While delayed periods of susceptibility, the unpredictability of the economy, instability of political

situations, oppression based on fear, and pandemics negatively affect the practice of RM in hotels (Simon, Harry & Katharine, 2015).

## **5.2 Revenue management practices and their effects on the financial performance of star-rated hotels in Kenya**

The reasons for practicing RM in Kenyan hotels were to forecast the development of the hotel, reduce costs, improve yield and generate revenue. The findings of the study revealed that about 40.9 percent have entirely operationalized RM practices in their facilities; while, 59.1% of hotels are not compliant with RM practices, which could be one reason for the dismal performance. Further, in terms of the expertise of revenue managers, 9.5% have basic skills, 38% have intermediate skills, 35.8% are experts, and 16.8% are advanced-level skills. RM experiences for staff are complicated; hence, employees need to be knowledgeable and competent to meet RM issues (Gurel et al., 2016). Hence, upholding that revenue management is more useful than traditional restaurant methods (Karmarkar & Dutta, 2011).

This study established a linkage between RM practices and aspects of the financial performance of hotels. The RM practices explain variation in hotel financial performance as follows, profitability (42.1%), solvency (24.2%), liquidity (20.0%), valuation (13.2%) and efficiency (15.0%). The model results chi-square=3.005 (2df)  $p=.223$  CFI=.998 RMSEA=.0320 NFI=.996, indicating that the model fit for the data was acceptable (Arbuckle, 2020). Hence, the hypothesis that ***H<sub>02</sub>: There is no statistically significant link between the revenue management practices and their effects on the financial performance of star-rated hotels in Kenya was rejected.***

Further regression analysis ( $R^2=0.564$ , sig. 0.05) revealed that RM practices account for 56.4 percent variation in hotel financial performance. The findings show that RM practices from a dataset from rated hotel chains effectively increase occupancies rather than making more significant alterations (Ortega 2016). In addition, advances in management technologies lead to a



more complex revenue generation business capability, with performance measures such as efficiency rate, occupancy, and yield (Guadix et al., 2010).

### **5.3 Determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya**

The study established the link between determinants of revenue management and hotel financial performance. Determinants of revenue management explain the variation in hotel financial performance as follows profitability (30.5%), solvency (45.5%), liquidity (17.2%), valuation (20.2%) and efficiency (25.8%), and general financial performance (26.6%). The model results chi-square=2.261 (1df) p=.133 CFI=.998 RMSEA=.018 NFI=.997, indicating that the model fit for the data was acceptable (Arbuckle, 2020). Hence the hypothesis that *H<sub>03</sub>: There is no statistically significant relationship between the determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya was rejected.*

Further, regression analysis results ( $R^2=0.209$ , Sig. 0.05) reveal that determinants of revenue management explain 20.9% of the variation in financial performance. The findings support that determinants of revenue management have a significant linkage with aspects of financial performance (Sainaghi, 2011). For instance, a star rating permits the hotel to raise prices by 25% to 36%, which may translate to better financial performance (Adam & Tomasz, 2017). The hotel's size significantly influences its profitability (Barros & Mascarenhas, 2005; Rodriguez & Cruz, 2007). International market orientations boost financial performance by introducing fresh productivity expertise (Bernard & Jensen, 2004). A hotel's size could positively impact its profitability by giving it a competitive edge (Claver-Cortés et al., 2007). External determinants like seasonality turning points characterized by high and low seasons affect operations. They are linked to the periods when increases in occupancy rates change to lower occupancy levels;

consequently, full occupancies are also affected by uncertainties, complexity factors, and the dynamism which automatically affects financial performance (Tang, 2011).

#### **5.4 Mediation role of RM practices on the relationship between determinants of revenue management and their effects on the financial performance of star-rated hotels in Kenya**

The study established mediation between RM practices on the linkage between determinants of revenue management and hotel financial performance. The regression analysis ( $R^2=0.577$ , sig. 0.05) revealed that RM explains a variation of 57.7% in financial performance. When RM practices were introduced as a vector mediator in the model, the beta value for the determinants variable dropped to 0.127 from 0.457 (in the direct correlation); (*reference: regression model 3 table 4.2.4.2 in this study*). Thus, it can be concluded that revenue management practices mediate the relationship between determinants of revenue management and hotel financial performance. *Hence, the hypothesis that  $H_4$ : Revenue management practices statistically do not significantly mediate the linkage between internal determinants and financial performance of star-rated hotels in Kenya was rejected.*

By adopting RM practices, RM reservation policies help financial managers function hotels to assess and improve hotel financial performance in terms of systems and procedures (Nanishka, 2015). Incorporating RM practices in the hotel business reduces general operations costs, affecting the organizations' financial performance (Ndung'u, 2017). Hence, RM managerial practices significantly impact hotel financial performance (Murigu, Kiragu, and Kiai, 2018), and revenue managerial practices impact the profitability of star-rated facilities (Cherono, 2019). The findings affirm that technological innovations influence the development of RM practices, and advancement in technology management resulted in more advanced RM capabilities that led to high efficiency, high occupancy, and greater yields (Guadix, Cortés, Onieva, and Muuzuri, 2010).

## **5.5 Contribution to the knowledge**

This thesis has three frontiers: theoretical, empirical, and methodical contributions.

### **5.5.1 Theoretical contribution**

Previous research revealed that studies using contingent theory to explain the determinants of revenue management in hotel sector RM practices are still scarce. Only a few researchers have used specific contingency variables without citing contingency theory. However, in other circumstances, like developing countries, and without an emphasis on contemporary elements of RM practices, (Chenhall 2007, & Wadongo, 2014) observed that updating and generalizing contingency theory across disciplines is becoming increasingly difficult. Despite its flaws, the contingency approach is still a viable hypothesis for determining how internal and external determinants relate to hotel financial performance in today's dynamic and complex hotel sector. Consequently, this thesis contributes to developing and explaining how RM practices influence hotel financial performance in Kenya's star-rated hotels. This thesis used structural equation modeling to fit models using the following contingency determinants of RM as a variable. The variables included star ratings, hotel location, available rooms, hotel market orientation, seasonality, technological changes, environmental complexity, uncertainty, and environmental dynamism.

A conceptual framework's foundation was built on the preceding theoretical reasoning and empirical investigation into determinants of revenue management using contingency theory. The structural modeling approach has been used to classify contingency-based management studies. A literature review finds certain drawbacks in the methodology used to pick the variables to study and the interaction between those variables (Chapman, 1997, Wadongo, 2014). Some research suggested that if applied rightly, revenue management practices could improve hotel financial performance and that future studies should explore this possibility further. The findings have

established that RM practices mediate the relationship between the determinants of revenue management and the hotel industry's financial performance. The structural model parameter estimates between the components were construed carefully not to infer causality and demonstrate the mediating role of RM practices. A theoretical contribution is thus made by this thesis concerning the fundamental principles of developing a framework explaining the relationship between determinants of revenue management and their effects on the financial performance of hotels.

### **5.5.2 Empirical Contribution**

The research subject addressed in the thesis contributes to the current discussion on the significance of RM practices in the hospitality business. Hotel RM theory differs from how it is applied in practice, which is the emphasis of this study. Despite the importance of RM methods to hotels and frequent requests for study in the field, a literature survey indicated that research in star-rated hotels is still limited. Consequently, this study filled in the knowledge gap by looking at RM practices from the point of view of financial controllers of star-rated hotels; and further explaining the links between determinants, RM practices, and their influence on financial performance using structural equation modeling.

RM practices for the hotel sector have been extensively presented in the literature; however, empirical evidence was lacking to confirm the relevance or merits of employing revenue management practices and their influence on financial performance (Teelken, 2008). This study found that various RM practices considerably affect the financial performance of Kenyan star-rated establishments. RM is an essential tool in today's hospitality business, and it deserves to be given an opportunity. Hotels should embrace RM techniques and computerize RM since they generate a 37.0 percent change (Kimes, 2010). The results empirically show that RM practices

mediate between the determinants of RM and hotel financial performance. This thesis also presented empirical data on the mediating effects of RM practices on links between factors and hotel financial performance.

Despite recent development and the role of the hotel business, particularly in emerging nations, RM studies in this industry lags. According to the analyzed literature, only a few RM studies in the hotel sector were conducted in emerging countries. This study used star-rated Kenyan hotels since they operate and contribute to the developing economy in Africa's Sub-Saharan region. The study context constitutes a lively, structured, and controlled industry in a politically steady emerging nation with hybrid national and devolved government systems. The researcher examined the generalizability of revenue management practices in various situations because of the hotel business in a developing country.

### **5.5.3 Methodical contribution**

Covariance Based-Structural Equation Modeling (CB-SEM) is an approach that is rarely used in revenue management research, especially in the hotel business. One drawback of this approach is the possibility of equifinality or the availability of many models that describe connections in a given situation equally well. Nevertheless, recent advancements in structural equation modeling methodologies and technologies have enabled a variety of goodness-of-fit testing for comparing rival modeling techniques (Arbuckle, 2020). The researcher took a four-step method in this investigation. CFA was used to evaluate the measurement models, and path analysis was used to verify the hypothesized correlations. The study adopted the measurement model because it was good enough to proceed with factor scoring estimations using the Full Information Maximum Likelihood stochastic regression model imputation approach for the composite variables. This approach generated composite factor loadings with fair means and variances. For the indirect

effects, we used bootstrapping to get unbiased estimates and significance levels with two sigmas. As a result, this study offers methodological value by using structural equation modeling to investigate the determinants of revenue management and their effects on the financial performance of hotels in Kenya. In future investigations, SEM instruments that have recently undergone advancements may be used to implement similar techniques.

### **5.6 Limitations of the study**

The current investigation used a cross-sectional survey design approach, which was undertaken in time and did not indicate RM practices changes. The study relied heavily on quantitative methods and adopted field research to answer the secondary questionnaire. This research was limited to star-rated hotels in Kenya; therefore, conclusions may not apply to other industries, such as the commercial industry and government.

The sampled hotels across the country were only those operating between January and July 2021 (within the Covid-19 era), mainly reflecting the continued easing of COVID-19 restrictions and increased compliance with the health protocols. Travel restrictions were lifted in and out of Nairobi metropolitan and Mombasa, and international flights resumed. A government appeal to the local guests to continue supporting accommodation and restaurant services in the sector during the COVID-19 pandemic.

A brief of the Covid-19 situation in Kenya; - Effective Friday, 27<sup>th</sup> March 2020; a Daily Curfew from 7 p.m. to 5 a.m. was effected by presidential order in the territory of the Republic of Kenya, with all movement by persons not authorized to do so or not being Medical Professionals, Health Workers, Critical and Essential Services Providers, being prohibited between those hours. The positivity rate fell from 13% in June then 7% in July 2020 to a low of 4%; the decision to re-open the country was made on 27<sup>th</sup> September 2020. In the grip of its third COVID-19 wave, some parts

of the country were locked down on Friday, 26 March 2021; Nairobi city had recorded 60% of all Covid-19 cases countrywide. The country's death rate had climbed from three a day in January 2021 to seven in March 2021. To avoid a national health crisis, the President ordered Nairobi city and its metropolitan areas to be declared disease-infected and, therefore, cessation of movement by road, rail, and air in and out of these counties as one zoned area. Then on May 1<sup>st</sup>, 2021, lifted, the COVID-19 lockdown allowed for a reopening of some hotel facilities like bars that were not operational.

COVID-19 affected the study in two ways; some targeted star-rated hotels were not operational because they were slow to comply with COVID-19 health protocols during that period. Further, the situational and protocols observed during COVID-19 prolonged the data collection period, causing delays in response from respondents.

Secondly, CB-SEM models were preferred to PSL-SEM. After CFA, the researcher had many latent variables that he could not use. The researcher utilized bootstrapping to guarantee that the path model's interpreted parameter estimations were unbiased. However, readers are warned that using composite scores rather than latent factors may result in some loss of predictive ability.

Finally, this research is one of the few that has looked into the mediation role of RM practices on the links between determinants of revenue management and financial performance in the hospitality industry. Several developing research challenges, for instance, the breakdown of the mediation role of specific RM elements and multi-group analyses of the moderation impacts of various hotel sector characteristics, could not be addressed. As a result of this flaw, systemic mistakes could be introduced, skewing the results. However, the numerous benefits of putting the concept to the test outweighed the disadvantages of the new problems.

Notwithstanding these drawbacks, this study got essential data that has shed light on how RM practices mediate the relationship between determinants of revenue management and the financial performance of the Kenyan hotel business. So the research's limitations open the door to many new future investigation options.

### **5.7 Conclusion and suggestions for future research**

The research demonstrated how determinants of revenue management and RM practices influence the Kenyan hotel sector's financial performance using a mediation model developed in this thesis. For example, using an independent sample to cross-validate, the model would improve its validity and reliability while enhancing the findings' applicability. Furthermore, subsequent research could propose and test different mediating or moderating frameworks in the hotel sector by employing an alternate modeling technique in SEM. Other countries with developing economies, especially those in Africa and elsewhere, might conduct similar research. While the present investigation used a field cross-sectional survey methodology, a more comprehensive longitudinal study employing alternative methods would be beneficial to determine whether the RM practices examined here and their effects on financial performance are stable over time.

RM policies and implementation, RM systems, and RM tools context remain understudied in revenue management relative to performance management, providing a chance for future research to concentrate on small model areas. The current study measured factors using a general survey instrument because of the wide range of perspectives on latent variables from the literature and the field study. As the researcher developed several indicators, future research may enhance the assessment of the latent variables, which generally include internal and external factors, RM practices, and hotel financial success.



A literature review found a dearth of research in management science based on a contingency approach that addressed revenue management in the hotel industry. External variables, in particular, have received scant attention. According to this thesis, technical advances, seasonality, environmental conditions, and uncertainty all impact the design and adoption of effective RM strategies in the hotel industry, while others have no bearing. Furthermore, this thesis has shown that different revenue management strategies substantially affect the financial performance of different domains. Studies in other hospitality sectors may want to look at the generalizability of these outcomes in future research. Lastly, further revenue management research that combines various study fields, such as merging management science and hotel management viewpoints, is still required. This study would improve the generalizability of revenue management frameworks created in management science to other contexts, such as hospitality and tourism.

## **5.8 Recommendations**

For an effective execution and capitalization from revenue management strategies in the hotel business, hoteliers should fit the internal and external drivers of revenue management with financial performance. This finding proposes that hotels can diagnose and find appropriate solutions to decreasing occupancy rates by successfully implementing RM practices. In addition, the mismatch between determinants of revenue management and hotel financial performance in Kenya should be addressed.

As a result of the research, we now understand the subject better. Scholars and practitioners in the hotel sector in Kenya and developing nations may respond to, absorb, and build upon these study results. This research was notable since it expanded the understanding of management science and contributed significantly to the academic literature on hotel RM. Despite the study's shortcomings, like lack of generalizability and a few cases, the study complements the growing body of

knowledge on revenue management and performance management in the hotel business. This thesis combines management science and hotel management views in response to prior literature demands for integrating multiple disciplines (Chenhall, 2007; Lecy et al., 2011, Wadongo & Abdel-Kader, 2014). Subsequent empirical research can use this study's findings to cross-validate the model in more comprehensive surveys.

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**APPENDICES**

***Appendix I: Questionnaire***

I am Michael Murimi, a post-graduate student at Maseno University. I have been permitted to conduct a study on **“Determinants of Revenue Management Practices and their effects on Financial Performance of Star Rated Hotels in Kenya.”**

As a result, I would like to collect data from your hotel to meet the study's goal. Your hotel is one of the study's sampled units. You will be able to contribute to the hospitality sector's growth and development by participating in this survey. This inquiry will take us less than 30 minutes to complete. The information collected in the questionnaire will be kept private and used solely for the study. Your name will not be associated with the information. The research is entirely voluntary; hence the participant has a right to withdraw if they feel uncomfortable. There will be no monetary remuneration for participating in the study, and participants are not at risk.

The study's findings are expected to assist close revenue management gaps in the hospitality sector and boost the hotel sector's economic development for the benefit of all stakeholders.

- 1. If you have any questions or would like to clarify anything about participant rights, participation, or the entire research project, kindly make inquiries to:

**The Secretary, Maseno University Ethics Review Committee, Private Bag, Maseno; Telephone Numbers 057-51622, 0733230878, 0721543976, 0722203411, Email: muerc-secretary@gmail.com; muerc-secretary@maseno.ac.ke;**

- 2. Suppose you have concerns about the study that need to be addressed. Kindly contact:

**Michael Murimi, P.O. Box 109, 60100, Embu. Telephone Number is 0720 080359 Email: njue2010@gmail.com.**

Appending your signature below signifies consent to participate in the research

.....

Respondent Signature

**INSTRUCTIONS:** Kindly answer ALL QUESTIONS in each section as structured below. DO NOT indicate the name of the organization or your name anywhere in this questionnaire.

**Section A**

A .1. What is your current position in this hotel?.....

**B2. HOTEL INTERNAL DETERMINANTS**

B.1. what is your hotel’s star rating?

One star [ ]

Two-star [ ]

Three-star [ ]

Four-star [ ]

Five-star [ ]

B.2. the location of the hotel

Urban	
Semi-urban	
Rural	

B.3. what is the belonging of this hotel?

Chain affiliated [ ]

Independent [ ]

B.4. How long has the hotel been in existence?

Less than five years	
6-10 years	
11-15 years	
16-20 years	
Over 21 years	

B.5. When was the last refurbishment of the hotel done?

Less than five years ago	
6-10 years ago,	
11-15 years ago,	
16-20 years ago,	
Over 21 years ago	



**B.6. The number of available rooms for sales in this hotel**

Less than 100 rooms	
101-200 rooms	
201-300 rooms	
301-400 rooms	
401-500	
Over 501 rooms	

B.7. The number of beds available for sale.....

**B8. Rate your hotel room prices based on the following** (please, tick in the boxes on the table below against each statement)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Room prices are fixed until the subsequent reviews.					
The hotel has low-season and high-season prices.					
The hotel uses local and foreign visitor prices.					
Room prices vary according to the market being quoted.					
Room prices are fixed with different discounts to different identified market segments.					
When occupancy is low, this hotel lowers the prices					

B9. Rate the following regarding the market orientation of the hotel (tick in the boxes on the table below)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Market orientation for this hotel is customer-oriented					
The hotel caters to the wants and needs of its clientele.					
Hotel practices the following; information gathering and dissemination and a quick response to current and future customer needs and preferences					

### C. HOTEL EXTERNAL DETERMINANTS

C.1. Please indicate below your agreement on how seasonality affects your hotel? (Please, tick in the boxes on the table below against each statement)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Hotel experiences low and peak customer seasons					
Hotel is affected by seasonal fluctuations of clients					
Hotels may be able to predict seasonal fluctuations					
Seasonal fluctuations of clients affect bookings/reservations of this hotel heavily					

**C.2. Please indicate below your agreement on how technological changes have affected your hotel.** (Please, tick in the boxes on the table below against each statement)

	Strongly Disagree	Disagree	Neither nor Disagree	Agree	Agree	Strongly agree
The hotel has adopted technological innovations in its operations						
Technological changes have improved operations in this hotel						
Technological innovations adopted are vital in gathering information						
The innovations are used in trailing prices						
The innovations are used in forecasting						
Technological changes have increased hotel efficiency						

**C.3. Rate how the following environmental complexity factors affect your hotel business** (please, tick in the boxes on the table below against each statement); Never to highly

	Never	Rarely	Lowly	Moderately	Highly
The concentration of competitors within this location					
The concentration of target customers within this region					
Labor availability					
Variety of products/services provided by the hotel					
The geographic location of the hotel					

**C.4. Rate how the following environmental uncertainty factors affect your hotel** (please, tick in the boxes on the table below against each statement) (never to high)

	Never	Rarely	Lowly	Moderately	Highly
Changes in guest room rates					
Changes in labor availability					
Changes in demand for guest rooms					
Changes in competitive tactics used by competitors					
Changes in regulatory service and activities					
Changes in customers' tastes and preferences					
Oppression by fears and Pandemics					
Changes in market structures					

**C.5. Please indicate below your agreement on how the following environmental dynamism has generally affected your hotel.** (Please, tick in the boxes on the table below against each statement)

	Very rarely	Rarely	Occasionally	frequently	Very frequently
Regulatory environment (laws, regulations, policies)					
Social-economic environment (inflation, population, crime, disasters)					
Political and security aspects (elected leaders, politics, violence)					
Technologique environnement (innovations, ICT)					

**D. THE REVENUE MANAGEMENT PRACTICES**

*“Revenue Management (RM) operational definition: The hospitality term “revenue management” (RM) refers to a variety of strategies for increasing a hotel's revenue and profitability by manipulating room rates and reserving room allocations. RM strives to make the most efficient use of existing hotel beds, occasionally allocating bed capacity to guests with varying revenue-generating potential through discriminatory pricing strategies. It is crucial when there is either too much demand or too little capacity in hotels.”*

**D.1.1. Is your hotel's revenue management (RM) formally practiced?** (Tick appropriately against responses in the spaces provided);

- a) Fully [ ]
- b) Slightly [ ]
- c) Have heard the expression but do not understand the meaning [ ]
- d) Never heard of the term before today [ ]

**D.1.2. Rate the importance of RM practices in your hotel.**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Predicts growth of the hotel					
Improves yield					
Reduces costs					
Generates revenue					

D.1.2. Rate your extent of expertise in Revenue management

- Null Skills [ ]
- Basic Level [ ]
- Intermediate Level [ ]
- Expert Level [ ]
- Advanced Level [ ]

**D2. RM policies and implementation**

**(Indicate the extent of agreement with the following statement regarding RM policies and implementation)**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The hotel applies revenue management policies					
There is somebody in charge of revenue management implementation in the hotel					
The hotel inducts new employees on RM policies					
RM policies are regularly used when making decisions					
It is my role as a revenue manager to oversee the implementation of RM policies					
The management support implementation of RM policies to the core.					
RM policies have helped us manage the finances of this hotel					

**D.3.1. RM techniques**

**(Rate how often the following RM techniques are used in your hotels)**

	Very rarely	Rarely	Occasionally	frequently	Very frequently
Price optimization tool					
Dynamic pricing tool					
Revenue forecasting					
Demand forecasting					

D.3.2. Do you identify this hotel as having an RM team in its dealings?

Yes [ ]

No [ ]

D.3.3. how much do you feel like part of the RM team at the hotel?

a) Very much so [ ]

b) Not very much. [ ]

c) Not at all. [ ]

d) I do not know. [ ]

**D.3.4. Indicate your agreement with the following statement regarding the revenue management team**

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The revenue management team is knowledgeable and skilled					
RM employees have the right attitude for their Job.					
RM team is capable of handling RM challenges					
RM team is a team of integrity					
We rarely handle RM unethical issues					

D.3.5 Rate the use of the following social media tools on revenue management

	Very rarely	Rarely	Occasionally	Frequently	Very frequently
The hotel is fully engaged in social media integration on RM activities					
The hotel has embraced social media to handle clients' issues related to RM, bookings, pricing.					
Integration of social media contributes to the financial performance of your hotel					

D.4.1. Does the hotel operate an RM (Revenue Management) system?

Yes [ ]

No [ ]

D.4.2. Please tick the appropriate response (s) about RM statements below.

Does your hotel use any of the following RM systems?

- a) Hotels own in-house system, [Yes/NO ]
- b) Multiple hotels a centralized system, [Yes/NO ]
- c) Contracted RM service from corporate centers, [Yes/NO ]
- d) Outsource this function to third-party vendors, [Yes/NO ]
- e) Combination of these strategies (Mixed) [Yes/NO ]

D.4.3. Does your hotel use the following RM software?

- a) Automation of revenue collection (RM software, [ Yes/ No ]



- b) Demand management  Yes/ No
- c) Price optimization software,  Yes/ No
- d) Revenue forecasting software,  Yes/ No
- e) Reservations software,  Yes/ No
- f) Integrated RM software)  Yes/ No

D.4.4. Which of the following brand of RM software does your hotel use?

- a) Frequency Opera
- b) Delphi
- c) Trust
- d) Elektra
- e) RateGain
- f) Reseliva
- g) Erbasoft
- h) Hotel runner
- i) Ideas
- j) Amadeus RMS
- k) Others, specify.....[  ]

D.4.5. Are all revenue centers in this hotel integrated into RM software

Yes

No

**D.4.6. Rate your hotel in terms of RM data and information: -**

	Very rarely	Rarely	Occasionally	frequently	Very frequently
The hotel provides clients with relevant information on prices and reservation conditions					
The hotel provides discounts in reservation rates in exchange for stricter cancellation/amendment conditions					
The hotel offers significant price discounts in exchange for stricter cancellation/ amendment conditions					
The hotel provides various prices for products perceived by clients as different, e.g., weekend and weekday prices					
The hotel provides Changes in reservation terms without \ informing the clients)					

**D.4.7. Indicate your hotel's source of RM Data and information**

- a) Shopping
- b) Global Distribution Systems (GDS)
- c) Third-Party Data Providers
- d) Electronic Distribution Systems

**D.4.8. Rate your hotel on the use following pricing techniques**

	Very rarely	Rarely	Occasionally	frequently	Very frequently
The erection of rate fences					
Price discrimination					
Lowest price guarantee					
Dynamic and behavioral pricing					
Other techniques specify.....					

D.4.9. Compare your hotel prices with the prices charged by the competitors of the same rating.

- a) This hotel's prices are lower than those of competitors [ ]
- b) This hotel's prices are the same as those of competitors [ ]
- c) These hotels' prices are higher than those of competitors [ ]
- d) I do not know [ ]

D.4.10. Rate the use of the following non-pricing techniques in your hotel

	Very rarely	Rarely	Occasionally	frequently	Very frequently
Capacity management,					
Overbookings,					
Length of stay control					
Room availability guarantee					
Channel management.					
Others, specify.....					

## E. HOTEL FINANCIAL PERFORMANCE

E.1. (Indicate the extent of agreement with the following statement regarding the profitability of the hotel in the last financial year, 2019/2020)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
Gross profit increased					
The hotel generated more revenue (met the revenue target)					
There were increased net profit margins					
The hotel was able to break even					
Substantial returns were generated for the hotel shareholders					
There were higher returns on assets					

E.2. (Indicate the extent of agreement with the following statement regarding the solvency of the hotel)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
There were low debts compared to equity					
Low debt led to high returns					

A low percentage of hotel assets as financed by debt					
The hotel has a high property base					
Owners' funds finance the hotel business					
The hotel can pay its interest on outstanding debts obligations					

E.3. (Indicate the extent of agreement with the following statement regarding the liquidity of the hotel)

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
The hotel meets its short-term obligations using most of the liquid assets					
The hotel can pay its expenses without receiving any additional cash inflow					
The period between cash outflow and cash inflow is short.					

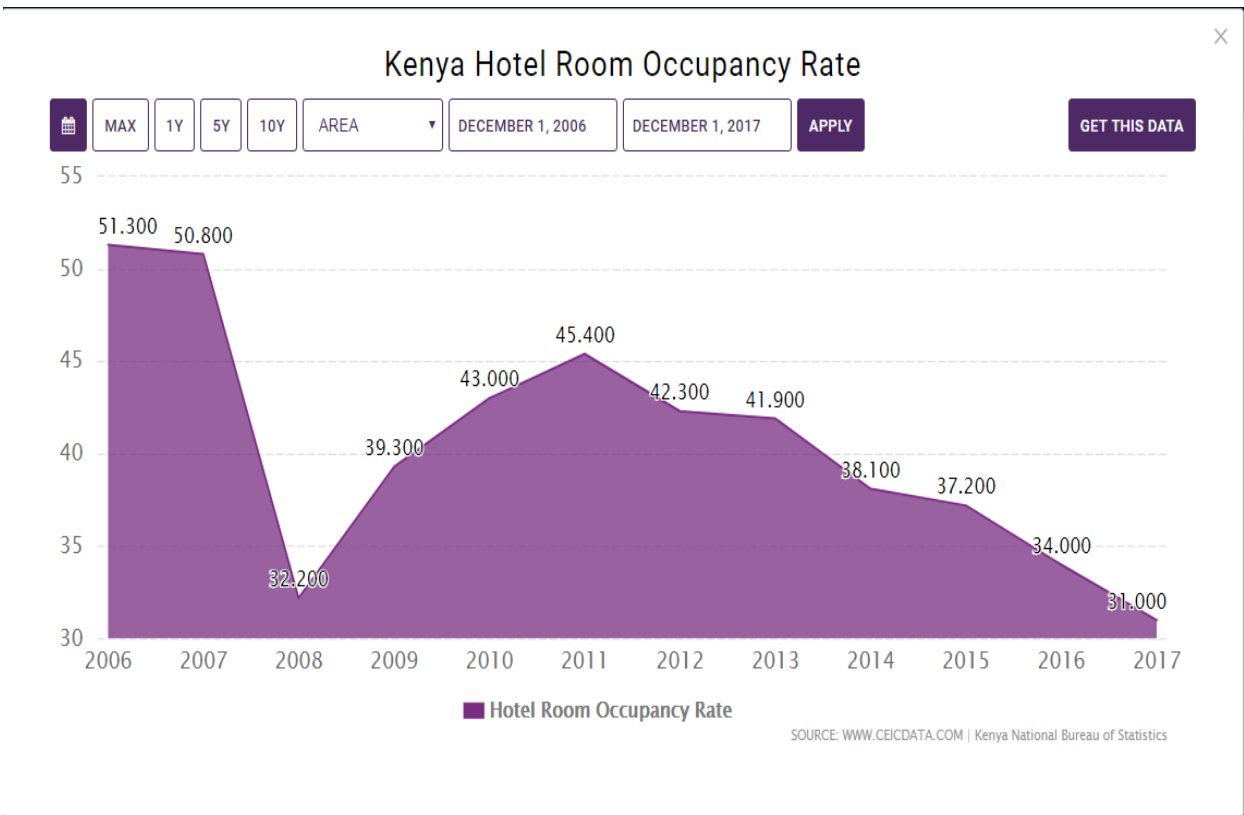
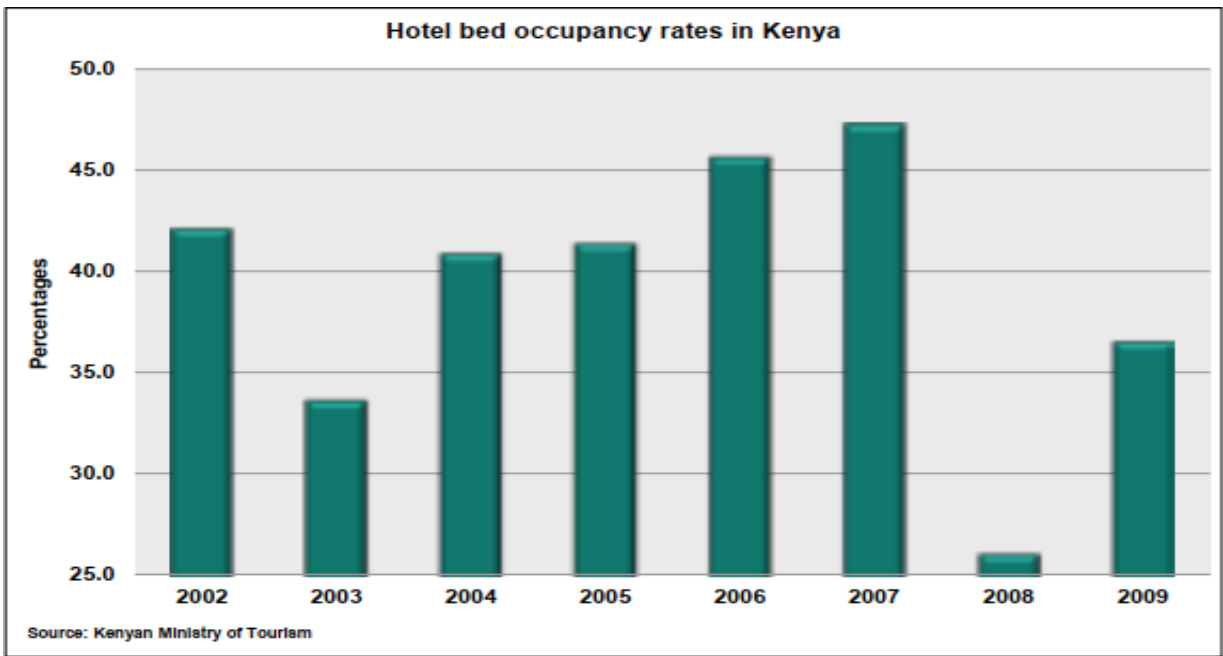
E.4. (Indicate the extent of agreement with the following statement regarding the efficiency of the hotel)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
The hotel takes a shorter period to collect money owed by customers					
The hotel takes a shorter period to pay short-term debts					
The hotel can generate more sales from its fixed assets					
Hotel equipment and inventory are used in an efficient way					
Hotel equity is used efficiently for the benefit of hotels.					

E.5. (Indicate the extent of agreement with the following statement regarding the valuation of the hotel)

	Strongly Disagree	Disagree	Neither nor Disagree	Agree	Strongly agree
The hotel collected higher revenue last financial year					
The was a high total value of the hotel (Assets-liabilities=high value)					
The hotel is aiming to generate more earnings in the coming few years					

**APPENDIX II: KENYA HOTEL ROOM OCCUPANCY RATE 2002-2017**



Summary of the above diagrammatic graph on Kenya Hotel Room Occupancy Rate

Name	Kenya Hotel Room Occupancy Rate
Country	Kenya
Source	Kenya National Bureau of Statistics
First Date	2002
Last Updated	21 Nov 2018
Mean	42.156
Mean	42.156
Variance	42.719
Standard deviation	6.536
Max	2006– 51. 300
Min	2017 - 31.000



### APPENDIX III: OCCUPANCY RATE PER REGION IN KENYA

Hotel Bed Occupancy Rate: Others: Maasai Land	▲ 33.00 2016	▼ 29.40 2015	27.00 2008	59.00 2006	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Others: Northern	▼ 13.00 2016	▲ 25.60 2015	13.00 2016	64.00 2005	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Others: Nyanza Basin	▼ 26.00 2016	▲ 37.60 2015	21.00 2008	45.00 2005	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Others: Western	▼ 27.00 2016	▲ 27.80 2015	20.00 2004	31.00 2012	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Coastal: Beach	▲ 41.00 2016	▼ 37.80 2015	28.00 2008	59.00 2006	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Coastal: Coast Hinterland	▼ 23.00 2016	▼ 25.60 2015	23.00 2016	63.00 2002	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Coastal: Others	▲ 37.00 2016	▼ 36.60 2015	27.00 2009	51.00 2011	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Nairobi: High Class	▼ 44.00 2016	50.90 2015	44.00 2016	68.00 2007	%	Yearly	2002 - 2016 Updated on 2018-01-17

## More Indicators for Kenya

Related indicators ^	Last	Previous	Min	Max	Unit	Frequency	Range
Hotel Bed Occupancy Rate	▲ 32.500 2018	▲ 31.200 2017	26.000 2008	47.200 2007	%	Yearly	2002 - 2018 Updated on 2019-04-25
Hotel Bed Occupancy Rate: Coastal: Beach	▲ 36.00 2016	▼ 27.00 2015	23.00 2008	57.00 2007	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Coastal: Coast Hinterland	▲ 20.00 2016	▼ 19.60 2015	19.60 2015	60.00 2002	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Coastal: Others	▲ 31.00 2016	▼ 30.70 2015	26.00 2004	48.00 2011	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Nairobi: High Class	▼ 36.00 2016	▼ 37.50 2015	32.00 2003	52.00 2012	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Nairobi: Others	▲ 27.00 2016	▼ 26.20 2015	26.20 2015	41.00 2006	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Bed Occupancy Rate: Others: Central	▼ 24.00 2016	▼ 27.10 2015	11.00 2005	32.00 2007	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Nairobi: Others	▲ 33.00 2016	▼ 28.90 2015	28.90 2015	48.00 2003	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Others: Central	▼ 27.00 2016	▼ 33.10 2015	20.00 2004	37.00 2005	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Others: Maasai Land	▲ 34.00 2016	▼ 32.90 2015	31.00 2008	66.00 2005	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Others: Northern	▼ 18.00 2016	▲ 33.60 2015	15.00 2009	60.00 2005	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Others: Nyanza Basin	▼ 29.00 2016	▲ 42.60 2015	24.00 2008	42.60 2015	%	Yearly	2002 - 2016 Updated on 2018-01-17
Hotel Room Occupancy Rate: Others: Western	▼ 30.00 2016	▲ 31.10 2015	26.00 2006	35.00 2012	%	Yearly	2002 - 2016 Updated on 2018-01-17

**APPENDIX IV: COMPARISON OF HOTEL PERFORMANCE IN KENYA AND OTHERS IN THE REGION**

	2012	2013	2014	2015	2016	2017
<b>R millions</b>						
South Africa	10 688	12 249	13 100	14 165	15 892	16 629
Nigeria	2 074	2 271	2 210	2 185	2 321	2 592
Mauritius	6 143	5 606	5 858	6 252	7 183	8 092
Kenya	6 160	6 000	5 605	5 926	6 222	5 382
Tanzania	1 913	2 123	2 185	2 506	2 691	2 543
<b>Total hotel revenue</b>	<b>26 978</b>	<b>28 249</b>	<b>28 958</b>	<b>31 034</b>	<b>34 309</b>	<b>35 238</b>
<b>% change year on year</b>						
South Africa	11,4	14,6	6,9	8,1	12,2	4,6
Nigeria	9,8	9,5	-2,7	-1,1	6,2	11,7
Mauritius	4,3	-8,7	4,5	6,7	14,9	12,7
Kenya	-7,1	-2,6	-6,6	5,7	5,0	-13,5
Tanzania	6,2	11,0	2,9	14,7	7,4	-5,5
<b>Total hotel revenue</b>	<b>4,5</b>	<b>4,7</b>	<b>2,5</b>	<b>7,2</b>	<b>10,6</b>	<b>2,7</b>

CAGR - compound annual growth rate (2018-2022)

Sources: PricewaterhouseCoopers LLP, Wilkofsky Gruen Associates

**APPENDIX V: STAR-RATED HOTELS UNDER NATIONAL CLASSIFICATION  
REGISTER TOURISM REGULATORY AUTHORITY**



NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
1	Intercontinental Nairobi	Greater Nairobi	Nairobi	326	372	*****
2	Radisson Blu Hotel Nairobi	Greater Nairobi	Nairobi	271	354	*****
3	The Sarova Stanley	Greater Nairobi	Nairobi	217	440	*****
4	Villa Rosa Kempinski	Greater Nairobi	Nairobi	200	216	*****
5	Fairmont The Norfolk	Greater Nairobi	Nairobi	170	200	*****
6	Sankara Nairobi	Greater Nairobi	Nairobi	156	167	*****
7	The Boma Nairobi	Greater Nairobi	Nairobi	148	178	*****
8	Crowne Plaza Nairobi Airport	Greater Nairobi	Nairobi	144	209	*****
9	Tribe Hotel	Greater Nairobi	Nairobi	137	154	*****
10	Dusit D2	Greater Nairobi	Nairobi	101	122	*****
11	Hemingway's Nairobi	Greater Nairobi	Nairobi	45	50	*****
12	Hilton Nairobi Limited	Greater Nairobi	Nairobi	287	334	****
13	Crowne Plaza	Greater Nairobi	Nairobi	206	254	****
14	Hilton Garden Inn Nairobi Airport	Greater Nairobi	Nairobi	175	226	****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
15	City Lodge Hotel At Two Rivers	Greater Nairobi	Nairobi	171	200	****
16	Southern Sun Mayfair Nairobi	Greater Nairobi	Nairobi	171	212	****
17	Eka Hotel	Greater Nairobi	Nairobi	167	220	****
18	Sarova Panafric Hotel	Greater Nairobi	Nairobi	162	324	****
19	Silver Springs Hotel	Greater Nairobi	Nairobi	160	180	****
20	Nairobi Safari Club	Greater Nairobi	Nairobi	146	186	****
21	The Panari Hotel, Nairobi	Greater Nairobi	Nairobi	136	272	****
22	Ole Sereni Hotel	Greater Nairobi	Nairobi	134	206	****
23	Windsor Golf Hotel and Country Club	Greater Nairobi	Nairobi	130	205	****
24	Fairview Hotel	Greater Nairobi	Nairobi	127	133	****
25	Weston Hotel	Greater Nairobi	Nairobi	120	154	****
26	Golden Tulip Westlands	Greater Nairobi	Nairobi	94	188	****
27	Amboseli Serena Lodge	Greater Nairobi	Kajiado	92	184	****
28	Gelian Hotel	Greater Nairobi	Machakos	90	136	****
29	Pride Inn Lantana Apartments and Suites	Greater Nairobi	Nairobi	55	110	****
30	Executive Residency by Best Western.	Greater Nairobi	Nairobi	48	106	****
31	House of Waine	Greater Nairobi	Nairobi	11	20	****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
32	Carnivore Restaurant	Greater Nairobi	Nairobi	0	0	****
33	Ibis Styles Nairobi Westlands	Greater Nairobi	Nairobi	277	331	***
34	Maanzoni Lodge	Greater Nairobi	Machakos	272	421	***
35	Azure Hotel	Greater Nairobi	Nairobi	165	231	***
36	Best Western Plus Meridian Hotel	Greater Nairobi	Nairobi	128	166	***
37	Ngong Hills Hotel	Greater Nairobi	Nairobi	110	165	***
38	The Heron Portico	Greater Nairobi	Nairobi	109	218	***
39	Pride Inn Raptha Nairobi,	Greater Nairobi	Nairobi	100	200	***
40	Sportsview Hotel Kasarani	Greater Nairobi	Nairobi	94	188	***
41	Kenya Comfort Suits	Greater Nairobi	Nairobi	88	120	***
42	Amboseli Sopa Lodge	Greater Nairobi	Kajiado	83	166	***
43	La Masion Royale	Greater Nairobi	Nairobi	71	144	***
44	The Clarion Hotel	Greater Nairobi	Nairobi	62	67	***
45	Kibo Safaris Camp	Greater Nairobi	Kajiado	60	120	***
46	Boma Inn Nairobi	Greater Nairobi	Nairobi	59	83	***
47	Utalii Hotel	Greater Nairobi	Nairobi	57	114	***
48	Marble Arch Hotel	Greater Nairobi	Nairobi	41	57	***

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
49	Fahari Gardens Hotel	Greater Nairobi	Nairobi	32	64	***
50	Villa Leone Guest House	Greater Nairobi	Nairobi	51	54	***
NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
51	Jacaranda Hotel Nairobi	Greater Nairobi	Nairobi	128	256	**
52	Town Lodge	Greater Nairobi	Nairobi	84	124	**
53	Central Park Hotel	Greater Nairobi	Nairobi	80	100	**
54	After 40 Hotel	Greater Nairobi	Nairobi	63	101	**
55	Summerdale Inn	Greater Nairobi	Nairobi	60	75	**
56	Eton Hotel	Greater Nairobi	Nairobi	58	116	**
57	Zehneria Portico	Greater Nairobi	Nairobi	56	65	**
58	Kahama Hotel	Greater Nairobi	Nairobi	47	51	**
59	West Breeze Hotel	Greater Nairobi	Nairobi	26	34	**
60	Tea Tot Hotel	Greater Nairobi	Machakos	54	66	**
61	PrideInn Paradise	Coast	Mombasa	240	480	*****
62	Leopard Beach Resort and Spa	Coast	Kwale	198	396	*****
63	Hemingways Watamu	Coast	Kwale	166	200	*****
64	Diani Reef Beach Resort & Spa	Coast	Kwale	143	286	*****
65	Swahili Beach Resort	Coast	Kwale	125	250	*****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
66	Medina Palms Suites and Villas	Coast	Kilifi	40	70	*****
67	Baobab Beach Resort & Spa	Coast	Kwale	343	686	****
68	Sarova White Sands Beach Resort and Spa	Coast	Mombasa	335	435	****
69	Leisure Lodge Beach & Golf Resort	Coast	Kwale	253	506	****
70	Voyager Beach Resort	Coast	Mombasa	236	472	****
71	Severin Sea Lodge	Coast	Mombasa	188	376	****
72	Diani sea resort	Coast	Kwale	170	340	****
73	Serena Beach Resort and Spa	Coast	Mombasa	164	328	****
74	Turtle Bay Beach Club	Coast	Kilifi	145	290	****
75	Lantana Galu Beach	Coast	Kwale	47	240	****
76	Silver Palm Spa & Resort	Coast	Kilifi	40	80	****
77	Diamond Dream of Africa	Coast	Kilifi	35	70	****
78	Marina English Point	Coast	Mombasa	26	28	****
79	Msambweni Beach House and Private Villa	Coast	Kwale	5	24	****
80	Leopard Point Luxury Beach Resort	Coast	Kilifi	15	30	****
81	Sandies Tropical Village	Coast	Kilifi	109	218	***
82	Bahari Beach Hotel	Coast	Mombasa	105	212	***
83	Indian Ocean Beach Resort	Coast	Kwale	101	180	***
84	Kenya Bay Beach Hotel	Coast	Mombasa	99	198	***
85	Royal Court Hotel	Coast	Mombasa	89	188	***
86	Mnarani Club	Coast	Kilifi	80	160	***
87	Crystal Bay Beach Resort	Coast	Kilifi	76	176	***
88	Ashnil Aruba Lodge	Coast	Taita	52	108	***



NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
89	Isinya Resorts Limited	Coast	Mombasa	43	86	***
90	PrideInn Mombasa	Coast	Mombasa	40	96	***
91	Azul Margarita Beach Resort	Coast	Mombasa	35	98	***
92	Sentrim Tsavo East Camp	Coast	Taita	25	50	***
93	JacyJoka Apartments	Coast	Mombasa	12	16	***
94	Bollywood Bites	Coast	Mombasa	0	0	***
95	North Coast Beach Hotel	Coast	Kilifi	124	199	***
96	Papillon Lagoon Reef Hotel	Coast	Kwale	150	300	**
97	Neptune Paradise	Coast	Kwale	92	184	**
98	Plaza Beach Hotel	Coast	Mombasa	88	176	**
99	Seven Islands Resort	Coast	Kilifi	84	226	**
100	Jambo Travellers Hotel	Coast	Kilifi	75	99	**
101	Castle Royal Hotel	Coast	Mombasa	68	99	**
102	Midview Hotel	Coast	Mombasa	68	136	**
103	Neptune Palm Beach Resort & Spa	Coast	Kwale	60	120	**
104	Morning Star Apartments	Coast	Kwale	50	65	**
105	Gasaro Hotel Limited	Coast	Mombasa	39	58	**
106	Kilili Baharini	Coast	Kilifi	35	70	**
107	Voyager Safari Camp	Coast	Taita	25	50	**
108	Flamingo Villas	Coast	Kilifi	20	36	**
109	Saruni Ocean Beach Resort	Coast	Kwale	10	20	**
110	Enashipai Resort and Spa	South Rift	Nakuru	140	215	*****
111	Mara Serena Safari Lodge	South Rift	Narok	74	148	*****
112	Lake Elementaita Serena Camp	South Rift	Nakuru	25	50	*****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
113	Cottars Nineteen Twenties Safari Camp	South Rift	Narok	16	40	*****
114	Olare Mara Kempinski	South Rift	Narok	12	17	*****
115	Masai Mara Sopa Lodge	South Rift	Narok	100	198	****
116	Keekorok Lodge	South Rift	Narok	99	225	****
117	Sentrim Elementaita Lodge	South Rift	Nakuru	83	166	****
118	Lake Naivasha Sopa Resort	South Rift	Nakuru	82	164	****
119	Sarova Mara Game Camp	South Rift	Narok	75	150	****
120	Lake Naivasha Sawela Lodge	South Rift	Nakuru	74	150	****
121	Sarova Lion Game Lodge	South Rift	Nakuru	67	134	****
122	Lake Nakuru Sopa Lodge	South Rift	Nakuru	62	138	****
123	Mara Intrepids Camp	South Rift	Narok	60	93	****
124	Ashnil Mara Camp	South Rift	Narok	56	118	****
125	Fairmont Mara Safari Club	South Rift	Narok	51	102	****
126	Naivasha Kongoni Lodge	South Rift	Nakuru	29	29	****
127	Neptune Mara Rianta Luxury Tented Camp	South Rift	Narok	20	40	****
128	Mara Engai Wilderness Lodge	South Rift	Narok	20	40	****
129	Little Governors' Camp	South Rift	Narok	17	34	****
130	DBA Mara West Tented Camp	South Rift	Narok	16	30	****
131	Sunbird Lodge	South Rift	Nakuru	16	32	****
132	Governors' Ilmoran Camp	South Rift	Narok	10	10	****
133	Mara Explorer Camp	South Rift	Narok	10	20	****
134	Encounter Mara Camp	South Rift	Narok	10	24	****
135	Naboisho Camp Tented Camp	South Rift	Narok	9	22	****
136	Olarro Lodge	South Rift	Narok	9	18	****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
137	Mara Simba Lodge	South Rift	Narok	84	168	***
138	Lake Naivasha Simba Lodge	South Rift	Nakuru	70	140	***
139	Hotel Cathay	South Rift	Nakuru	62	140	***
140	Lake Nakuru Flamingo Lodge	South Rift	Nakuru	60	91	***
141	Hillcourt Resort & Spa	South Rift	Nakuru	43	50	***
142	Tipilikwani Mara Camp	South Rift	Narok	20	34	***
143	Sekenani Camp	South Rift	Narok	15	30	***
144	Sanctuary Olonana Camp	South Rift	Narok	14	28	***
145	The Ole Ken Hotel	South Rift	Nakuru	40	54	***
146	Rekero Camp	South Rift	Narok	9	24	***
147	Hotel City Max	South Rift	Nakuru	40	56	**
148	Governors' Camp	South Rift	Narok	37	74	**
149	Chester Hotel	South Rift	Nakuru	31	36	**
150	Kabarak University Guest House	South Rift	Nakuru	24	32	**
151	Mpata Safari Club	South Rift	Narok	23	46	**
152	Agricultural Resource Centre (ARC) Hotel	South Rift	Nakuru	90	96	**
153	Mara Siria Luxury Tented Bush Camp	South Rift	Narok	14	35	**
154	Loldia House	South Rift	Nakuru	7	19	**
155	Porini Mara Camp	South Rift	Narok	6	12	**
156	Mara Bush Houses	South Rift	Narok	3	18	**
157	Porini Lion Camp	South Rift	Narok	10	20	*
158	Acacia Premier Hotel	Western	Kisumu	92	97	*****
159	The Vic Hotel	Western	Kisumu	106	122	***
160	Kisumu Hotel	Western	Kisumu	86	120	***

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
161	Imperial Hotel	Western	Kisumu	78	90	***
162	Hotel Nyakoe	Western	Kisii	75	86	***
163	Sovereign Hotel	Western	Kisumu	32	64	***
164	Jambo Impala Eco-lodge	Western	Kisumu	12	24	***
165	Golf Hotel	Western	Kakamega	62	124	**
166	Dados Hotel	Western	Kisii	57	72	**
167	Sunset Hotel	Western	Kisumu	50	100	**
168	St. Johns Manor-Le Savanna Country Lodges	Western	Kisumu	49	49	**
169	Le Savanna Country Lodge & Hotel	Western	Kisumu	39	78	**
170	Rondo Retreat Centre	Western	Kakamega	20	40	**
171	Kiboko Bay Resort	Western	Kisumu	10	20	**
172	Dewchurch Drive Hotel	Western	Kisumu	13	16	*
173	Mountain Breeze Hotel Ltd	Eastern	Embu	60	75	***
174	Ikweta Safari Camp	Eastern	Meru	15	23	***
175	Nkubu Heritage Hotel	Eastern	Meru	43	88	**
176	Legacy Star Hotel	Eastern	Meru	40	52	**
177	Ikweta Country Inn	Eastern	Meru	38	51	**
178	Leopard Rock Lodge	Eastern	Meru	15	30	**
179	Panari Resort, Nyahururu	Central & MT. Kenya	Laikipia	100	200	*****
180	Segeera Retreat Lodge	Central & MT. Kenya	Laikipia	11	20	*****
181	Fairmont Mt. Kenya Safari Club	Central & MT. Kenya	Nyeri	120	240	****
182	White Rhino Hotel	Central & MT. Kenya	Nyeri	102	128	****

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
183	Sarova Shaba Game Lodge	Central & MT. Kenya	Isiolo	85	170	****
184	Sweetwater's Serena Camp & Ol Pejeta House	Central & MT. Kenya	Laikipia	62	112	****
185	Aberdares Country Club	Central & MT. Kenya	Nyeri	47	94	****
186	Ashnil Samburu Camp	Central & MT. Kenya	Isiolo	30	62	****
187	Samburu Intrepids Camp	Central & MT. Kenya	Samburu	26	56	****
188	Saruni Safari lodge, Samburu	Central & MT. Kenya	Samburu	8	20	****
189	Sportsman's Arms Hotel	Central & MT. Kenya	Laikipia	180	360	***
190	Green Hills Hotel	Central & MT. Kenya	Nyeri	100	260	***
191	Samburu Simba Lodge	Central & MT. Kenya	Isiolo	70	134	***
192	Westwood Hotel	Central & MT. Kenya	Nyeri	57	74	***
193	Outspan Hotel	Central & MT. Kenya	Nyeri	43	93	***
194	Serena Mountain Lodge	Central & MT. Kenya	Nyeri	42	84	***
195	Giraffe Ark Camp Lodge	Central & MT. Kenya	Nyeri	30	52	***
196	Mantis Mutara Tented Luxury Camp	Central & MT. Kenya	Laikipia	15	30	***
197	Borana Lodge	Central & MT. Kenya	Laikipia	8	16	***
198	The Ark	Central & MT. Kenya	Nyeri	60	120	**
199	Ibis Hotel Nyeri	Central & MT. Kenya	Nyeri	40	44	**

NO	ESTABLISHMENT	REGION	COUNTY	ROOMS	BEDS	RATING
200	Ibis Hotel Nanyuki	Central & MT. Kenya	Laikipia	39	44	**
201	Maxoil Hotel	Central & MT. Kenya	Laikipia	25	50	**
202	Elephant Bedroom	Central & MT. Kenya	Samburu	12	24	**
203	Solio Lodge	Central & MT. Kenya	Laikipia	5	16	**
204	Ibis 2000 Hotel Karatina	Central & MT. Kenya	Nyeri	52	57	*
205	Boma Inn, Eldoret	North Rift	Uasin Gishu	68	80	****
206	The Noble Conference Centre	North Rift	Uasin Gishu	53	67	***
207	Kerio View Lodge	North Rift	Elgeyo Marakwet	28	40	***
208	Samich Resort	North Rift	Elgeyo Marakwet	15	30	***
209	Hotel Comfy & Lodge	North Rift	Uasin Gishu	96	110	**
210	Starbucks Hotel and Restaurant Ltd	North Rift	Uasin Gishu	93	182	**
211	Hotel Winstar	North Rift	Uasin Gishu	85	95	**
212	Cicada Hotel	North Rift	Uasin Gishu	56	56	**
213	The Pearl Tourist Hotel Ltd	North Rift	Uasin Gishu	42	42	**
214	Kenmosa Resort	North Rift	Uasin Gishu	17	26	**
215	Poa Place Resort	North Rift	Uasin Gishu	15	35	**

**APPENDIX VI: APPROVAL - SCHOOL OF GRADUATE STUDIES MASENO  
UNIVERSITY**



**MASENO UNIVERSITY  
SCHOOL OF GRADUATE STUDIES**

*Office of the Dean*

**Our Ref:** PHD/SC/00070/2017

Private Bag, MASENO, KENYA  
Tel:(057)351 22/351008/351011  
FAX: 254-057-351153/351221  
Email: [sgs@maseno.ac.ke](mailto:sgs@maseno.ac.ke)

Date: 20<sup>th</sup> March, 2020

**TO WHOM IT MAY CONCERN**

**RE: PROPOSAL APPROVAL FOR MICHEAL MURIMI —  
PHD/SC/00070/2017**

The above named is registered in the Doctor of Philosophy Degree Programme in hospitality management in the School of Biological and physical Sciences, Maseno University. This is to confirm that his research proposal titled "Determinants of revenue management practices on hotel financial performance in Kenya." has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

  
Prof. J.O. Agure  
**DEAN, SCHOOL OF GRADUATE STUDIES**



*Maseno University*

*ISO 9001:2008 Certified*



# APPENDIX VII: APPROVAL - MASENO UNIVERSITY ETHICS REVIEW COMMITTEE



## MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext: 3050  
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya  
Email: [muerc-secretariate@maseno.ac.ke](mailto:muerc-secretariate@maseno.ac.ke)

**REF:** MSU/DRPI/MUERC/00857/20

**Date:** 8<sup>th</sup> March, 2021

**TO:** Michael Murimi  
PHD/SC/00070/2017  
Department of Ecotourism, Hotel and Institution Management  
School of Biological and Physical Sciences  
Maseno University  
P. O. Box, Private Bag, Maseno, Kenya

Dear Sir,

**RE: Determinants of Revenue Management Practices and their Impacts on the Financial Performance of Hotels in Kenya**


This is to inform you that Maseno University Ethics Review Committee (MUERC) has reviewed and approved your above research proposal. Your application approval number is MUERC/00857/20. The approval period is 8<sup>th</sup> March, 2021 – 7<sup>th</sup> March, 2022.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Maseno University Ethics Review Committee (MUERC).
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours of notification.
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Maseno University Ethics Review Committee (MUERC) within 24 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to Maseno University Ethics Review Committee (MUERC).

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://oris.nacosti.go.ke> and also obtain other clearances needed.

Yours sincerely

  
Prof. Philip O. Owuor, PhD, FAAS, FKNAS  
Chairman, MUERC



MASENO UNIVERSITY IS ISO 9001:2008 CERTIFIED





# APPENDIX VIII: NACOSTI LICENSE FOR DATA COLLECTION

REPUBLIC OF KENYA  
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION  
Ref No: 217655  
Date of Issue: 04/May/2020

**RESEARCH LICENSE**



This is to Certify that Mr. Michael Murimi of Maseno University, has been licensed to conduct research in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makeni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua, Nyeri, Samburu, Siaya, Taita-Taveta, Tanariver, Tharaka-Nithi, Transzoia, Turkana, Uasin-Gishu, Vihiga, Wajir, Westpokit on the topic: **DETERMINANTS OF REVENUE MANAGEMENT PRACTICES ON HOTEL FINANCIAL PERFORMANCES IN KENYA** for the period ending : 04/May/2021.

License No: NACOSTI/P/20/4896

Applicant Identification Number: 217655

Director General  
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code



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## APPENDIX IX: HELB PH.D. SCHOLARSHIP AWARD



### HIGHER EDUCATION LOANS BOARD

Tel: 0711052000  
E-mail: [contactcentre@helb.co.ke](mailto:contactcentre@helb.co.ke)  
Website: [www.helb.co.ke](http://www.helb.co.ke)

Anniversary Towers  
University Way  
P.O Box 69489-00400  
Nairobi, Kenya

HELB/45/003/VL.II/52

30<sup>th</sup> October, 2018

Michael Murimi Njue  
Maseno University  
**MASENO**

Dear Sir/Madam,

**RE: HELB POSTGRADUATE SCHOLARSHIP AWARD 2018/2019**

This is to inform you that you have been nominated for the award of the Higher Education Loans Board 2018/2019 Postgraduate Scholarship.

We take this opportunity to congratulate you on this well-deserved achievement. Your scholarship is valued at **Kshs.450,000.00** and will cover your tuition fees only.

The award will be disbursed in three annual instalments to your university during your studies, upon receipt of **academic progress report and transcripts from your respective faculty**. Please ensure that each report is availed to the Board at the beginning of each academic year and share with us a copy of your thesis/dissertation.

**Please note that the award is valid until 2021/2022 financial year.**

By a copy of this letter, the university is also informed of the award and is requested to acknowledge receipt then get in touch with the Board in the event that the student is receiving any other institutional scholarship.

Yours faithfully,

GEOFFREY MONARI  
CHIEF OPERATIONS OFFICER  
**FOR: BOARD SECRETARY/CEO**

Cc: Finance Officer - Maseno University

## APPENDIX X: RESEARCH SCHEDULE

Activity	2018/2019			2019/2020			2020/2021		2022
	Nov-Feb	Mar-June	Jul-Oct	Nov-Feb	Mar-June	Jul-Oct	Nov-June	June-Dec	Jan-Dec 22
Concept development & seminars attendances	Xxx								
Submission of concept & seminars attendances		Xxx							
Concept corrections and advancement to the proposal			Xxx						
Proposal development & seminars attendances			Xxx						
Submission and defense at the department				Xxx					
Submission to the school of biological & physical sciences					xxx				
Submission at SGS, MUERC						Xxx	Xxx		
Publication 1- theoretical framework						Xxx			
Pre-testing & data collection							Xxx	xxx	
Data analysis and thesis writing								Xxx	
Thesis submission for external marking								Xxx	
Publication 2 & Defense of thesis									Xxx
Corrections & submission of the final thesis									Xxx

## APPENDIX XI: ESTIMATED BUDGET FOR THE STUDY

Item description	Quantity	The total amount in Kshs
Printing of proposals and thesis for submission at various levels		
2 concept papers (@50 pages)	(50pgs×5 kshs) 2copies	500/=
6 copies for supervisors (@115pgs)	(115×5) 6copies	3,450/=
6 copies for ECOHIM DPT (@115pgs)	(115×5) 6copies	3,450/=
6 copies for the School (@115pgs)	(115×5) 6copies	3,450/=
6 copies for sgs (@115pgs)	(115×5) 6copies	3,450/=
Three copies for SGS (@120pgs)	(120×5) 6copies	3,800/=
3 copies for MUERC(@120pgs)	(120×5) 6copies	3,800/=
200 copies of questionnaires (8 pages)	(8×5) 200 copies	8,000/=
9 copies of thesis reports and 4 final documents (approximated 200pgs)	(200×5) 15 copies	15,000/= 44,900/=
Binding charges of proposals submitted at all levels,	(@ kshs200×44copies)	8,800/=
4 final thesis (hard binding)	(@kshs2000×4copies)	8,000/= 16,800/=
Traveling to and from Maseno Main campus during proposal submissions, seminars, and defenses.	(Kshs 2800×30 journeys)	84,000/=
Subsistence for 24 journeys	(Kshs 1800×30)	54,000/= 138,000/=
MUERC certificate	5,000/=	5,000/=
NACOSTI permit	2,000/=	2,000/= 7,000/=
Computer and fixtures for data and information backup	One laptop @ 60,000/= Fixtures 15,000/=	75,000/=
Typing and editing expenses for proposals and final thesis		80,000/=
Data entry charges	(10 days @1000p/d)	10,000/=
Subsistence and traveling allowance during pretesting	(5 days @ 7500/= per day)	37,500/=
accommodation and Travelling expenses during actual data collection	21 days @ 5000/= per day	105,000/=
Subsistence during data collection	21days @1800/=per day	37,800/=
Data analysis charges and data software		100,000/=
Journal publication type setting, paging and formatting, and grammar certification	2 papers@15000/=	30,000/=
Miscellaneous	10% of the total expenses	68,840/=
Total		<u>755,240/=</u>