

Factors Affecting Operational and Financial Performance Indicators of Rooms Division in Four and Five-Star Hotels in Cairo

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Abstract:

The purpose of this research is to investigate the factors affecting operational and financial performance indicators of the rooms division in Cairo's four- and five-star hotels. The results of this research show that there is a high variation coefficient for the performance indicators among the sample hotels; a t-test showed that the factors of hotel manager gender (in favor of female managers), hotel chain type (in favor of international chains), and hotel manager nationality (in favor of Egyptian managers) have an effect on the level of hotel performance; According to the results of the chi-squared test, the factors of hotel operator, hotel operator nationality, and hotel location have an effect on the level of hotel performance; and the indicator of total room revenues has a positive correlation with average daily rate ($r = 0.591$), revenue per available rooms ($r = 0.599$), total rooms sold ($r = 0.717$), and annual rooms ($r = 0.727$); in addition, there is a strong direct relationship between average daily rate and revenue per available room ($r = 0.977$) at the 0.01 level. Finally, the findings of this research are crucial for hotel managers to understand in order to increase the level of hotel performance, whether it is operational or financial.

Keywords: Financial Performance, Operational Performance, Performance Indicators, Average Daily Rate, Revenue per Available Room.

1. Introduction

Performance can be determined and measured with an appropriate measurement activity and a designed process aimed at calculating the efficiency and effectiveness of a specific action using an appropriate set of specific metrics. Performance is defined as the contribution generated by an entity through its action to the achievement of the goals and the highest fulfillment of the needs and desires of key stakeholders (Neely *et al.*, 2005). To put it another way, it is a method of determining whether the financial objectives established by shareholders have been met; accounting indicators including net profits, revenues, margins, and returns were also measured in relation to peer rivals (Torrington *et al.*, 2014). The hotel business is a significant part of the tourist industry and has a significant impact on the development of various locations' economies (Babajee *et al.*, 2020).

Managers' primary objectives include performance analysis and improvement. Consequently, businesses are reconsidering their performance assessment techniques across a number of sectors (Eccles, 1991). UK hotel businesses continue to prioritize more conventional performance criteria in the hospitality sector (Brown & McDonnell, 1995; Brotherton & Shaw, 1996; Harris & Brown, 1998). There is a worry that hotel managers may be neglecting important concerns by employing unethical tactics, which might seriously harm their enterprises (Atkinson, 1999). This worry may be ignoring crucial concerns, which might have negative effects. New empirical data on the variety of performance metrics now in use in UK hotels lend weight to this worry. Organizations across various sectors are reevaluating their performance assessment systems in order to successfully navigate the difficulties of a climate of competition that is becoming more complicated (Atkinson & Brown, 2001). In this environment, research on the hotel and restaurant industries is growing important (Sharma & Upneja, 2006). Particularly, hotel

profitability drivers will become more difficult, which will have an impact on hotel management (Burgess, 2007). Since it may be used as a guide in decisions about budget allocation and/or business unit performance improvement, performance evaluation is a crucial topic for managers (Chen, 2009). Moreover, achieving high profitability and improving performance is a typical goal for running any firm (Tavitiyaman et al., 2011). The factors that affect each property's financial performance must be determined. However, little study has been done on this crucial subject (Kim et al., 2013). On average, 39.46% of the enterprises were considered safe, 25.94% were in financial hardship, 15.90% were in a grey region, and 18.71% had no accessible data. It was discovered that the severity of the financial crisis indicates that businesses must make significant adjustments and that business processes need improvement (Chadha, 2016).

Due to the intense rivalry in the hotel sector, developing a marketing plan, enhancing hotel operations, and raising service standards are essential not only for financial success but also for the survival of both independent hotels and hotel chains. The effective administration of hotel chains is dependent on all of these elements, either directly or indirectly (Hwang & Chang, 2003). Income management (RM) has historically been the main strategy used by US hotels to increase room revenue (Kim *et al.*, 2013). Although all company executives prioritize profitability, it is advised that focus has been devoted to researching the factors that contribute to profitability (Alarussi & Alhaderi, 2018). Researchers and economists have been interested in performance for a long time, but they have mostly focused on large organizations (Panno, 2018). As a result, the capacity of service businesses to increase financial performance by effectively and efficiently employing limited resources to face the difficulties of shifting competitive pressures, client expectations, and cost structures will play a significant role in the sector's future growth (Deloitte, 2018). Practically speaking, there haven't been many empirical researches on performance indicators for the hotel business (Lee *et al.*, 2019). Therefore, it is crucial to create research that can broaden our understanding of hotel administration. Any hotel's primary objective is to maximize profitability, thus they must focus on boosting revenues and cutting expenses. As a result, managers frequently look for ways to boost hotel income (Santos *et al.*, 2020).

The hotel industry is a very cutthroat field. A hotel chain must thus run effectively if it hopes to increase or keep its market share (Deng *et al.*, 2019). When quality management is considered holistically as a commonality of its interrelated activities, financial performance may be enhanced (top management leadership; employee management; customer focus; supplier management; process management; quality data and reporting). Managers must thus include stakeholders in the design and implementation of efficient quality management systems (Augustyn *et al.*, 2019). In this regard, value-based management significantly affects increasing earnings, profit margins, creditor confidence, investor and potential investor confidence, and room occupancy rates (Diatmika & Yuniarta, 2019). The balanced scorecard (BSC) is a strategic management tool for assessing financial performance (Ribeiro *et al.*, 2019). The hotel sector employs common revenue management indicators, such as the capital market, as a baseline for financial performance (Demydyuk, 2021). Naturally, revenue management helps hotels develop by reducing the time and expenses associated with traditional pricing 75%, improving employee performance 79%, improving revenue streams accountability 69%, offering the best hotel management techniques 82%, and improving the assessment of new products and services 58% (Adegboyega *et al.*, 2021).

One of the key goals of hotels is to produce high levels of financial success. However, it presents a significant and crucial problem for hotel administrators (Atkinson, 1999; Atkinson & Brown, 2001; Sharma & Upneja, 2005; Burgess, 2007; Chen, 2009; Chadha, 2016; Alarussi & Alhaderi, 2018; Panno, 2018; Adegboyega *et al.*, 2021). As a result, it's critical to pinpoint the elements that influence each property's degree of financial success. However, little study has been done on this crucial subject (Kim *et*

al., 2013). The study by Zaki & Qoura (2019) found that a hotel manager's competence and effectiveness depend on their capacity to recognize the elements that might influence profitability management. Additionally, it is crucial to create studies that may advance knowledge in the field of hotel management since they enable operational and managerial techniques, which support the industry's sustainable growth and boost profitability (Santos *et al.*, 2020).

As a result, the studies by Santos *et al.* (2020), Zaki & Qoura (2019), and Kim *et al.* (2013) highlighted the importance of researching hotel performance. The fundamental issue in Egypt is the wide disparity in financial and operational performance indices across hotels (Abdelmawgoud, 2022). No research have been done on the effects of hotel management style, hotel managed by owner, hotel type, hotel chain type, hotel manager gender, hotel manager nationality, and hotel operator nationality on the level of hotel performance, according to the previous analysis of the literature review. Exploring the variables that influence the operational and financial performance indicators of the room division in Cairo hotels is the goal of this research. Finally, boosting the hotel's revenues and profits may be possible with an awareness of the aspects influencing the degree of performance.

2. Review

2.1. Performance Indicators

Hotels used a variety of performance metrics, both monetary and non-monetary, to gauge their level of performance. Financial measurements alone have been shown to be lagging performance indicators, representing the results of past decisions and management actions but saying nothing about the underlying factors that led to those managerial decisions and the subsequent organizational performance of the business (Brignall & Ballantine, 1996). A mix of financial and nonfinancial indicators, appropriately tailored to take into account sector- and firm-specific characteristics, are becoming more widely acknowledged (Westhead *et al.*, 2001; Haber & Reichel, 2005).

The main focus of hospitality management is still on financial performance indicators (Wadongo *et al.*, 2010). Many financial metrics including return on equity return on assets, occupancy rate, and gross operational profit per available room view profitability as a multidimensional notion (O'Neill *et al.*, 2016). Additionally, financial metrics by themselves are insufficient to adequately account for the organization's outputs and results. Other measurements, usually nonfinancial, qualitative, and subjective, are required to evaluate and track a company's operational success. Net profits, profitability ratios like return on investment and return on sales, revenues for available rooms, occupancy rate, and various cost efficiency ratios are among the conventional financial indicators that are believed to be pertinent. However, non-financial criteria including customer happiness, complaints, new and repeat customers, employee competences, and staff talents are frequently used (Panno, 2018).

2.1.1. Financial Performance Indicators

The majority of papers use total sales and income as financial metrics (Anderson *et al.*, 1999). Therefore, a profit-seeking company's main goal is to maximize profits (Parsons, 2002). Indicators used by hotels to gauge their financial success include return on equity (ROE), return on assets (ROA) (Lee *et al.*, 2019), RevPAR, occupancy rate (OPR), and stock return (Chen, 2011). Numerous studies that evaluate hotel performance have only considered room revenue or profit. According to existing research, metrics for measuring hotel performance include gross operating profits (GOP), revenue per available room (RevPAR), total revenue per available room (TrevPAR), average daily rate (ADR), occupancy rate, net operating income (NOI), and return on investment (ROI) (Banker *et al.*, 2005; Sainaghi, 2010). The primary gauge of a company's performance over the past few decades has been RevPAR. Generally

speaking, the stock performance of publicly listed hotel businesses in the United States cannot be accurately predicted by RevPAR or other conventional performance measurements (Chen, 2011).

Financial success is measured by the ratios of net operating profit before taxes (RONOPBT), profits before taxes (ROPBT), and return on assets before taxes (ROABT) (Shieh *et al.*, 2018). Understanding the primary factors influencing each property's financial success is essential for hotel management (Kim *et al.*, 2013). Financial performance of hotels is correlated with economic performance, which is measured by technological efficiency (Sami & Mohamed, 2014). The hotel industry measures its success and excellence using both top-line financial indicators, such as the average daily rate (ADR) and revenue per available room (RevPar), as well as bottom-line financial ratios, such as gross operating profit (GOP) or net operating income (NOI) (O'Neill *et al.*, 2016).

According to O'Neill *et al.* (2016), RevPAR, ADR, occupancy rate, and operational profit per paying customer (OPAC) are employed as predictors of a company's risk-adjusted market performance. Business performance has frequently been gauged using financial performance as an indicator (Shieh *et al.*, 2018). Profitability and revenue are seen as financial indicators (Oliveira *et al.*, 2013, Arbelo *et al.*, 2018). Financial performance metrics include room occupancy rate, ADR, ARR, RevPAR, average occupancy per room, TRevPAR, and gross operating profit per available room (GOPPAR) (Gomes *et al.*, 2018). Net profits, profitability ratios (return on investment, return on sales, revenues for available rooms, and occupancy rate), cost efficiency ratios (Panno, 2018), and pricing (Kim *et al.*, 2020) are examples of conventional financial indicators. As performance metrics, most hotels employ RevPAR, GOPPAR, ADR, ProfPAR, NRevPAR, and TRevPEC (Adegboyega *et al.*, 2021).

2.1.1.1. Average Daily Rate (ADR)

According to Kim *et al.* (2013), the average daily rate (ADR) is a common operating statistic that is used to forecast a company's risk-adjusted market performance. ADR is calculated by dividing the entire income for a single night by the total number of sold rooms. When determining a hotel's profitability, it is the most important operating indicator (O'Neill *et al.*, 2016). A profitability metric is the gross operating profit percentage (GOP%) (Kim *et al.*, 2013). However, because it addresses RevPAR's shortcomings, gross operating profit per available room (GOPPAR) has gained popularity as a significant alternative performance indicator (Lee *et al.*, 2019).

2.1.1.2. Revenue per Available Room (RevPAR)

The most popular non-financial performance measures are revenue per available room (RevPAR), average daily rate (ADR), and occupancy rate (Ismail *et al.*, 2002). It is a significant element influencing hotel stock values (Elgonemy, 2000; Ismail *et al.*, 2002). The lodging sector significantly relies on RevPAR as a gauge of sector success (Ismail *et al.*, 2002). RevPAR is a proxy for the stock performance of hotel companies (Elgonemy, 2000; Ismail *et al.*, 2002; Chen *et al.*, 2011); it is a performance measurement (Chen, 2011) that gives a good indication of the stock performance of publicly listed lodging firms in the United States (Chen *et al.*, 2011); it is a benchmark measurement that is frequently used to measure performance in the lodging industry (Prasad & Dev, 2000 (Lee *et al.*, 2019; Santos *et al.*, 2020; Panno, 2018; Adegboyega *et al.*, 2021; Kim *et al.*, 2013).

RevPAR is a metric used to forecast a company's risk-adjusted market performance. When determining a hotel's profitability, it is the most important operating indicator (O'Neill *et al.*, 2016). Regarding a hotel's features, such as its class, location, and operating style, RevPAR seems to be more discerning than GOPPAR (Lee *et al.*, 2019). RevPAR is calculated by multiplying paid occupancy

percentage by the average daily rate or by dividing room revenue by the total number of rooms available over a time period. RevPAR and stock market success are statistically significantly correlated with one another (Schwartz *et al.*, 2017; Lee *et al.*, 2019). Additionally, RevPAR provides better outcomes at the firm level compared to GOPPAR (Gross Operating Profit per Available Room), but GOPPAR at the property level yields inconsistent results (Lee *et al.*, 2019). One of the most often utilized indicators is RevPAR. Hotel management may find it advantageous to base their choices on more accurate information (Santos *et al.*, 2020). Last but not least, total revenue per available room (TRevPAR) is a more complete indication that takes into accounts all of the hotels' income streams (Santos *et al.*, 2020; Adegboyega *et al.*, 2021).

2.1.2. Non-Financial Performance Indicators

Strategic decision-making can be supported more effectively by non-financial measures. Most publications see the quantity of rooms, market share, or visitors as non-financial statistics (Anderson *et al.*, 1999). The association between organizational resources and effectiveness was notably favorable (Sharma & Upneja, 2006). There was no correlation between employee happiness and productivity going the other way (Chi & Gursoy, 2009). The use of information technology increased the productivity of the hotel industry (Sirirak *et al.*, 2011). In addition to the family's unwavering dedication to delighting customers, key factors and essentials for a company's success and superior operational and financial performance now include customer satisfaction, competence, personnel abilities, long-lasting and personalized relationships with customers, and total quality management (Jeong *et al.*, 2014). Hotels with effective customer relationship management skills might boost performance dramatically (Josiassen *et al.*, 2014). Additionally, non-financial measures like room productivity and market share were employed (Wang *et al.*, 2014). The quantity of available hotel nights (supply) and the quantity of sold room nights (demand) are also used as determinants of a firm's risk-adjusted market performance (O'Neill *et al.*, 2016).

Non-financial qualitative aspects of the business, such as quality management, customer satisfaction, organizational flexibility, constant alignment with stakeholders' expectations, market share, innovation capability, and adoption of new technology adoption, have become increasingly relevant in order to gain and maintain competitive advantage (Panno, 2018). Efficiency measurement may be used to pinpoint elements that have an influence on profitability (Zaki & Qoura, 2019). Customer happiness, the amount of complaints, the number of new and returning customers, employee skills, and staff talents are other non-financial measures (Panno, 2018). The potential of the hotel to be a source of competitive advantage and profitability is improved by integrating human resource management (HRM), quality management (QM), and sustainability (Moliner *et al.*, 2021).

The majority of hotels employ performance measures including duration of stay, occupancy rate, and number of overnights (Adegboyega *et al.*, 2021). The quality of services, a company's flexibility, resource usage, and market orientation are also seen as important nonfinancial characteristics that improve a service company's or hotel's profitability-based success. Resource utilization, adaptability, and service quality all had a beneficial impact on the hotel's performance in terms of occupancy rate (OCR), average daily rate (ADR), and revenue per available room (RPA) (RevPAR). Innovation, however, had an indirect impact on performance through service quality ($p = 0.311$, $p = 0.05$), rather than a direct impact on performance ($p = 0.068$). Market orientation had no effect on performance ($p = 0.076$), but it had a beneficial influence on both innovation and service quality ($p = 0.0146$ and 0.322 , respectively) (Phan *et al.*, 2021).

2.1.2.1. Occupancy Rate (OR)

The entire number of sold rooms is divided by the total number of available rooms in any hotel to determine the occupancy rate (OR). Any hotel's objective is to run at full occupancy rates in order to provide greater financial returns (Matovic, 2002). According to O'Neill *et al.* (2016), the hotel sector employed occupancy as a financial indicator and a predictor of a firm's risk-adjusted market performance. The occupancy rate is a profitability indicator (Zaki & Qoura, 2019) and one of the most internationally used indicators (Santos *et al.*, 2020). Last but not least, some hotels employ occupancy rate as a key performance metric (Kim *et al.*, 2013; Santos *et al.*, 2020; Panno, 2018; Adegboyega *et al.*, 2021).

2.1.2.2. Customer Satisfaction (CS)

Customer satisfaction (CS) is one of the most well-known non-financial characteristics that is assessed and controlled, particularly in the service industry. It is also one of the most significant leading indications of future financial success that defines business effectiveness (Haber & Reichel, 2005). Customer satisfaction clearly influences hotel efficiency and is a nonfinancial leading indicator (Assaf & Magnini, 2012). It is a significant performance driver (Kim *et al.*, 2013), and a predictor of hotel performance (Chi & Gursoy, 2009). Finally, the importance of customer satisfaction as a leading indication of non-financial company performance cannot be overstated (Panno, 2018).

2.1.2.3. Service Quality (SQ)

An important factor in determining a company's performance is service quality (SQ) (Fitzgerald *et al.*, 1991). According to Chu & Choi (2000), it increased hotel productivity and was viewed as a comprehensive service experience as opposed to individual components (Wilkins *et al.*, 2007). Additionally, there was a significant link between good hotel management and service quality (Phillips *et al.*, 1999). In addition, total quality management (TQM), lean, and six-sigma have a favorable impact on a hotel's financial success (Partalidou *et al.*, 2020).

2.2. Hotel Performance Factors

Numerous scholars have been interested in the topic of hotel performance, and the majority of them have concentrated on researching the aspects that influence this performance. A greater comprehension of a company's revenue and profit drivers is essential to assessing its potential and, consequently, the quality of an investment in that company (Shields & Shields, 2005; Penman, 2007; Huefner & Largay, 2008). Numerous financial and non-financial elements can have an impact on a hotel's performance or profitability.

2.2.1. Hotel Location

A non-financial component that influences how well a hotel performs is its location. It matters for assessing efficiency (Chu & Choi, 2000), is a source of income and profit (O'Neill & Mattila, 2006), and boosts RevPAR (Sainaghi, 2011). Instead, performance stabilization was unaffected by location (Kim *et al.*, 2013). Hotels situated in picturesque or seaside settings, in particular, perform better financially than other types of accommodations (Sami & Mohamed, 2014). Additionally, it has a significant impact on TRevPAR (Lado-Sestayo *et al.*, 2017). Beach and rural resort hotel locations affect TRevPAR, with all-inclusive resorts producing a greater TRevPAR (Bonfatto *et al.*, 2017). In terms of return on equity, return on asset, occupancy rate, and gross operational profit per available room, it has a significantly favorable

impact on the profitability of hotels (Menicucci, 2018). In the other way, hotels in the capital do not exhibit higher profitability levels than hotels in outlying regions (Zaki & Qoura, 2019). Additionally, the location of a hotel affects TRevPAR (Santos *et al.*, 2020), and it (the property's proximity to an airport and a highway) significantly increased costs (Kim *et al.*, 2020).

2.2.2. Hotel Category

A non-financial aspect that influences the degree of hotel performance is hotel category (star rating). It influences hotel performance strategically (Cortés *et al.*, 2007). However, it has little impact on RevPAR and has little impact on performance stabilization (Sainaghi, 2011), and does not affect performance stabilization (Kim *et al.*, 2013). In addition, the impact of hotel category (star-rating) on technical efficiency has a varied results; a positive correlation (Such-Devesa & Pealver, 2013), and no correlation (Oliveira *et al.*, 2013). A non-financial aspect that influences the degree of hotel performance is hotel category (star rating). It influences hotel performance strategically (Cortés *et al.*, 2007). But it doesn't yield meaningful outcomes for RevPAR (Sainaghi, 2011). Hotels were able to charge more and offer fewer incentives due to their hotel category (Beccera *et al.*, 2013). In contrast, according to Jorge and Suárez (2014), it has a negative correlation with technical efficiency. Positively, it is a key profit factor (Zaki & Qoura, 2019), and significantly affects TRevPAR (Lado-Sestayo *et al.*, 2017; Santos *et al.*, 2020).

2.2.3. Hotel Size

A non-financial aspect that influences how well a hotel performs is the size of the hotel (the number of rooms). It is a strategic factor in determining hotel performance and a generator of revenue and profit (O'Neill & Mattila, 2006). In order to reach greater performance levels, hotels should ideally be medium- or large-sized (Cortés *et al.*, 2007). The size of the hotel has a considerable negative association with RevPAR, in contrast (Sainaghi, 2011). The size of the hotel has a favorable impact on its financial success (Almajali *et al.*, 2012; Kim *et al.*, 2013). The kind of hotel also modifies the link between guest happiness, hotel size, client mix, and performance, which may lead to varying hotel performance (Kim *et al.*, 2013). The impact of hotel size on hotel performance is varied; it has a negative impact effect on financial performance (Sami & Mohamed, 2014); a positive effect on hotel profitability (Aissa & Goaid, 2016), and it has no effect on the correlation between RevPAR and GOPPAR (Schwartz *et al.*, 2017). Moreover, hotel size is a main profitability determinant (Zaki & Qoura, 2019). However, there is no clear evidence of a relationship between hotel size and its efficiency (Deng *et al.*, 2019). Finally, hotel size influences TRevPAR (Santos *et al.*, 2020), as it has a significant positive effect on prices (Kim *et al.*, 2020), and a strong positive relationship with stock-market performance (Demydyuk, 2021).

2.2.4. Hotel Type

The kind is a non-financial variable that impacts the performance level of hotels. According to Brown & Dev (1997) and O'Neill & Mattila (2006), brand affiliation (or branding) has an impact on the financial performance of hotels. Hotel type also has moderating effects on the relationship between customer satisfaction, hotel size, and customer mix and performance, which may lead to varying levels of hotel performance (Kim *et al.*, 2013). Additionally, hotels operating under franchise agreements and hotels connected to a worldwide network have superior financial performance versus other hotels (Sami & Mohamed, 2014). Additionally, joining a chain system improves the financial performance of hotels (Shieh *et al.*, 2018). A key factor in profitability is type (Zaki & Qoura, 2019). However, there is no conclusive proof that the hotel chain affects its effectiveness (Deng *et al.*, 2019). Price differences between budget, midscale, and premium hotels are notable (Kim *et al.*, 2020).

2.2.5. Other Factors of Hotel Performance

Other factors, such as pricing policies and the amount invested in fixed assets, have an impact on the performance of hotels (Poorani & Smith, 1995; Kaufman *et al.*, 1996); International expansion (Contractor *et al.*, 2003); Operating factors like inefficiencies caused by a lack of employee training, low investments in fixed assets and technology, and government policies that ignore the proper emphasis on ensuring safety and security may also be to blame for low profitability (Sharma & Upneja, 2006); price and quantity of staff (Brown & Dev, 1997; O'Neill & Mattila, 2006). Revenue and profit drivers include opening year, region, average daily rate (ADR), and occupancy (O'Neill & Mattila, 2006). Strategic determinants of hotel performance include hotel management (Cortés *et al.*, 2007) and corporate social responsibility (CSR), which has a positive impact on the financial performance of hotels (Lee *et al.*, 2019). Key success factors include the effective use of the Internet, service quality, financial performance, and marketing (Avcikurt *et al.*, 2010). The quantity of staff, hotel age (date of construction and most recent renovations), services (congress infrastructures), and market orientation did not significantly affect RevPAR (Sainaghi, 2011).

Leverage, liquidity, and managerial skill all have a favorable impact on financial performance since rising firm assets result in strong financial success (Almajali *et al.*, 2012). Additionally, performance stabilization was considerably impacted by hotel placement. Performance is significantly impacted by the consumer mix (Kim *et al.*, 2013). Additionally, ownership (Gelübcke, 2013), links between organizations (Gloede *et al.*, 2013), franchising (Madanoglu *et al.*, 2013), and lastly, a high intellectual level, show a superior financial success than others. Additionally, debt has a detrimental effect on a company's financial success (Sami & Mohamed, 2014). A mixed approach that blends implementation methodologies is connected with the highest RevPAR index (Altin *et al.*, 2017); hotel profitability is influenced by levels of debt, exposure to crisis events, and managers' education levels; All-inclusive resorts provide a greater TRevPAR, hence service type (all-inclusive versus the others) has an impact on TRevPAR specifically (Bonfato *et al.*, 2017). E-commerce costs have a beneficial influence on company performance, as do online rating (Ding *et al.*, 2017), human resource development (Chatterjee, 2017), and hotel performance (DeFranco *et al.*, 2017).

Oil price fluctuations, corporate social responsibility (CSR), knowledge acquisition (Sinthupundaja *et al.*, 2018), Twitter use by hotels has a favorable correlation with RevPAR (Kim & Chae, 2018), domestic visitors, occupancy rate, and operating year are among the performance determinants (Shieh *et al.*, 2018). The financial performance of hotels is positively impacted by intellectual capital (Sardo *et al.*, 2018), loyalty programmer costs (Hua *et al.*, 2018), and managers' experience and sustainability (Sardo *et al.*, 2018). Moreover, loyalty program expenses have a significant and positive impact on all three operational performance indicators of RevPAR, ADR, and occupancy as well as the financial performance indicator of gross operating profit (Zaki & Qoura, 2019). When it comes to maximizing income, the role of the employees and the facilities stands out (Garcia *et al.*, 2019). The level of service (measured by the TripAdvisor score) significantly influences cost (Kim *et al.*, 2020). The valence's beneficial impact on financial success is favorably moderated by the level of online review helpfulness (ORH) (Mariani & Borghi, 2020). One of the finest practices in hotels is implementing a service marketing plan (Sutari *et al.*, 2020). The success of the stock market was shown to be strongly positively correlated with size and consumer traffic (Demydyuk, 2021). The competitive differentiation advantage serves as a complete mediator in the link between quality management (QM), hotel performance, and sustainability (Moliner *et al.*, 2021).

In hospitality industry, numerous operational aspects have an effect on hotels' financial success. Service time is one of these components that consider a strong competitive tool. In this regard, queuing theory is one of the best practical methods for successfully examining service time characteristics

(Moussa *et al.*, 2015). Additionally, customer satisfaction is particularly affected by waiting times in Cairo's five-star hotels (Abdelmawgoud *et al.*, 2016). Hotel managers must therefore think of ways to shorten the time that customers must wait (Abdelmawgoud, 2016). Because web advertising is an effective tool at promoting hospitality businesses, marketing also plays a part. For instance, 78.10% of Cairo's five-star hotel guests believe that web advertising is a useful strategy (Abdelmawgoud *et al.*, 2018). Based on online rating, according to Abdelmawgoud's research (2019), most guests to Hurghada city give their hotels extremely high marks on review websites, giving them an average rating of 4.18 for each of the following categories: hotel location, service quality, value for money, hotel cleanliness, and room quality (Abdelmawgoud, 2019a).

Over 95% of hotel customers in North Upper Egypt believed relationship marketing to be a successful strategy, and one of the main drivers is dealing with hotels at a fair price (Abdelmawgoud *et al.*, 2020). The capacity of a hotel also affects how well it performs financially. The reduction in hotel capacity brought on by local and international crises is a significant problem in the Egyptian hospitality industry. Specifically, the growth rate of hotels, rooms, and beds is negative (Abdelmawgoud, 2019b). The cost of the meals is an important factor. However, there is a huge issue with the wide price disparity across hotels. The factors of Cairo hotels, hotels with a large number of rooms, five-star hotels, and hotels operated by firms statistically substantially predicted the high level of meal costs in hotels. As a result, changing meal costs is a crucial step in increasing hotel income (Abdelmawgoud, 2020). The quality of the meal has a big impact on how well hotel perform. Moreover, the general assessment of customers' trust in the safety of meals offered at hotels in Cairo, Luxor, and Aswan came at a high level in various Egyptian establishments (Abdelmawgoud & Abdelnaby, 2020).

3. Methodology

The aim of this research is to investigate the factors affecting the operational and financial performance indicators of the rooms division. According to data from the Information & Decision Support Center (IDSC, 2022), the research population is represented in the fixed five- and four-star hotels in Cairo (32 hotels); there are 20 five-star hotels and 13 four-star hotels. As a result, the sample is a stratified random sample, and the sample size was determined using Thompson's equation as given in Table 1. The sample size is estimated to be 20 hotels for five-star hotels and 13 hotels for four-star hotels.

$$n = \frac{N \times \rho (1 - \rho)}{[N - 1 \times (d^2 \div z^2)] + \rho (1 - \rho)}$$

Table (1): The Size of the Research Sample

No.	Items	Five-Star Hotels	Four-Star Hotels
1	N = Population Size	20	13
2	Z =Confidence Level of 95 % (1.96)	1.96	1.96
3	d = Error Proportion (0.05)	0.05	0.05
4	ρ = Probability (50 %).	0.50	0.50
5	n = Sample Size	20	13

Table (1) demonstrates that in order to have a confidence level of 95% that the true value is within 5% of the measured value, about 20 hotels' historical data reports are required. Since 50% of the public is predicted to respond to information about five-star hotels, In addition, to achieve a 95% confidence level for four-star hotels, 13 hotels' historical data reports are required. As seen in the table (2), research data for performance indicators are quantitative. For the study design, the descriptive information was gathered using data from the hotel's website, while the financial data for performance indicators was obtained from the front office department of the hotels in the form of a historical data report. Data for 12 five-star hotels and 4 four-star hotels were collected through personal connections because most hotels refused to supply the necessary information, but several hotels consented to do so because of these connections. Therefore, there are around 16 hotels in the real sample. As a result, this sample is regarded as a convenience sample or a no statistical sample.

Table (2): The Research Variables & Factors

Performance Indicators	Performance Factor
Average Daily Rate (ADR)	Hotel Category
Revenue Per Available Rooms (RevPAR)	Management Type
Occupancy Rate (OR)	Management by Owner
Total Rooms Sold (TRS)	Hotel Type
Annual Rooms (AR)	Chain Type
Daily Rooms (DR)	Manager Gender
Total Rooms Revenues (TRR)	Manager Nationality
	Operator Name
	Operator Nationality
	Hotel Location

4. Data Analysis & Results Discussion

About 16 historical & financial data reports for performance indicators have been obtained from Cairo hotels. Specifically, twelve data reports for five-star hotels and four for four-star hotels were obtained. All these data were analyzed using SPSS version 25.

4.1. Statistical Distributions of Research Variables:

The statistical distribution of the research variables is depicted in the following table (3).

Table (3): Statistics of Research Variable Distributions

No.	Research Variables	Test Statistic	Sig (2-tailed)	Distribution Type
1	Total Rooms Revenues (TRR)	0.269	0.003	Non-Normal
2	Average Daily Rate (ADR)	0.266	0.003	Non-Normal
3	Revenue Per Available Rooms (RevPAR)	0.199	0.089	Normal
4	Occupancy Rate (OR)	0.224	0.031	Non-Normal
5	Total Rooms Sold (TRS)	0.181	0.168	Normal
6	Daily Rooms (DR)	0.163	0.200	Normal

7	Annual Rooms (AR)	0.163	0.200	Normal
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Table (3) displays the results of a one-sample Kolmogorov Smirnov test used to determine the statistical distribution of the research variables. The results show that the variables of daily rooms, annual rooms, total sold rooms, and revenue per available room are normally distributed, while occupancy rate, total rooms' revenues, and average daily rate are non-normally distributed.

4.2. Descriptive Statistics of Research Variables

Table (4): The Research Variables' Descriptive Statistics

No.	Variables	Mean (Annually)		Std. Deviation	CV %
		Statistic	Std. Error		
1	Daily Rooms (DR)	402	48.7	194.8	48.44
2	Annual Rooms (AR)	146798	17775.5	71101.9	48.44
3	Total Rooms Sold (TRS)	93576	11197.6	44790.3	47.87
4	Occupancy Rate (OR) %	0.65	0.02	0.08	12.87
5	Total Rooms Revenues (TRR) LE	40754285.7	7962579.8	31850319.2	78.15
6	Average Daily Rate (ADR) LE	450.9	73.1	292.5	64.87
7	Revenue per Available Rooms (RevPAR) LE	281.9	40.6	162.5	57.64

The descriptive statistics for the research variables are shown in Table (4). The findings showed that the average yearly income per room is 40754285.66 LE, the average daily rate is 450.91 LE, and the revenue per available room is 281.91 LE. There are 402 rooms every day, 146798 rooms per year, and 65% of those rooms are occupied. The sample hotels have a large variation coefficient for the performance measures. Total room revenues (78.15%), average daily rate (64.87%), revenue per available room (57.64%), daily rooms (48.44%), yearly rooms (48.44%), and occupancy rate (12.87%) are all projected figures.

Table (5): The Research Variables' Descriptive Statistics according to Hotel Category

No	Variables	Mean		Std. Deviation		CV %	
		Five Star	Four Star	Five Star	Four Star	Five Star	Four Star
1	Daily Rooms (DR)	522	324	213	128	41	40
2	Annual Rooms (AR)	190607	118362	77611	46741	41	40
3	Total Rooms Sold (TRS)	122415	72603	49032	21678	40	30
4	Occupancy Rate (OR) %	64.68	63.93	6.55	7.86	10.13	12.29

5	Total Rooms Revenues (TRR) LE	56849624.4	23512194.3	38145905.4	4114258.4	67.09	17.49
6	Average Daily Rate (ADR) LE	457.2	370.1	256.4	135.7	56.08	36.67
7	Revenue per Available Rooms (RevPAR) LE	286.9	231.5	142.3	105.2	49.59	45.42

In this table (5), financial and nonfinancial performance factors for five-star and four-star hotels are compared. It is evident from table (5) that the average daily room count for five-star hotels is 522 rooms, compared to 324 rooms for four-star hotels; the total number of rooms sold annually for five-star hotels is 190607, compared to 118362 rooms for four-star hotels; and the average occupancy rate for five-star hotels is 64.68%, compared to 72603 rooms for four-star hotels, which is 63.93%. The average daily rate for rooms is projected to be 457.17 LE, and the average income for available rooms is roughly 286.95 LE in five-star hotels, as shown in figure (1), which shows the total room revenues according to the five-star hotels in Cairo. The total room revenue is 56849624.4 LE.

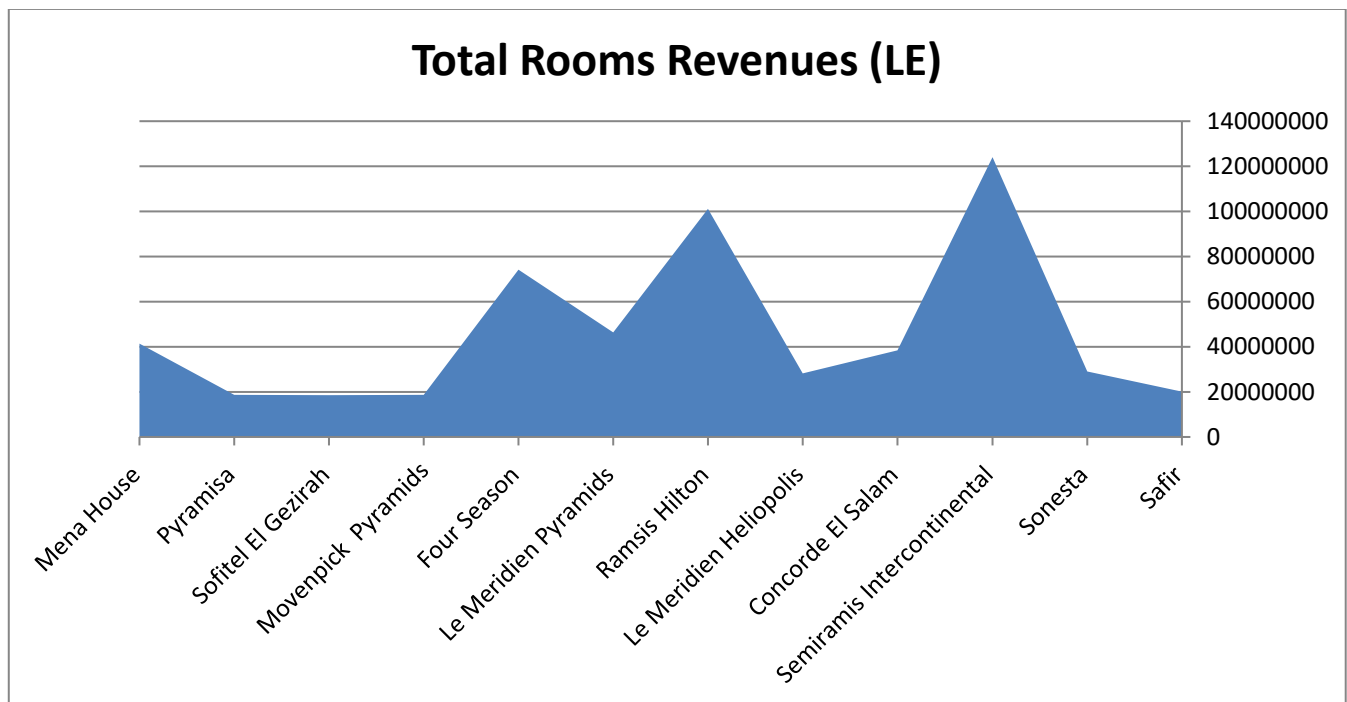


Figure (1): Total Room Revenues from Cairo's Five-Star Hotels

According to the four-star hotels in Cairo, the total room revenues are anticipated to be around 23512194.34 LE, with the average daily rate estimated to be 370.11 LE and the average income per available room being approximately 231.54 LE, as shown in figure (2).

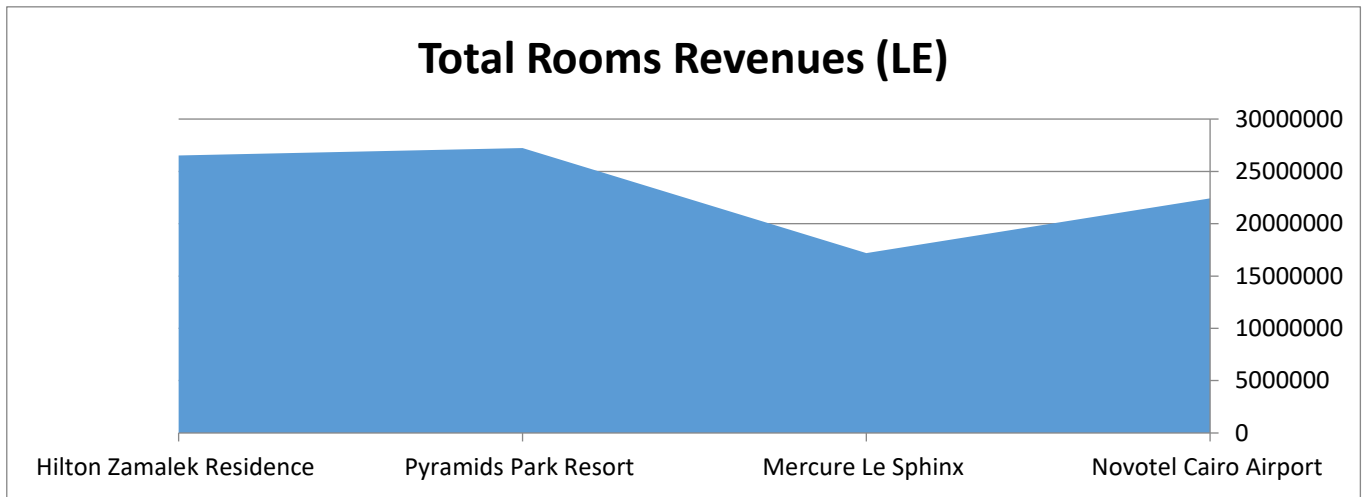


Figure (2): Total Room Revenues in Cairo, Per Four-Star Hotels

According to this investigation, the financial and non-financial metrics of five-star hotels are superior to those of four-star hotels. The mean of performance indicators in relation to the research factors is shown in table (6) below.

Table (6): The Mean of Financial Performance Measures Based on Research Factors

No.	Factors	Items	DR	AR	TRS	RevPAR	OR %	TRR LE	ADR LE
1	Hotel Category	Five Star	522	190607	122415	286.95	64.68	56849624.40	457.17
		Four Star	324	118362	72603	231.54	63.93	23512194.34	370.11
2	Management Type	Management Contract	398	145400	95563	301.39	66.63	43294835.79	470.02
		Independent	429	156585	79664	145.54	50.16	22970434.75	317.09
3	Management by Owner	Yes	429	156585	79664	145.54	50.16	22970434.75	317.09
		No	398	145400	95563	301.39	66.63	43294835.79	470.02
4	Hotel Type	Chain	397	144881	93253	290.36	65.14	41655841.10	459.82
		Independent	429	156585	79664	145.54	50.16	22970434.75	317.09
5	Chain Type	International	398	145400	95563	301.39	66.63	43294835.79	470.02
		Local	429	156585	79664	145.54	50.16	22970434.75	317.09
6	Manager Gender	Male	353	128663	81802	284.99	64.61	36041196.66	456.12
		Female	859	313535	200215	322.73	63.86	101188285.70	521.33
7	Manager Nationality	Egyptian	381	139037	88158	307.79	64.50	42943555.31	494.09
		Foreigner	421	153665	99695	155.65	64.90	23749410	241.88
8	Operator Nationality	Kuwait	286	104390	76503	191.99	73.29	20042006.86	271.20
		USA	431	157461	100209	392.98	63.12	54470590.26	651.62

		British	726	264990	166187	468.17	62.71	124060142.90	753.78
		France	371	135342	88725	209.40	66.51	26521145.2	312.35
		Singapore	320	116800	87405	328.58	74.83	38377560	438.87
		Switzerland	234	85410	63118	218.82	73.90	18689314	296.63
		Egypt	429	156585	79664	145.54	50.16	22970434.75	317.09
9	Hotel Location	Dokki	332	120998	68707	163.98	58.78	19375961.18	294.05
		Nasr City	409	149285	98038	194.26	65.67	29000000	301.69
		Corniche El Nil	635	120998	151269	373.16	67.13	87875329.53	571.33
		Heliopolis	245	89425	61894	284.75	70.26	25299776.86	409.73
		Cairo-Alex Desert Road	335	122275	76084	178.82	64.33	21041362.90	288.88
		El Remaya Square	641	233965	151766	197.91	64.87	46303531.57	307.51
		Giza Street	351	128115	77116	436.35	58.99	46346309.72	785.57
		El Ahrām	456	166440	110509	248.96	66.40	41436481.29	372.61
		Zamalek	164	59860	39403	443.27	65.83	26534384.86	673.40

4.5. T-Test Analysis:

4.5.1. Total Rooms Revenues (TRR):

Table (7): Test of Mann-Whitney U for Total Room Revenue (TRR)

No.	Variables	Items	Mean Rank	Test Mann-Whitney U	Sig
1	Hotel Category	Five Star	9.50	12.000	0.146
		Four Star	5.50		
2	Management Type	Management Contract	8.86	9.000	0.427
		Independent	6.00		
3	Management by Owner	Yes	6.00	9.000	0.427
		No	8.86		
4	Hotel Type	Chain	8.53	7.000	0.914
		Independent	8.00		
5	Chain Type	International	8.86	9.000	0.427
		Local	6.00		

6	Manager Gender	Male	7.57	1.000	0.165
		Female	14.00		
7	Manager Nationality	Egyptian	8.31	9.000	0.497
		Foreigner	6.00		

According to hotel category, management type, owner equals operator, hotel type, chain type, manager gender, and manager nationality, Table (7) shows a Mann-Whitney U Test for total rooms' revenues. The findings showed that, at the level of significance of 0.05%, there were no statistically significant changes in the total room revenues according to these criteria. This finding is in line with earlier research, which found that the location of a hotel had no impact on performance stabilization and that hotels located in rural places did not function more profitably than those in capital cities (Zaki & Qoura, 2019). Additionally, there is no concrete proof that a hotel chain's efficiency is related to it (Deng *et al.*, 2019). The degree of hotel performance is affected by the location of the hotel, contrary to the findings of other research (Chu & Choi, 2000; O'Neill & Mattila, 2006; Lado-Sestayo *et al.*, 2017; Bonfato *et al.*, 2017; Menicucci, 2018; Santos *et al.*, 2020). Hotels situated in picturesque or seaside settings, in particular, perform better financially than other types of accommodations (Sami & Mohamed, 2014). Additionally, the location of the hotel in relation to the distance from the airport and the highway significantly influenced pricing (Kim *et al.*, 2020).

According to Cortés *et al.* (2007), Lado-Sestayo *et al.* (2017), and Santos *et al.* (2020), the category has an impact on how well hotels operate and has allowed them to raise rates and provide fewer incentives (Beccera *et al.*, 2013). According to O'Neill & Mattila (2006), Aissa & Goaid (2016), Zaki & Qoura (2019), Santos *et al.* (2020), and Demydyuk (2021), the size of the hotel has an impact on how well it performs. Additionally, medium- or large-sized hotels are preferable if hotels are to reach greater performance levels (Cortés *et al.*, 2007). Additionally, it improves financial performance (Almajali *et al.*, 2012; Kim *et al.*, 2013). According to Brown & Dev (1997), O'Neill & Mattila (2006), Zaki & Qoura (2019), and Kim *et al.* (2020), the kind has an impact on the performance level of hotels. Hotels operating under franchise agreements and hotels connected to a worldwide network do better financially than other hotels (Sami & Mohamed, 2014). Additionally, joining a chain system improves the financial performance of hotels (Shieh *et al.*, 2018). Additionally, there are moderating effects of hotel type on the link between guest satisfaction, hotel size, customer mix, and performance, which in turn affects how well hotels function (Kim *et al.*, 2013). On the other hand, it has a detrimental influence on financial performance (Sami & Mohamed, 2014).

4.5.2. Average Daily Rate (ADR):

Table (8): Average Daily Rate Using the Mann-Whitney U Test (ADR)

No.	Variables	Items	Mean Rank	Test Mann-Whitney U	Sig. (2-Tailed)
1	Hotel Category	Five Star	8.50	24.000	1.000
		Four Star	8.50		
2	Management Type	Management Contract	8.64	12.000	0.751

		Independent	7.50		
3	Management by Owner	Yes	7.50	12.000	0.751
		No	8.64		
4	Hotel Type	Chain	8.53	7.000	0.914
		Independent	8.00		
5	Chain Type	International	8.64	12.000	0.751
		Local	7.50		
6	Manager Gender	Male	7.71	3.000	0.355
		Female	12.00		
7	Manager Nationality	Egyptian	8.77	3.000	0.089
		Foreigner	3.00		

According to the factors of hotel category, management type, management by owner, hotel type, chain type, manager gender, and manager nationality, Table (8) shows a Mann-Whitney U test for total rooms' revenues. The findings showed that, at the level of significance of 0.05%, there were no statistically significant changes in total room revenues according to these factors.

4.5.3. Revenue per Available Rooms (RevPAR):

Table (9): Analysis of T-Tests for Revenue per Available Room (RevPAR).

No.	Variables	Items	Mean	t	df	Sig.
1	Hotel Category	Five Star	287.7501	0.241	14	0.813
		Four Star	264.3733			
2	Management Type	Management Contract	301.3872	1.297	14	0.215
		Independent	145.5365			
3	Management by Owner	Yes	145.5365	-1.297	14	0.215
		No	301.3872			
4	Hotel Type	Chain	290.3593	0.796	14	0.439
		Independent	155.1047			
5	Chain Type	International	301.3872	3.457	13.85	0.004

		Local	145.5365			
6	Manager Gender	Male	284.9895	-0.211	13	0.836
		Female	322.7336			
7	Manager Nationality	Egyptian	307.7907	2.500	5.22	0.052
		Foreigner	155.6536			

The revenue per available room is broken down by hotel category, management type, hotel managed by owner, hotel type, chain type, manager gender, and manager nationality in Table (9) using a T-test. The findings showed that, at the level of significance 0.05%, there were statistically significant variations in the revenue per available room according to chain type in favor of the international chain and manager in favor of Egyptian. This finding contradicts earlier research since hotel location affects RevPAR positively, hotel category has no discernible impact on RevPAR, and there is a substantial inverse link between hotel size and RevPAR (Sainaghi, 2011).

4.5.4. Occupancy Rate (OR):

Table (10): Mann-Whitney U Test for Occupancy Rate (OR)

No.	Variables	Items	Mean Rank	Test Mann-Whitney U	Sig. (2-Tailed)
1	Hotel Category	Five Star	8.42	23.000	0.903
		Four Star	8.75		
2	Management Type	Management Contract	9.43	1.000	0.039
		Independent	2.00		
3	Management by Owner	Yes	2.00	1.000	0.039
		No	9.43		
4	Hotel Type	Chain	8.87	2.000	0.233
		Independent	3.00		
5	Chain Type	International	9.43	1.000	0.039
		Local	2.00		
6	Manager Gender	Male	8.07	6.000	0.817
		Female	7.00		
7	Manager Nationality	Egyptian	7.92	12.000	0.865
		Foreigner	8.50		

Table (10) displays a Mann-Whitney U test for occupancy rate (OR) according to the hotel category, management type; hotel managed by owner, hotel type chain type, and manager gender and manager nationality. The findings showed that, at the significance level of 0.05%, there were statistically significant differences in the occupancy rate depending on the type of management, favoring management contracts; hotel owned and managed by the owner, favoring the separation of ownership from management; and chain type, favoring international chains.

4.5.5. Total Rooms Sold (TRS):

Table (11): T-Test Analysis for the Total Number of Rooms Sold (TRS).

No.	Variables	Items	Mean	t	df	Sig. (2-Tailed)
1	Hotel Category	Five Star	102875.5	1.497	14	0.157
		Four Star	65675.61			
2	Management Type	Management Contract	95562.90	0.457	14	0.655
		Independent	79663.93			
3	Management by Owner	Yes	79663.93	-0.457	14	0.655
		No	95562.90			
4	Hotel Type	Chain	93252.77	-0.108	14	0.916
		Independent	98416.86			
5	Chain Type	International	95562.90	0.457	14	0.655
		Local	79663.93			
6	Manager Gender	Male	81801.96	-3.564	13	0.003
		Female	200214.57			
7	Manager Nationality	Egyptian	88157.86	-0.338	13	0.741
		Foreigner	99694.93			

According to hotel category, management type, hotel controlled by owner, hotel type, chain type, manager gender, and manager nationality, Table (11) shows a T test analysis of the total number of rooms sold. The findings showed that, at the level of significance of 0.05%, there were statistically significant variations in the total number of rooms sold according to the gender of the hotel management in favor of women.

4.5.6. Daily Rooms (DR):

Table (12): T-Test Analysis for Daily Rooms (DR).

No.	Variables	Items	Mean	t	df	Sig. (2-Tailed)
1	Hotel Category	Five Star	441.08	1.431	14	0.174
		Four Star	285.50			
2	Management Type	Management Contract	398.36	-0.201	14	0.843
		Independent	429.00			
3	Management by Owner	Yes	429.00	0.201	14	0.843
		No	398.36			
4	Hotel Type	Chain	396.93	-0.406	14	0.691
		Independent	481.00			
5	Chain Type	International	398.36	-0.201	14	0.843
		Local	429.00			
6	Manager Gender	Male	352.50	-3.402	14	0.005
		Female	859.00			
7	Manager Nationality	Egyptian	380.92	-0.268	13	0.793
		Foreigner	421.00			

According to hotel category, management type, hotel managed by owner, hotel type, chain type, manager gender, and manager nationality, a T-test analysis of the quantity of hotel rooms is shown in Table (12). According to the findings, there were statistically significant changes in the number of daily rooms depending on the hotel manager's gender, with a 0.05% level of significance favoring females.

4.6. Chi-Square Analysis

Table (13): Chi-Square Analysis for Performance Indicators

No.	Factors	Performance Indicators	Chi-Square	df	Sig
1	Hotel Name	Daily Rooms (DR)	1415.271	15	0.000
		Occupancy Rate (OR)	16.151	15	0.372
		Average Daily Rate (ADR)	2843.796	15	0.000
		Revenue Per Available Rooms (RevPAR)	1404.887	15	0.000
2	Hotel Operator	Daily Rooms (DR)	1681.179	11	0.000
		Occupancy Rate (OR)	268.778	11	0.000
		Average Daily Rate (ADR)	2652.490	11	0.000
		Revenue Per Available Rooms (RevPAR)	1518.080	11	0.000
3	Operator Nationality	Daily Rooms (DR)	3999.359	6	0.000
		Occupancy Rate (OR)	598.503	6	0.000
		Average Daily Rate (ADR)	6735.861	6	0.000
		Revenue Per Available Rooms (RevPAR)	3953.004	6	0.000
4	Hotel Location	Daily Rooms (DR)	2830.059	8	0.000
		Occupancy Rate (OR)	209.288	8	0.000
		Average Daily Rate (ADR)	2704.200	8	0.000
		Revenue Per Available Rooms (RevPAR)	1616.601	8	0.000

The study of the chi-square test of hotel performance indicators is shown in Table (13). Through this test, it was discovered that there are statistically significant differences between hotels according to the number of hotel rooms in favor of 859 rooms, the average daily rate in favor of 1389.08 LE, and the revenue per available room in favor of 755.65 LE. There are statistically significant differences between hotel operators according to the number of hotel rooms in favor of 726 rooms, the occupancy rate in favor of 74.83 %, the average daily rate in favor of 13889.08 LE, and the revenue per available room in favor of 755.65 LE. According to the number of hotel rooms, where British nationality have 726 rooms, the occupancy rate, where Singapore nationals have 74.83%, the average daily rate, where British nationality have 753.78 LE, and the revenue per available room, where British nationals have 468.17 LE, there are statistically significant differences between hotel operator nationalities. There are statistically significant disparities across hotel sites based on the amount of hotel rooms, with Elremaya Square having 641 rooms, Heliopolis having a 70.26% occupancy rate, Giza Street having a 785.57 LE average daily rate, and Zamalek having a 443.27 LE income per available room.

Table (14): Analysis of Chi Square for Performance Indicators

No.	Factors	Performance Indicators	X ² (Calculated)	X ² (Table)	Decision
1	Hotel Name	Total Rooms Sold	343590	19.63	Refuse Null Hypothesis
		Total Rooms Revenues	355404030.4	19.63	
2	Hotel Operator	Total Rooms Sold	148130.7178	19.63	
		Total Rooms Revenues	251747353.1	19.63	
3	Operator Nationality	Total Rooms Sold	71755.28397	14.07	
		Total Rooms Revenues	195274874.6	14.07	
4	Hotel Location	Total Rooms Sold	130980.0978	15.51	
		Total Rooms Revenues	95608492.81	15.51	

The study of the chi-square test for hotel performance indicators is shown in table (14). This test revealed statistically significant differences between hotels in terms of the number of total rooms sold (200214.6 LE) and the number of total rooms' revenues (124060142.90 LE). There are statistically significant differences between hotel operators according to total rooms sold in favor of the Intercontinental chain with 166187 rooms and total number of the rooms' revenues in favor of Intercontinental chain with 124060142.9 LE. According to the total number of rooms sold, which favor the British chain with 166187 rooms, and the total number of rooms' revenues, which favor the British chain with 124060142.9 LE, there are statistically significant variations in hotel operator nationality. According to the overall number of rooms sold, which favors the Elremaya Square area with 151766 rooms, and the total number of rooms' revenues, which favor the Corniche El Nile with 87875329.53 LE, there are statistically significant differences between the locations of the hotels.

4.7. Correlations Analysis:

Table (15): Relationships between the Research Variables

No.	Variables		R	Sig.
	Independent	Dependent		
1	Average Daily Rate (ADR)	Revenue Per Available Rooms (RevPAR)	0.977**	0.000
2	Annual Rooms (AR)	Total Rooms Sold (TRS)	0.976**	0.000
3	Annual Rooms (AR)	Total Rooms Revenues (TRR)	0.727**	0.001
4	Total Rooms Sold (TRS)	Total Rooms Revenues (TRR)	0.717**	0.002

5	Total Rooms Revenues (TRR)	Revenue Per Available Rooms (RevPAR)	0.599*	0.014
6	Total Rooms Revenues (TRR)	Average Daily Rate (ADR)	0.591*	0.016

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

The correlations between the research variables are displayed in Table (15). At the 0.05 level of significance, it was discovered that there was a significant direct correlation between average daily rate and revenue per available room ($r = 0.977$) as well as between average daily rate and total room revenues ($r = 0.591$). Additionally, there is a statistically significant average direct association between total room revenues and revenue per available room ($r = 0.599$). Furthermore, at the 0.01 level of significance, there is a significant direct correlation between the total number of rooms sold and the total income from the rooms ($r = 0.717$). Finally, at the 0.01 level of significance, there is a significant direct correlation between yearly rooms and total rooms revenues ($r = 0.727$) and a good correlation between annual rooms and total rooms sold ($r = 0.976$).

5. Conclusion:

The purpose of this study is to investigate the variables influencing operational and financial performance indicators of the rooms division in Cairo's four- and five-star hotels. The findings showed that the average yearly income per room is 40754285.66 LE, the average daily rate is 450.91 LE, the average revenue per available room is 281.91 LE, there are 402 rooms every day, 146798 rooms per year, and the occupancy rate is 65%. The sample hotels have a large variation coefficient for the performance measures. Total room revenues (78.15%), average daily rate (64.87%), revenue per available room (57.64%), daily rooms (48.44%), yearly rooms (48.44%), and occupancy rate (12.87%) are all projected figures. Using a T-test with a significance threshold of 0.05%, there is a statistically significant difference in the number of daily rooms. According to management gender, preferring female managers in the overall number of rooms sold; a statistically significant difference in revenue per available room favoring international chains in the chain type and benefiting Egyptian managers based on the nationality of the manager.

According to the chi-squared test, there is a statistically significant difference between the chains based on the number of hotel rooms, with the InterContinental chain having 726 rooms, the Concorde chain having an occupancy rate of 74.83%, the Four-Season chain having a daily average rate of 13889.08 LE, and the Four-Season chain having a revenue per available room of 755.65 LE. In terms of the hotel operator's nationality, there is a statistically significant difference based on the number of hotel rooms (726 rooms) in favor of British nationality, the occupancy rate (73.83%) in favor of Singaporean nationality, the average daily rate (753.78 LE) in favor of British nationality, and the revenue per available room (468.17 LE) in favor of British nationality. According to the number of hotel rooms in favor of Elremaya Square area with 641 rooms, the occupancy rate in favor of Heliopolis area with 70.26%, the average daily rate in favor of Giza Street area with 785.57 LE, and the revenue per available room in favor of Zamalek area with 443.27 LE, there is a statistically significant difference between hotel locations. According to the performance metrics, there is a statistically significant difference between hotels for the total number of rooms sold in favor of Ramsis Hilton hotel (200214.6 LE), and total rooms revenues in favor of Semiramis Intercontinental hotel (124060142.90 LE); Hotels operator according to total rooms sold in favor of the Intercontinental chain (166187 rooms), and total rooms revenues in favor of the Intercontinental chain with (124060142.9 LE); hotel operator nationality according to total rooms sold in favor of British chain (166187 rooms), and total rooms revenues in favor of British chain (124060142.9 LE); a statistically significant difference between hotels location according to the total rooms sold in favor of Elremaya square area (151766 rooms), and total rooms revenues in favor of Corniche El Nile (87875329.53 LE).

Finally, this study's findings demonstrated that, at the significance level of 0.05, there is a significant positive direct correlation between average daily rate and revenue per available room ($r = 0.977$); a significant direct correlation ($r = 0.591$) between average daily rate and total room revenues; an average direct correlation exists between total room revenues and revenue per available room ($r = 0.599$); a significant direct correlation between total rooms sold and total rooms revenues ($r = 0.717$); a significant correlation between yearly rooms and overall sold rooms ($r = 0.976$); and a strong direct relationship between annual rooms and total rooms revenues ($r = 0.727$).

6. Recommendations:

The following points are included in the recommendations based on the findings of this study.

- Attention should be given to the predictions of female managers, foreign chains, and Egyptian managers of the four- and five-star hotels in Cairo in order to optimize the level of hotel financial performance.
- Evaluating and contrasting the degree of financial performance in Cairo's four- and five-star hotels based on the characteristics of hotel operator, operator nationality, and hotel location.
- Support the variables that favorably affect the average daily rate, the quantity of sold rooms, and the revenue per available room in Cairo's four- and five-star hotels to maximize the total room revenue.
- Increasing the number of rooms occupied at Cairo's four- and five-star hotels.
- Rising hotel room rates at Cairo's four- and five-star hotels at a suitable level for the customers.

7. Limitations and Future Research

Thompson's equation states that the calculated sample is 20 for five-star hotels and 13 for four-star hotels, whereas the real size of sample is 12 five-star hotels and 4 four-star hotels. This indicates that there is a tiny sample size. As a result, this sample is not statistical. It is advised that other scholars conduct more research on the variables influencing the level of hotel performance using a bigger sample size in other hotel categories. Finally, the key limitation of this research is the small size of the sample.

8. References

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