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Selling Rooms and Making Money in the Lodging Industry: Analyzing the Effects of RevPAR and GOPPAR Together

Thomas Rogers

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SELLING ROOMS AND MAKING MONEY IN THE LODGING INDUSTRY: ANALYZING
THE EFFECTS OF REVPAR AND GOPPAR TOGETHER

by

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DEDICATION

I dedicate the success of this research to my committee: Dr. Scott Smith, Dr. Fang Meng and Dr. Mark Ferguson. In addition, I also want to dedicate this research to Dr. Sandy Strick and Dr. David Cardenas for as well as all the faculty of the School of Hotel, Restaurant and Tourism Management. Lastly, this research is dedicated to friends and family members that have endured this process alongside me.

ABSTRACT

Based on previous research, revenue management now focus on alternative benchmarks for assessing bottom-line performance. The advent of alternative benchmarks leads to increased analysis of the relationship between revenue and profitability within hotel management. This thesis builds on previous research of revenue and profitability with RevPAR and GOPPAR acting as proxies for revenue and profitability to determine the relationship between the two variables as well as identifying their roles and analysis within revenue management as revenue management maneuvers toward a more strategic outlook. Also, this thesis identifies whether affiliation (independent vs. chain-affiliated) and hotel service levels directly affect the correlation between RevPAR and GOPPAR. First, a comprehensive literature review discusses the evolution of revenue management practices as well as the evolution of performance benchmarking including non-financial performance assessment. The literature review also discusses the roles of RevPAR and GOPPAR in hotel management. Lastly, the literature review discusses characteristics of independent properties and the characteristics of service levels and the visibility of revenue and profitability within each affiliation and service level.

The empirical results show that affiliation is not significantly related to RevPAR and GOPPAR; therefore, property affiliation does not significantly affect the correlation between RevPAR and GOPPAR. Empirical results do show that Service Level is

significantly related to RevPAR and GOPPAR. Results also show how each Service Level affects the relationship strength between RevPAR and GOPPAR. The conclusion discusses managerial and academic implications.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

In just its brief yet revolutionary and necessary existence within the lodging industry, the evolution of revenue management practices persists thanks to technology, strategic management developments, departmental cohesion, development of service and quality management among others. In contemporary hotel management, a consensus is reached between academia and industry that competitive revenue management is a prerequisite of organizational success (Noh et al. 2016). Over time, the industry witnessed the radical migration from the term yield management to become revenue management, as the role and scope of the field has evolved (Noone et al. 2017). Traditionally, the principles of revenue or yield management embrace the practice of maximizing revenues or profits from the sale of perishable assets, such as airline seats, hotel rooms, and car rentals by controlling price and inventory and improving service (Lieberman 1993; Dacko 2008). Based on certain demand forecasting techniques and optimization models, revenue management has been found to be very effective in generating extra revenue by dealing with diversified and uncertain demand, given a fixed capacity of perishable inventory (Lin and Huang 2015). In a marketplace where technology advances rapidly, the hotel distribution channel continuously evolves, the sharing economy's remarkable impact and big data and analytics playing an increasingly important role, RM will continue to assert itself as a crucial strategic domain for hotels (Altin et al. 2017).

The definition of revenue management has evolved as its application has moved from maximizing yield or average daily rate (ADR) to maximizing revenue— with the current focus on property-wide profits rather than just room revenue (Anderson and Xie 2010). Before, researchers only identified that revenue management involved the application of information systems and pricing strategies to manage customer flow and allocate the right capacity to the right customer at the right place and time and that still holds true, but evolution of the discipline added more professional aspects to the field (Kimes 2000; Dacko 2008). Traditionally, hotels dynamically changed their prices to maximize revenue per unit and a vast majority of hotels continue to do so (Anderson and Lawrence 2014). Yet if it was just that simple and developmentally stagnant, revenue management would not be an important support operation let alone evolve according to operational, marketing and strategic management trends. In a recent article, Wang et al. (2015) summarize eight major paradigm shifts in the hotel RM domain: Revenue maximization to profit optimization; revenue-centric approach to customer-centric approach; demand-driven pricing to reputation and value-based pricing; short-term tactical RM to long-term strategic RM policies; rooms department focus to total hotel; distribution management to channel management; relying on historical and predicted demand analysis to capitalizing on the opportunities offered by big data; and educating RM leaders to foster RM culture throughout the organization (Altin et al. 2017).

Revenue management drastically relies on performance measurement and benchmarking for forecasting, formulating strategy, setting prices, etc. Most publications and industry/academic analyses use financial measures such as operating margins, cash flows and profits because of their relevance to key stakeholders such as investors and

shareholders (Schwartz et al. 2017). Throughout general business analyses, financial measures have been the traditional means of performance measurement (Bergin-Seers and Jago 2007; Sainaghi et al. 2013). However, the process of performance measurement is generally complex, and managers face several challenges especially when there are several components to the performance metric at different levels of activity like the individual property versus the corporation, chain affiliation, brand affiliation, and service level along with customer satisfaction levels, etc. (Schwartz et al. 2017). Hotel owners are concerned about the performance of their hotels because the market value of a hotel is significantly related to its operating performance (Corgel 2005; Xiao et al. 2012). During the past two decades the service economy has evolved to become the dominant contributor to Gross Domestic Product (GDP) in which hospitality performance measurement had to keep pace with developments from its earlier origins in cost accounting (Sainaghi et al. 2013). This permeated the advent of nonfinancial performance measurement and the strategic shift of lodging revenue management which has expanded performance analysis.

Also noteworthy is the extensive analyses published on nonfinancial performance measures as well as the relationship with financial performance measures. Performance measurement frameworks now need to move beyond the mere collection of financial and non-financial measures and seek to identify causal links among measures, strategies and outcomes (Sainaghi et al. 2013). Nonfinancial measures are believed to complement short-run financial figures as indicators of progress toward a firm's long-term goals and reflect overall corporate strategy (American Accounting Association 1971; Johnson and

Kaplan 1987; Kaplan and Norton 2000); therefore, the concept of overall performance measurement is essential to introduce and discuss to establish the necessity of this study.

One important aspect of general strategic management within the lodging industry is monitoring and successfully optimizing bottom-line performance. Revenues and profits reflect aspects of performance that may be deemed important based on corporate strategies formulated to deal with changes in the external industry environment (Schwartz et al. 2017). Hotel firms' and/or owners' strategies regarding branding, franchising, and service have significant effects on hotel financial performance (O'Neill and Xiao 2006; O'Neill and Mattila 2010; Xiao et al. 2012). Bottom-line performance is perhaps more important for manager evaluation and for asset valuation purposes than total revenue generation and forecasting in hotels (Schwartz et al. 2017). Many properties still utilize traditional commercial-wide financial measures to assess organizational performance and health such as ROA (return on assets), ROE (return on equity), EPS (earnings per share), and the other standard financial ratios (liquidity, debt-to-equity, current, etc.); also, public hotel corporations of course assess health and performance based on TSR (total shareholder returns) as well (Chen et al. 2011). Yet, measures such as Occupancy, ADR, RevPAR, GOPPAR, etc. are unique and vital to assessing operational performance throughout the lodging industry despite all the subsectors (resorts, rentals, full-service, self-service, etc.) (Sainaghi et al. 2013).

Next emerges the major issue in which this study will focus: should hotels/lodging properties measure performance based on revenue or profitability or which is the more efficient benchmark option for a specific type of property? Hotel performance and management practices are now commonplace, but innovation and learning take on

greater contemporary importance (Sainaghi et al. 2013). The central area of performance measurement in this study is financial performance, more specifically revenue and profitability measures. Schwartz's et al. recent study (2017) examined the issue of monitoring revenues vs. profits which establishes the foundation of this study. If in the long run the firm's survival is linked with its ability to generate revenues higher than costs and inflows larger than outflows, the alternative strategies to dynamically create equilibrium are many and different which explains the necessity to further examine the relationship between revenue and profitability (Sainaghi et al. 2013). A hotel may have the highest possible RevPAR but may be unprofitable to its owner because of excessive investment cost (Xiao et al. 2012). In their findings, they indicate that there is a relatively high correlation between RevPAR and GOPPAR (Schwartz et al. 2017), so the issues of efficiency and implementation remain and need to be examined via the relationship and associated variables.

The industry standard is still to measure performance extensively based on RevPAR which is also used as a proxy for profitability by hotel managers and analysts; this industry wide convention makes it easier to benchmark and monitor trends across hotels, brands, companies, locations, and on a historical basis (Schwartz et al. 2017). RevPAR remains the primary performance indicator from a competitive benchmarking perspective (Noone et al. 2017). From an industry perspective, David Warman, vice president of revenue management and worldwide reservations for Four Seasons Hotels and Resorts, exclaims that RevPAR is often the dominant driver of a hotel's RM efforts (Noone et al. 2017). The concept of RevPAR provides necessary insights into hotel supply and demand performance (Slattery 2002). Both Wall Street and the lodging

industry consider RevPAR as one of the most important indicators of a lodging firm's performance and an indicator for changes in lodging companies' stock prices (Elgonemy 2000; Ismail et al. 2002; Chen et al. 2011). Dating back to the 1930s, the industry has analyzed market performance by comparing historical RevPAR data within or across lodging companies (Higgins 2006; Chen et al. 2011). Furthermore, for hotel performance, RevPAR provides meaningful information that allows companies to compare their performances with that of their competitors in an efficient and easily accessible figure (Manson 2006; Chen et al. 2011). The comparisons are efficient and accessible because RevPAR reports occur quarterly by publicly traded lodging companies and some independent lodging firms as well as STR's overtly-extensive reporting based on daily, monthly, and annual figures (Chen et al. 2011). Gallagher and Mansour (2000) stated that RevPAR is prevalent among analysts because they used RevPAR as a proxy for firm performance to understand hotel markets in terms of revenue and respective market volatility (Chen et al. 2011).

The question is whether the popular industry-wide measure of RevPAR is adequate or whether hotels should aim to replace RevPAR, which is a readily available measure through service providers such as STR, with less-accessible, profit-oriented measures (Schwartz et al. 2017). However, often, the reported RevPAR differs from 'real' RevPAR and may be unreliable for the investing, consulting and academic community (Schwartz et al. 2017). This is a reason that the validity of RevPAR is questioned in this study as well as in previous analyses. Especially, when considering the prevalent practice of reporting RevPAR by major lodging firms to the public and financial markets, showing the insignificant explanatory power of RevPAR may suggest

that industry practitioners and financial analysts should reevaluate the validity of RevPAR and analyze alternative industry-specific measurements (Chen et al. 2011). More specifically, measurement validity contributes to the necessity for analyzing the relationship between RevPAR and GOPPAR for more efficient performance measurement.

Schwartz et al. (2017) exclaim that GOPPAR provides a precise snapshot of a hotel's profit potential due to the encompassing nature of the measure; GOPPAR is far more encompassing of a performance measurement compared to RevPAR because RevPAR measures typically only account for only room revenue whereas GOPPAR can include revenue from multiple streams and includes expenses/variable costs and fixed costs. Yet, GOPPAR does possess limitations; this is particularly reflected in number of rooms as well as hotel service level (Lindt 2006; Schwartz et al. 2017). Thus, looking at the previous exclamation specifically, previous literature creates a necessity for examining what determines the relationship strength between RevPAR and GOPPAR. What do the limitations affect? What defines the relationship? What are the determiners in this relationship? Which is the most efficient benchmark?

1.2 PURPOSE OF THE STUDY

Schwartz's et al. (2017) study investigates the severity of the GOPPAR/RevPAR performance measure problem and the assessments and monitoring at the property level. By examining the relationship using a sample of 1000 hotels over a 6-year period, they gauge the dynamics of the gap between these indicators to assess whether the two

measures can serve as substitutes for each other (Schwartz et al. 2017). Specifically, they argue that measuring the correlation between RevPAR and GOPPAR could assist decision makers in assessing the adequacy of using RevPAR rather than the theoretically more appropriate GOPPAR (Schwartz et al. 2017). More relevant to the following study, Schwartz et al. (2017) also identify the implications of the issues surrounding the use of RevPAR as a proxy for GOPPAR in revenue management due to the correlation level. In that regard, this study investigates the determiners of the correlation strength which in turn displays the situations where RevPAR can and cannot exist as a mostly accurate proxy for GOPPAR. Due to the previous declaration, it is essential to know that hotels should monitor based on their own specific situation and use Schwartz's et al. (2017) information as well as this investigation as a gauge for their performance. Schwartz's et al. (2017) study looks at the question of whether this depends primarily on property characteristics. This study will extend their examination by specifically focusing on the effects of chain-affiliated vs. independent hotels as well as hotel service level on RevPAR and GOPPAR performance.

The main purpose of this study is to examine what determines the level of strength in the relationship between RevPAR and GOPPAR. The further goal of this study is to examine effects on RevPAR and GOPPAR performance among chain-affiliated and independent hotels as well as hotels in each service level/scale.

The Independent Variables in this study are property affiliation (whether a lodging property is independent or a part of a chain) and service level/scale. The Dependent variables in this study are RevPAR and GOPPAR.

1.3 RESEARCH QUESTIONS

1. To what degree does Property Affiliation affect the RevPAR and GOPPAR?
2. To what degree does Service Level affect RevPAR and GOPPAR?
3. Is there a significant relationship between Property Affiliation and RevPAR?
4. Is there a significant relationship between Property Affiliation and GOPPAR?
5. Is there a significant relationship between Service Level/Scale and RevPAR?
6. Is there a significant relationship between Service Level/Scale and GOPPAR?

1.4 KEY TERMS

Chain Hotel – A hotel that is part of a series or of a group of hotels operated by the same company or owner (<https://www.xotels.com/en/glossary/chain-hotel> 2018).

GOPPAR (Gross Operating Profit per Available Room) - GOPPAR is a measure of a hotel property's profitability based on overall revenues and expenses. By evaluating both revenues and expenses, it provides a measure of efficiency of operations and aids in assessing the valuation of hotel properties. On the basis of the Uniform System of Accounts (AH&LA 1996), it measures aggregated revenue from rooms, food and beverage (including that from meetings, banquets and so on), telecommunication (including phone, fax and Internet charges), revenues from other departments such as garage, athletic facilities, gift shop and so on, cancellation fees and penalties, and other rental income. On the expenses side, operating expenses related to the departments mentioned above and undistributed operating expenses such as franchise fees, marketing expenses, utility costs, maintenance costs, and administrative and general expenses are computed for deduction from revenues. The resulting figure represents gross operating

profit (GOP) for the hotel business unit and when divided by the number of available rooms constitutes the GOPPAR measure (Schwartz et al. 2017).

Independent Hotel – STR places independent hotels into its own scale for reporting purposes. Academic studies usually divide independent hotels into service levels based on their financial measures and amount of ancillary revenue centers on property such as Kim and Canina's (2011) study used in this research.

Performance Measurement - Performance consists of financial, operational, and overall effectiveness for a firm (Venkatraman and Ramanujam 1986; Kim and Canina 2011).

RevPAR (Revenue per Available Room) - RevPAR is calculated by dividing the hotel's total guestroom revenue by the number of available rooms and the number of days during the measured period; alternatively, it can be derived by multiplying the hotel's average daily room rate by its occupancy rate. Several syndicated data companies compile RevPAR information and provide the information back to the hotels. The leading company among them is STR Global Inc., which provides more than 30,000 hotels with monthly, weekly or daily STAR reports where the subject property's performance, the aggregated performance of their chosen competitive set, indexes and ranking are all listed. Not surprisingly, one of the most important numbers in this STAR report is the RevPAR Index. It is calculated by dividing the subject hotel's RevPAR by the competitive set's RevPAR and multiplying by 100. The index measures the subject hotel's 'fair market share' of its segment's RevPAR (that is, competitive set, market or submarket). In other words, the RevPAR index facilitates performance comparison among competing hotel properties (Schwartz et al. 2017).

Service Level/Scale – STR uses its well-known brand or chain classification (chain scale segments) and price classification (price segments) (Kim and Canina 2011). This study refers to service level as an interchangeable and a contemporary alternative term to chain scale due to this study's presentation of nonfinancial measures which primarily are a result of service operations. The service levels vary on amenities, facilities, and services, as well as rates (Enz et al. 2009). Almost all chain scale/service level studies as well as STR divide the midscale segment into limited service and full service depending on the amount of ancillary revenue centers. The following list contains the chain scales as determined by Smith Travel Research (2018): economy, midscale, upper midscale, upscale, upper upscale, and luxury.

Theoretical Concepts Introduced:

From a revenue management theoretical perspective, Schwartz, Altin and Singal (2017) show that using RevPAR as a proxy for GOPPAR (or other GOP-based measures) as the hotel's performance measure has two related major drawbacks:

- *Bidirectionality* – Using RevPAR to assess the impact of setting certain levels of controls (such as the revenue management decisions on room rates and the allocation of rooms to rate levels and to distribution channels) might be a misleading practice. As demonstrated by Schwartz et al. (2017), the two performance measures might be moving in opposite directions. That is, within certain levels of rates and sold rooms, when RevPAR indicates an improvement, the GOPPAR measure indicates a decline in the hotel's performance.

- *Suboptimality* - If the optimization is RevPAR based (that is, if revenue management controls are set such that the hotel maximizes its revenues or RevPAR), GOPPAR, which more appropriately represents the ‘true target function’ of hotel owners and investors, is not necessarily optimized. In fact, as demonstrated mathematically, if the hotel faces a downward sloping linear demand function, GOPPAR is not optimized if the optimization is RevPAR based (Schwartz et al. 2017).

CHAPTER 2

LITERATURE REVIEW

2.1 PERFORMANCE MEASUREMENT

Performance measurement, both financial and non-financial, is the only method of determining a hotel's position in its competitive set as well as the insight into successful organizational growth. Performance measurement is based on the strategic role the hotel unit plays in the organization at the business level and the overall corporate strategy the organization sets for itself based on its mission and objectives (Schwartz et al. 2017). Thus, lodging industry managers are increasingly tasked with monitoring performance and the outcome of these performance measures plays a major role in shaping their short- and long-term managerial decisions (Smith 2012; Schwartz et al. 2017). There is wide consensus on the fact that the performance results of an organization may depend on the strategy enacted by the management and by external factors mainly linked to the structure of the market or the sector (Sainaghi 2010). Sustained progress requires the establishment and industry-wide acceptance of performance measures that better capture total hotel performance, from both a revenue and profitability perspective (Noone et al. 2017).

The overall theme of performance measurement criticism is the adequacy and accuracy of performance benchmarking related to many different factors such as chain affiliation, service level, competitive set, etc. Among the more central questions are those related to the adequacy of the performance measures, the composition of the competitive sets and the potential biasing effect of inherent conflicts of interest (Jin-young and

Canina, 2011; Wilson, 2012; Mauri, 2013; Schwartz et al. 2017). Competitor identification is an integral first step in performance evaluation processes (Kim and Canina 2011). Kim and Canina (2011) analyzed performance measurement based on two competitive set developments: product type and cluster-type based on ADR. Using the product type to determine the competitive set is useful when analyzing the performance of the management of the property relative to managers of properties with similar characteristics; however, product-type classifications may not accurately capture a hotel's competitive position compared to a cluster-type based on a performance measurement (Kim and Canina 2011). The performance of hotels within competitive groups established by cluster analysis is more similar than for those in competitive groups established by product type (Kim and Canina 2011). Despite the highlight of the importance of competitive set on performance measurement, Kim and Canina (2011) only utilized RevPAR as the benchmark and did not examine any profitability measures. Also, reconverted hotels have no effect on the performance of other hotels in its ZIP code further showing that competitive set and location may not be totally valid in benchmarking (Dev 2015).

Also, validity is a critical factor when examining the adequacy and accuracy of performance measurement; this is an issue when data is reported to STR and other research outlets (Slattery 2002; Schwartz et al. 2017). In Slattery's (2002) study, room nights sold is inflated, especially in casinos where rooms are provided gratis to high rollers, thus distorting the occupancy percentage and rendering RevPAR unreliable; as occupancy rates and RevPAR indices are generally used for internal use and at the business-unit level, they are not externally audited, resulting in variations in accounting

and recording practices that make comparison and benchmarking inappropriate (Schwartz et al. 2017). Previous research shows overall that in terms of evaluating performance, RevPAR cannot be used as a total measure of financial performance, either to assess the efficiency of operations or to predict market-based performance of the organization (Slattery 2002; Schwartz et al. 2017).

The validity of RevPAR reporting and measurement is primarily challenged due to the presence of multiple revenue centers within a hotel. Therefore, as revenues and costs can be compared across departments and overall performance can be compared over time, GOPPAR provides an indication of a hotel's profit potential – a useful tool for evaluation when faced with strategic decisions (Schwartz et al. 2017).

Due to hotel characteristics such as number of rooms, property size, third-party agencies, etc., previous literature has proposed alternatives for more effective benchmarking in lieu of GOPPAR and RevPAR. Lindt (2006) suggested using revenue per square foot RevPAS (revenue per available square foot) and GOPPAS (gross operating profit per available square foot) as more consistent benchmark options (Schwartz et al. 2017). Other measures of performance have been suggested as alternatives to RevPAR, including NIPAR and NOIPAR (reflecting net income and net operating income per available room), TRevPAR (total RevPAR) and NRevPAR (net RevPAR, which deducts distribution costs, transactions fees and travel agents commission from revenues) (Younes and Kett, 2003; Banker et al, 2005; Landman, 2010; Schwartz et al. 2017). Actually, the hotel companies represented by the interview participants of Noone et al. (2017) have developed metrics to evaluate RM to account for ancillary revenue, including total revenue divided by revenue by revenue stream (4

companies), contribution by revenue stream (8 companies), total revenue per customer (4 companies), total contribution per customer (1 company), NRevPAR (4 companies), GOPPAR (3 companies), and RevPAS (3 companies).

However, as stated in the introduction, GOPPAR is not a perfect benchmarking option of measuring performance; there are fallbacks to encompassing total measures such as GOPPAR and TrevPAR among others. Originally, Sargeant and Mohamad (1999) found no conclusive link between the degree of market orientation attained and the measures of business performance based on profitability and turnover in British hotels (Jang et al. 2006). Metrics that encompass non-room revenue against the number of rooms handicap hotels with many rooms but not enough other income-generating activities (Lindt 2006; Schwartz et al. 2017). Additionally, it is possible that changes in net income are affected by various management factors including not only revenue generating abilities but also the capability of managing expenses as well as macroeconomic issues and market competition thus distorting the precision of macro-performance analysis (Jang et al. 2006). Performance Measurement is heavily based on comparisons industry-wide and in respective competitive sets; therefore, it is impossible to produce 100% accuracy and precision in measuring performance both industry-wide and in respective competitive sets.

Other previous research suggests using other financial measures involved in general business to assess hotel financial performance alongside the standard lodging measures such as RevPAR and GOPPAR. An article by Chen et al. (2011) compared the explanatory power of RevPAR with other alternative performance measures (i.e., traditional financial measures), such as ROE, ROA, and EPS. However, validity issues

remain with the plethora of alternative measures. This issue becomes more complex with public hotel corporations. Previous research generally suggests that neither RevPAR nor other traditional performance measures provides a good indication of publicly traded U.S. lodging firms' stock performance, regardless of using different earning numbers (i.e., net income and EBITDA) to estimate the traditional performance measures (Chen et al. 2011). Before that result; previous research claimed that financial analysts regard RevPAR as a key factor in moving lodging stock prices (Elgonemy 2000; Chen et al. 2011). Also, other researchers identified a relationship between lodging firms' stock returns and RevPAR (Chen et al. 2011). For instance, Ismail et al. (2002), analyzing lodging firms' risks by using RevPAR, concluded that higher risks accompany higher RevPAR's, and thereafter, higher expected stock returns (Chen et. al 2011). Then, Chen et. al (2011) found that none of the four financial performance measures provided a statistically significant explanatory power for TSR. Due to these findings and the all-pervasive issue of validity, research has even suggested creating another performance measure for the lodging industry (Chen et al. 2011). Whether development of a new measure occurs or not, stock performance and traditional financial measures are not efficient benchmarks of property performance for the lodging industry as a whole; therefore, they will not be measured in this study whatsoever even though analysts and managers, especially in public hotel chains, should not ignore those measures.

For any financial performance measurement and comparisons over time, one must remain aware of total external characteristics such as inflation rates, economic/financial crises, travel bans, natural disasters, artificial disasters, etc. Caution is recommended when interpreting RevPAR figures, especially during economic downturns, such as those

during 2008 and 2009 (Chen et al. 2011). This is because although RevPAR is a leading performance indicator for the U.S. lodging industry, it lacks provision for indicating any meaningful information about a lodging firm's cash position, which becomes important especially during economic downturns (Chen et al. 2011). However, this case can also emerge with GOPPAR. Spending power decreases while costs of anything increase and economic plus financial volatility becomes substantially more unpredictable in periods of economic turmoil.

Describing the variables and effects in the relationship between RevPAR and GOOPPAR cannot reach full circle if this study did not acknowledge nonfinancial performance measures and their impacts on financial performance. Overall, researchers have recognized the benefits of including financial and non-financial indicators; yet, more research is required in this area in order to offer hotel organizations better approaches to the management of their performance (Sainaghi et al. 2013). Previous research shows an increasing relevance of nonfinancial measures, especially to those that are strongly related with important stakeholders for hotel firms (Sainaghi 2010). Banker et al. (2005) analyzed time-series data from a number of lodging properties managed by a large hospitality firm that implemented an incentive system based on nonfinancial and financial performance measures to address the following issues: the nonfinancial performance significant indicators of financial performance and the adoption of an incentive compensation plan that increases the emphasis on nonfinancial performance measures for key managers and the impact on bottom-line and nonfinancial performance measurement. In terms of forecasting, the relationship analysis between Hotelcorp's nonfinancial performance measures and its financial performance suggest that

nonfinancial measures of customer satisfaction help predict future financial performance (Banker et al. 2005). However, the improvement in financial performance cannot be entirely ascribed to the inclusion of nonfinancial measures which will be described more in depth in the **Service Level/Scale** section (Banker et. al 2005).

Despite the validity issues of both RevPAR and GOPPAR, the aim of this study is to thoroughly analyze the factors that impact the strength of the relationship between RevPAR and GOPPAR; both measures are staples of financial performance within the lodging industry and will continue to serve as such. In summary, this study further analyzes the revenue and profitability relationship in hotels and investigates the more efficient performance measurement based on affiliation and service level/scale.

2.2 REVENUE MANAGEMENT TRENDS AND PRACTICES

Alongside contemporary academic and industry foci on RM (Revenue Management) implementation and pricing strategies, studies now examine RM performance measurement and implementation based on revenue and profitability optimization efforts. At least for the airline industry where RM originated, it is very difficult for any major airline to operate profitably without RM, given that, according to most estimates, the revenue gains from applying RM is about 4 –5%, which is comparable to many airlines' total profitability in a good year thus showing the importance of RM's role in organizational performance (Talluri & van Ryzin 2004; Lin and Huang 2015). Effective RM policies and implementation have been credited with generation of additional revenues, as well as improving occupancy rates during low points of the business cycle (Koushik et al. 2012; Ortega 2016; Noh et al. 2016). A similar result to the airline industry of 1 –8% has been reported for the improvement in

profits in the hotel sector when RM practices/divisions are incorporated into organizational operations (Jones 2000; Lin and Huang 2015).

There is a concentrated effort on behalf of the lodging industry to measure and benchmark the performance of the hotel's revenue management policies (Schwartz et al. 2017). Just the scope of foundational RM tasks in and of itself proves that RM is a rather encompassing support division within the lodging industry. Contemporary RM systems and computerized reservation systems are able to factor in a vast array of parameters including tracking past demand, current demand, and anticipated future effects of seasonality, firm advertising, competitive promotions, cancellations, and no-shows, in an ongoing effort to produce prices that should be charged at any given time for remaining inventories of tourism and travel products (McGill and Van Ryzin 1999; Blair and Anderson 2001; Netessine and Shumsky 2002; Dacko 2008).

Relying on alternate measures of performance and their relationship to current measures may enable managers to make informed decisions sooner to stay ahead of their peers given the aforementioned future effects (Schwartz et al. 2017). Since its early days, the practice of optimizing performance in the airline industry, and later in the lodging industry, was centered on yield and revenues (Phillips 2005; Hayes and Miller 2011; Legohérel et al. 2013; Schwartz et al. 2017). Now, the trend for RM is demand management, a system that creates both reservations and yields revenue from them (Anderson and Xie 2010).

Revenue managers and analysts always concern themselves with both revenue and profitability maximization efforts, yet the main area of practical concern is optimization based on revenue or profitability. Relihan (1989) introduces readers to the

idea of revenue optimization, in which a firm has a revenue maximizing price that balances ADR and occupancy (Anderson and Xie 2010). Although most hotels' goal is profit maximization, for various reasons, the employed management science methods of optimization are for the most part revenue-oriented (Schwartz et al. 2017). The main reason is that revenue optimization is considerably less complicated than profitability optimization (Schwartz et al. 2017). The biggest issue with profitability optimization is that profitability calculations are a much more laborious task than revenue optimization and benchmarking; despite the transparency that GOPPAR may provide, it is arduous for managers and analysts to compute frequently (Schwartz et al. 2017). Next, decisions regarding staffing and investment are often based on profitability which is a measure that is not always available in a timely manner which can hinder tactical and strategic decision-making (Schwartz et al. 2017). Lastly, hotel owners and managers are generally hesitant to disclose profitability numbers and less so on a monthly, weekly or daily basis because it creates extra scrutiny by investors and analysts (Schwartz et al. 2017).

An emerging trend in RM practices is the shift from a tactical perspective and approach to a more strategic outlook on maximization efforts. Traditional hotel RM is in transition from being chiefly a stand-alone, tactical technique for managing rooms inventory to adopting a strategic, customer-centric approach to demand creation and profit maximization (Cross et al. 2009; Noone et al. 2011; Noone et al. 2017). From a strategic perspective, RM is not different from the rest of the hotel's key strategic domains in that it is concerned with the strategic orientation needed to design new implementations and developing and implementing the revenue management system as a key consideration to ensure financial success (Okumus 2001; Chiang et al. 2007; Altin et

al. 2017). The goal of the hotel is to maximize profits, yet there is a shift from the tactical, rooms limited view to the more strategic, total hotel, profit maximization goal (Schwartz et al. 2017). Although conventional research views revenue management as a pricing tool to respond to expected demand changes and near-future market conditions, recent studies point out that such practice is short-term in nature and that greater consideration should be given to long-term price positioning due to its prolonged effect on hotel performance (Weatherford & Kimes, 2003; Noone et al. 2013; Noh et al. 2016). The lodging industry's strategic view on RM systems has evolved considerably in the past several decades, moving away from the narrow view of capacity control-based yield management to the more encompassing profit maximization (Altin et al. 2017). Thus, this centripetal issue emerges: should hotels move away from the considerably easier revenue-centric approach and employ more profit-oriented measures, or can it be assumed that revenue maximization suffices because ultimately profits are sufficiently close to the desirable maximum when revenues are (Schwartz et al. 2017)? More importantly for this study, how does this change in approach affect the relationship between revenue and profitability (more specifically in terms of RevPAR and GOPPAR)? As a prelude to some current concerns, Dunn and Brooks (1990) caution that the short-term market driven pricing approach of RM may erode profit margins potentially weakening this relationship; properties need to maintain a strategic eye on segment-level profitability (Anderson and Xie 2010). In recent interviews, industry leaders believed the future of RM was shifting to a focus on multiple hotel revenue streams, including restaurants, function space, catering, spas, and golf (Noone et al. 2017). Revenue managers forecasted this issue: in a prior study, Kimes (2011) surveyed

revenue managers from all over the world to explore the future of revenue management and found that 30% of respondents believed that revenue management will be strategy driven and only 18% of respondents felt that RevPAR would be used as a performance measure in the future (Schwartz et al. 2017). From a consumer perspective, as guests become more knowledgeable about RM practices, firms need to realize the implications of strategic or forward-looking consumer behavior on their inventory control decisions and the resulting implications on demand (Anderson and Xie 2010). According to these results, the shift is rapidly emergent and clearly visible in both the academic and industry communities. Also, in a general and contemporary perspective, recent research of the Houston hotel market showed that experienced hotels improved performance with flexible revenue management strategies (Noh et al. 2016). In addition, Noh et al. (2016) found that age, brand affiliation, number of competitors, as well as location significantly affect strategic revenue management decisions of hotels. Noh et al. (2016) also remark that location and competitive set must be taken into consideration when developing revenue management strategies, as they not only affect the room rates but also the long-term outcomes of revenue management decisions. It is essential to identify the eruption of strategic RM practices and the resulting change upon the relationship between revenue and profitability.

Due to the emergent shift of tactical-based RM operations to strategic RM pricing and benchmarking approaches, the academic and industry communities gradually identify the importance of GOPPAR among other encompassing benchmarking options to identify what fuels the relationship between revenue and profitability and the direction of this relationship. According to results, lower levels of correlation between RevPAR and

GOPPAR or a declining trend in the level of correlation should serve as an indication to hotel decision makers that it might be time to consider switching to profitability-based measures such as GOPPAR (Schwartz et al. 2017).

Contemporary RM practices and hotel management strategies incorporate nonfinancial characteristics and performance measures into their implementation efforts. Capiez and Kaya (2004) suggest that customer satisfaction is relative not only to the product and service satisfaction but also to the practices of yield management (Sainaghi 2010). Previous research has suggested that hotels should enhance their market share by promoting customer loyalty in every possible way to increase their profits (Yelkur & DaCosta 2001; Wu & Lu 2012; Lin and Huang 2015). In that case, this literature review will reiterate the following predicament: previous literature analyses confirm that for firms with a high level of fixed assets and costs, revenue management represents a priority for linking decisions and financial and nonfinancial results (Sainaghi et al. 2013). The need to balance short-term revenue maximization with long-term customer development is driving change in how the RM support function collaborates with other functional units, including operations and marketing (Cross et al. 2009; Noone et al. 2017). Senior managers believe that a customer-focused strategy is essential for the long-term profitability of an individual hotel (Banker et al. 2005). Kotler and Armstrong (2004) argue that marketing management's crucial task is to create profitable relationships with customers thereby bridging the gap with RM and finance (Jang et al. 2006). It is important for hotel management to document the relationships between various nonfinancial measures and financial performance (Banker et. al 2005). Previous research and industry insights explain why nonfinancial measures are used by hospitality

firms to augment financial measures in management control (Huckestein and Duboff 1999; Banker et. al 2005).

Ever since the massive emergence of online travel agencies in the 21st Century, RM practices have incorporated their presence in benchmarking, forecasting and formulating strategies. Therefore, the presence of OTA's and third-party organizations affect hotel revenue and profitability and must be examined in finding the determiners of strength between RevPAR and GOPPAR. RM practices also must account for the massive presence of social media and its influence on hotel performance as well as competitive set performance. The use of social media features and a presence on the main social media platforms are thus becoming critical success factors for competition in the hospitality service industry (Phillips et al. 2015; Neirotti et al. 2016). These are the most contemporary factors of change brought by Internet incorporation in the industry's structure and in the distribution channels of hospitality services (Leung et al. 2013; Neirotti et al. 2016). Compared to other firm types in service industries, hotels can only partly face the greater market demand brought by social media and their recommendation tools because they cannot dynamically adapt their supply of rooms according to the size of the available market demand; thus, the sales advantages that hotels can obtain from greater exposure on the Internet and on social media have a natural limit in the volume of services sold given the capacity constraints in their number of rooms (Neirotti et al. 2016). Greater Internet visibility that hotels can develop on social media platform or through social media features on online retailers' platforms might provide smaller hotels with opportunities for market growth in segments in which they have a limited market presence (Treem & Leonardi 2012; Neirotti et al. 2016). The frequency of using

TripAdvisor information (reports and metrics) and integrating third party reviews on the hotel website is crucial, since these tactics increase both the volume of and the appreciation in online reviews and, as such, indirectly influence both room occupancy and RevPAR positively (De Pelsmacker et al. 2018). It is important to explicate the importance of social media on lodging bottom-line performance because users may give more importance to reviews and opinions expressed by friends on other social media entities such as Facebook and TripAdvisor or by persons that exhibit similar attitudes in travelling which will be explained more when discussing Quality Management and nonfinancial measures (Neirotti et al. 2016).

An important proxy for customer satisfaction, an important nonfinancial measure, is online reviews and it is imperative for contemporary revenue management to recognize the impact of online reviews on revenue and profitability. From an encompassing organizational perspective, online feedback helps hotel managers track the attitudes, opinions, and satisfaction of guests and can serve as the basis for a series of management actions including responding to feedback, targeting investments in services that consumers would desire, and perpetuating positive actions (De Pelsmacker et al. 2018). Previous research has demonstrated that various product and consumer characteristics may moderate the relationship between online reviews and firm performance (Anderson and Magruder 2012; Anderson and Lawrence 2014). Generally, higher firm reputation via online reviews has been associated with greater firm performance (Rindova et al. 2005; Anderson and Lawrence 2014). Concisely stated, review scores have a significant and substantive positive relationship with hotel financial performance (Anderson and Lawrence 2014). To extend this analysis even further, Xie et al. (2014) reported a

positive effect of the number of management responses to consumers' comments on hotel performance (De Pelsmacker et al. 2018). Management responses to a specific comment or a complaint in a consumer review show that hotel managers take their customers seriously, with the potential of improving customer reviews, customer satisfaction and, ultimately, hotel profitability (Chi and Gursoy, 2009; Sun and Kim, 2013; De Pelsmacker et al. 2018). Xie et al. (2017) reported that providing timely responses enhances future financial performance, whereas providing responses by hotel executives and responses that simply repeat topics in the online review lowers future financial performance (De Pelsmacker et al. 2018).

However, what does an online presence mean for the relationship between revenue and profitability? In terms of online review scores, research has shown that increases in aggregate review scores can lead to higher reservation rates (Luca 2011); however, with limited capacity, these sellers may not be maximizing their total revenue (Anderson and Lawrence 2014). Anderson (2012) reports that a 1% increase in a hotel's online reputation score leads up to a 0.89% increase in price, a room occupancy increase of up to 0.54%, and a 1.42% increase in RevPAR (De Pelsmacker et al. 2018). As great as an online presence is for hotel organizational performance, the Internet can be a fickle beast in formulating RM strategies and analyzing the multitude of relationships in this excerpt. In highly fragmented sectors, such as the hospitality industry, the Internet can be a value-destroying mechanism for small businesses and can deter hotels' capacity to defend profit margins (Porter 1998; Neirotti et al. 2016). One such method of 'destruction' is the emergence of lodging substitute products such as Airbnb; in the Internet scenario, tourists have a stronger bargaining power with hotels thanks to the

greater transparency about price and quality levels of hotels and to the greater availability of substitute products (Neirotti et al. 2016). This occurs because the Internet changes industry attractiveness by affecting the vertical and the horizontal forces of competition in an industry (Neirotti et al. 2016). Specifically, value destruction refers to the reduction of profitability that incumbents may experience because of the re-intermediation played by external information/distribution platforms (Neirotti et al. 2016). The general implication from this previous analysis is that the increasing importance of user-generated reviews in online communities of travelers is shifting hotel competition from unit profit margin to volumes and to higher room occupancy rates, with online retailers capturing most of the value created from online transactions, which implies that hotels with lower room capacity are less likely to experience a positive effect of online visibility on their net profitability (Neirotti et al. 2016).

In all the characteristics and relationships displayed in this literature review, the hotel's location affects the relationship between revenue and profitability depending on specific relationships and circumstances. Neirotti et al. (2016) found that hotels located in less popular destinations are smaller because the correlation coefficient between revenues and location outside popular destinations is negative and significant (correlation coefficient equal to -0.103 , $p\text{-value} < 0.05$). Therefore, it is essential to remark on the term of destination competitiveness. Ritchie & Crouch (2003), in defining destination competitiveness, suggested that “what makes a tourism destination truly competitive is its ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences, and to do so in a profitable way” (Neirotti et al. 2016). Empirically, Neirotti et al. (2016) showed that gross profit margin difference

possessed a more negative coefficient related to online ratings for hotels where local competition is higher. Yet, even after accounting for the effects of seasonality and other factors such as current competitive promotions, marketers and revenue managers clearly have considerable choices about the pricing strategy and tactics to employ to maintain long-term profitability and customer satisfaction despite the impact of location (Dacko 2008).

2.3 REVPAR – REVENUE MEASURES

The lodging industry possesses a massive and mostly non-dissenting consensus that RevPAR is the standard of performance measurement. There is a unified industry-wide approach due to the popularity of RevPAR along with its comparative derivative index that contrasts a subject hotel's RevPAR with the average RevPAR of the subject hotel competitive set(s) (Schwartz et al. 2017). This ratio was developed with investors in mind but is currently used by revenue managers industry-wide to assess performance (Schwartz et al. 2017).

In terms of validity, previous research shows that RevPAR reporting is distorted, intentionally and unintentionally, thus solidifying the necessity to examine in-depth the relationship between RevPAR and GOPPAR; the literature has shown and will show that this relationship will correlate with validity of performance measurement.

Another major issue in hotel revenue management derives from the amount of revenue centers on property which created the evolution of total hotel revenue management (THRM). Therefore, it is vital to exclaim that RevPAR is not encompassing of all property revenue streams and should not define the discipline of RM. Researchers

and industry experts have criticized RevPAR by addressing its lack of reflection of revenues from other revenue-generating departments, and other critics argued that RevPAR only indicates revenue instead of profits, excluding the costs incurred (Jacobs 1997; Brown and Dev 1999; Slattery 2002; Younes & Kett 2003; Manson 2006; Chen et al. 2011). In terms of validity, ancillary revenue streams can cause issues with RevPAR reporting. Room revenues often account for only 50–55% of the total revenue, particularly in large, full-service, higher-scale and resort hotels (Younes and Kett, 2003; Schwartz et al. 2017). Reported RevPAR is not regarded as a proxy for hotel performance in limited to full service hotels since it excludes the non-rooms business; however, it is only in rooms-only hotels, which amount to a small minority of global hotel rooms, that RevPAR can safely be regarded as a proxy for hotel performance (Slattery 2002). The potential inadequacy of measuring RevPAR is also amplified by the recent shift toward THRM, that is, toward the inclusion of all the hotel's revenue-generating centers, as opposed to the more traditional, room-centered, revenue management approach (Anderson and Xie, 2010; Gregory, 2012; Schwartz et al. 2017). Noone et al. (2017) defines THRM in this manner: includes consideration of multiple revenue sources, a deep understanding of customer value, and a shift from top-line metrics to bottom-line measures to take into consideration distribution and operating costs. Therefore, new capabilities will be needed as the industry shifts the focus from rooms inventory management to the complex management of a hotel's entire revenue stream which involves customer-based pricing and long-term customer value creation (Noone et al. 2017). The move to THRM indeed means that hotels should not rely on RevPAR as a proxy for GOPPAR (Schwartz et al. 2017). Income from food and beverage and rental

income from other sources such as conferences and events do not appear in RevPAR calculations (Schwartz et al. 2017). This issue is also demonstrated when analyzing casino hotels. In his study of Las Vegas and UK casino hotels, Slattery (2002) demonstrated how RevPAR could be manipulated by large chains by underreporting the number of rooms and nights available or by excluding supply during low season, during refurbishments or when rooms are used by employees (Schwartz et al. 2017). The calculations used a denominator based mainly on an inaccurately reported number of room-nights available (Slattery 2002; Chen et al. 2011). To combat this issue, Slattery (2002) suggests that in order to utilize RevPAR for its intended benchmarking purpose, it is suggested that supply should be measured on the basis of total stock of rooms on all nights without manipulated exclusions, that revenue should be accounted only for rooms actually sold with no adjustment for complimentary rooms and that room revenue should be disaggregated from package deals and in-room services (Schwartz et al. 2017). Even with this proposed solution to calculating RevPAR, RevPAR cannot be used to assess total operational and asset performance efficiency as stated in previous research and before in **Performance Measurement** (Slattery 2002; Schwartz et al. 2017).

RevPAR figures and pricing strategies/decisions is a strong two-way correlation; without this relationship, revenue management cannot exist. As changing market conditions and technological advances stimulate innovations and strategic investments in revenue management, managers fundamentally need to know how to increase firm performance via pricing to drive higher revenue and stay ahead of the competition (Pekgün et al. 2013; Enz et al. 2015). To introduce pricing strategies and its effect on financial performance from a theoretical as well as a generally practical perspective,

strategic thrusts pursued by each firms' marketers and revenue managers have important implications for the price-sensitivity of their customers and the potential for each to offer travel/tourism services that are priced such that margins are higher than that for the lower-priced offerings of competitors (Dacko 2008). Hotels then can drive RevPAR by keeping price low and maximizing occupancy, or pricing at a premium and increasing margins (Anderson and Lawrence 2014). Yet, even though RM systems may achieve greater near-term revenue, hotels may decrease long-term profit if low last-minute prices lead to regular customers' experiences suffering as a result of attracting a clientele inconsistent with the firm's image (Dacko 2008). Thus, it is important for hotel operators to communicate with their guests regarding the true cost of offering the service and not to let them regard the deeply discounted price as the reference price when judging the profit margin (Lin and Huang 2015). Wang (2012) highlighted that the perception of fairness in the RM practice of price differentiation is one of the potential causes of the conflicts between customer relationship management and hotel revenue management (Lin and Huang 2015). There are two ways in which customers evaluate the fairness of a price and which thus become potential sources of unfairness: the perceived profit of the seller and the prices believed to be paid by others (Phillips 2005; Lin and Huang 2015).

It is essential to recognize the link between RM and marketing, and that link is pricing. This reflects a general issue in RM: pricing strategies still reflect a trend of revenue maximization despite optimization approach. Enz et al. (2009) explored 7 years of aggregate hotel occupancy and revenue data concluding that properties that maintain a small price premium tend to achieve a RevPAR premium as well (Anderson and Xie 2010). In addition, hotels that priced above their competitors experienced higher

comparative RevPAR performance regardless of the market segment (Enz et al. 2009). Offering guests prices that are lower than the competition lead to higher occupancy percentages for the discounting hotel, but these comparatively lower prices also resulted in lower RevPAR performance than the competition (Enz et al. 2009). In 2001-2007, hotels that price 5 to 10% lower than competitors have lower comparative RevPAR's, while those that price 5 to 10% higher than competitors have higher comparative revenues (Enz et al. 2009). In Europe, the hotels with prices 10 to 15% below the competition experienced annual RevPAR's that were 9.52% below those of competitors, even though their occupancies were 3% above their competitors (Enz et al. 2015). These hotels' steeply lower price positioning compared with competitors yielded only a slight increase in occupancy, but the consequence of those lower prices (that is, ADRs greater than 2% below their competition) was noticeably lower RevPAR's (Enz et al. 2015). In contrast, hotels that positioned themselves with higher ADRs compared to their competitors experienced substantially higher relative RevPAR's, indicating that more aggressive reference price premiums meant stronger RevPAR results (Enz et al. 2015). The maximum RevPAR advantage over the competitive set was obtained by those hotels that had the highest comparative ADRs (Enz et al. 2015). For example, hotels that had ADRs 15 to 30% higher than those of their competitive set also had 15.93% higher RevPAR's (Enz et al. 2015). Interestingly, hotels that priced less than 10% above competitors also recorded positive occupancies (Enz et al. 2015). Bizarrely, in a study of more than 30,000 hotels between 2001 and 2005, Canina and Enz (2006) found that hotels that priced above their competition were among the best at revenue management, defined as the rate-to-occupancy relationship (Enz et al. 2009). These results show that

RM is a more encompassing field than benchmarking and forecasting; however, these contrasting results show that RevPAR is not the total indicator of success and competitive performance. With the continued general use of revenue maximization, as opposed to profit, management may inadvertently be maintaining a narrow focus on RevPAR as the leading external performance benchmark which can lead to insufficient pricing decisions and strategies (Noone et al. 2017). However, what does the influence of RevPAR on pricing strategies and vice versa mean for the relationship between revenue and profitability via RevPAR and GOPPAR?

Another factor influencing revenue measures is the financial effect of policies regarding booking, sales decisions and loyalty/promotional programs. Service firms have increasingly turned away from short-term, transaction-based marketing in favor of customer-centered approaches, notably loyalty programs (Rust et al. 2004; O'Neill et al. 2008). The customers of the loyalty programs contribute a significant part of the overall hotel revenue in the contemporary hotel market (Lin and Huang 2015).

Loyalty and promotional programs emerged as a staple service offering in attracting and retaining guests. In that case, loyalty and promotional programs affect revenue and profitability measures. Hotels typically execute promotional opportunities with the major aim of enhancing firm profitability, considering the extent that their promotions will facilitate consumer's movement through different stages of the buying process, which includes need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase evaluation (Kotler and Armstrong 2001; Dacko 2008). Yet, what does the strategic aim of promotions/loyalty programs mean for lodging financial performance? To begin, hotel loyalty programs are a black hole when it comes

to reported rooms turnover and RevPAR (Slattery 2002). The size and the complexity of operating loyalty programs as well as the diversity of reporting practices raises doubts about the relationship between reported RevPAR and cash flow at participating hotels which muddles and complicates the relationship between revenue and profitability (Slattery 2002).

One such critical issue is the financial effect of cancellations. Weatherford (1995) summarizes, traditional RM has been shown to provide revenue gains of 4 to 5% by managing rates and by using overbooking to control for no-shows and cancellations. As hotels do not have standard cancellation policies, penalties and fees associated with cancellation vary considerably among hotels with similar occupancy, daily rates and RevPAR (Schwartz et al. 2017). Yet, cancellation fees do not significantly affect the relationship between RevPAR and GOPPAR (Schwartz et al. 2017). Although revenues from cancellation fees did not seem to matter much to the relationship between RevPAR and GOPPAR in their study, as revenues from these and other related fees increase, they could possibly become a significant factor in the relationship between RevPAR and GOPPAR (Schwartz et al. 2017).

Also, the effectiveness of RevPAR is challenged due to the financial effects of managerial decisions due to factors such as service recovery among others. This is the major issue regarding this factor: RevPAR is not an effective indicator of managerial competence because associated expenses are not factored into its calculation (Schwartz et al. 2017). However, higher levels of undistributed expenses do not seem to affect the correlation between RevPAR and GOPPAR (Schwartz et al. 2017). Another managerial decision is controlling guest stays and previous research shows this alters revenue

measures. Kathleen Cullen, senior vice president of revenue and distribution for Commune Hotels + Resorts, highlighted the need to understand the value of customers as individuals across booking channels and stay types rather than within traditional segments (Noone et al. 2017). Hotels can achieve upwards of an additional 3% through managing guests' length of stay (Weatherford 1995). Choi and Kimes (2002) find that if hotels are currently revenue managing by rate and length of stay, they will gain little incremental revenue by also controlling reservations by distribution channel, assuming a straightforward reallocation of existing demand across channels (Anderson and Xie 2010).

Also, two important operational aspects heavily impact RevPAR numbers: 1. Marketing (internal) and 2. Guest satisfaction. To introduce this perspective, there is a strong positive correlation between online review rating (interchangeable with valence) and RevPAR (Blal and Sturman 2014). However, volume (amount of reviews) did not influence RevPAR across all service levels (Blal and Sturman 2014). In a more recent study, Neirotti et al. (2016) found that better online visibility is more important than greater visibility; the number of reviews simply does not impact hotel performance. Furthermore, Neirotti et al. (2016) found that the standard deviation in users' ratings had no significant effect on revenue growth, whereas the average online rating had a significant effect, and the number of reviews had effects only when interacting with the average online rating. Specifically, their results show, in terms of the average online rating given by users, positively impacts the growth rate of sales revenue (Neirotti et al. 2016). Even though volume does not have a significant effect on RevPAR, review volume shows that reviews, positive or negative, are an indication of hotel popularity,

increase in consumers' awareness of the product, the product stays longer in consumers' consideration set, attracts information seekers, reduces uncertainty and perceived risk, and triggers normative behavior (Vermeulen and Seegers 2009; Viglia et al. 2014; Zhao et al. 2015; De Pelsmacker et al. 2018). In terms of RevPAR, hotel management should devote considerable attention to both the number and the valence of reviews about their hotel and should develop an extensive digital marketing strategy that has a profound impact on these reviews and, directly or indirectly, on hotel performance (De Pelsmacker et al. 2018).

How do online reviews affect the relationship between hotel revenue and profitability? Neirotti et al. (2016) concluded that only for hotels capable of attracting a great number of positive user-generated reviews, there may be a net positive effect on profitability due to online visibility. However, Neirotti et al. (2016) show that the average online rating assigned by users has a negative effect on the gross profit margin difference and there is no significant relationship between the online rating and the number of user-generated reviews on the gross profit margin difference. Yet, recent research shows that the average online rating given by travelers had no effect on the growth in the net profitability of sales (Neirotti et al. 2016). Nevertheless, results showed that there is a positive and significant relationship on the net profitability of sales due to the interaction between the number of reviews and the online rating. Thus, for these hotels, the magnitude of the positive effect on revenue growth outweighs the negative effect on the gross profit margin difference (Neirotti et al. 2016). However, previous empirical evidence shows that better visibility does not turn into a higher profitability margin because part of the revenue generated is appropriated by external distribution platforms

and other distributors (i.e., OTA) in the form of an intermediation fee (Neirotti et al. 2016). Now, how does hotel star rating affect the profitability of a property? The official star-rating is the main variable through which hotels can vertically differentiate their customer services (Silva 2015; Neirotti et al. 2016). Star-rating plays an important role in customers' decisions because customers consider star-rating the most important attribute of their selection process (Callan 1998; Neirotti et al. 2016). By signaling that higher-star hotels provide better quality service, a star-rating system helps prospective customers assess what to expect from a hotel with a certain star level and provides guidelines for them to make less risky hotel reservations (Neirotti et al. 2016). At least in Italy, the gross profit margin difference possesses a more negative coefficient related to online ratings for hotels with no more than 3 stars in their official ratings, with the coefficient being significantly lower than 0 for hotels with lower star-rating (Neirotti et al. 2016).

RM is the bridge that links operations and marketing to financial management; therefore, it is important to recognize one major aspect of marketing and its impact on financial performance: advertising. Chen (2015) found that advertising has a significantly positive impact on Occupancy and RevPAR. In addition, Chen and Lin (2013) find that advertising can affect hotel sales through a significant positive impact on hotel room price (Chen 2015). In practical terminology, an increase in advertising expenditures can raise hotel sales revenue in terms of Occupancy and RevPAR (Chen 2015). However, there is one major qualm to this relationship in practicality. Advertising expenditures do not significantly increase hotel profitability in terms of ROA and ROE (Chen 2015). Due to the issues surrounding revenue measurement and validity, the market does not value RevPAR as a predictor of investor returns (Schwartz et al. 2017). Chen et al (2011)

examined the relationship between RevPAR and traditional financial measures, including total shareholder returns for five publicly traded large US lodging chains that represented 72% of total market capitalization in 2006 (Schwartz et al. 2017). They reported that their results were consistent with the literature that had concerns regarding the validity of RevPAR as a performance benchmark; in their study it was not a predictor of shareholder returns (Chen et al. 2011; Schwartz et al. 2017). Instead, EPS estimated by using EBITDA significantly explains a lodging firm's equity performance whereas RevPAR does not (Chen et al. 2011). As equity returns are an important factor in analyzing organizational growth and RevPAR is not a significant predictor of returns, it is important to identify this contribution to the need of analyzing GOPPAR as a performance measurement and examining this relationship as previous literature points to this void.

However, RevPAR will remain a staple performance measure within the lodging industry due to many factors. As the correlation between RevPAR and GOPPAR is on average very strong, Schwartz et al. (2017) believe that from an industry-wide perspective the current practice of reporting RevPAR, despite its limitations, may work in efficiently predicting performance. RevPAR persists for a reason – in general, it correlates highly with profit measures and therefore provides a good proxy measure for the most part (Schwartz et al. 2017).

2.4 GOPPAR – PROFITABILITY MEASURES

With the challenge toward validity and precision of RevPAR as an accurate benchmark of hotel performance by the academic and industry communities, GOPPAR emerges as the frontrunner for the more accurate and encompassing benchmark option.

Although RevPAR is still widely used, GOPPAR is gaining ascendancy, especially as industry consultants and analysts see value in a metric that reflects overall hotel performance that can be used for strategic decisions such as valuation and acquisitions (Higgins 2006; Schwartz et al. 2017). Due to their findings on investor returns and RevPAR, Chen et al. (2011) encourage the use of another industry-specific metric such as GOPPAR because it appears to be a better indicator of lodging performance (Schwartz et al. 2017).

One major characteristic of GOPPAR is its more thorough inclusion of other departments as well as other operational factors with derived performance increase. Brown and Dev (1997) evaluated the GOPPAR of franchisees to find that performance benefitted when there were marketing partnerships and when there was a close relationship between franchisor and franchisee (Schwartz et al. 2017).

GOPPAR and RevPAR share this same relationship; pricing strategies and decisions share a strong two-way correlation with GOPPAR. Managers have an incentive to offer a price that is aligned with the current competitive condition of their property since fair behavior is instrumental to the maximization of long-run profits (Kimes and Noone 2002; Rohlfs and Kimes 2007; Kim and Canina 2011). However, RM's role could produce a double-edged sword in terms of pricing and customer fairness. Although the practice of RM has become an essential element in lodging operations, the implementation of RM can have an adverse effect on customers' perceptions of a company and even destroy customer loyalty, the basis for the long-term profitability of a company (Rigby, Reichheld & Dawson 2003; Lin and Huang 2015). Therefore, it is important to recognize the impact of RM implementation on profitability and GOPPAR

which extends into analyzing the impact of implementation efforts on the relationship between hotel revenue and profitability.

GOPPAR possesses its setbacks as well. As with RevPAR, the supply of rooms can be manipulated, and, as hotel room sizes vary, hotels with more, smaller rooms will have a lower relative GOPPAR (Schwartz et al. 2017). When comparing three equal space-sized hotels (but with different numbers of rooms) in an identical location and with the same quality of services, Lindt (2006) illustrated that hotels with identical total revenue and gross operating figures can have different figures for GOPPAR and TrevPAR (total RevPAR) on the basis of the number of rooms and differential use of space, leading to imbalanced performance benchmarking (Schwartz et al. 2017).

2.5 REVPAR VS. GOPPAR – REVENUE VS. PROFITABILITY

Academic and industry studies in the past extensively measured revenue and profitability but only recently have contemporary works really begun to focus on the relationship between revenue and profitability. Schwartz et al. (2017) exclaim this is due to the dilemma of the extensive use of RevPAR and the comparative RevPAR Index, the lodging industry's current standard measures of revenue performance, as proxies for profitability. RevPAR is an easier method of benchmarking and trend monitoring across hotels, brands, companies, locations, and over time (Schwartz et al. 2017). Also, the approach of revenue maximization was justified based on the assumption that, when revenues are optimized, profits follow suit and are sufficiently close to being maximal; therefore, the performance measures that hotels adopted to assess the outcome of their revenue management efforts were revenue centered (Schwartz et al. 2017). However, as

stated in the introduction, the reported RevPAR differs from ‘real’ RevPAR and is possibly unreliable in certain circumstances.

Theoretically, measuring RevPAR can be misleading in measuring financial operating efficiency which also displays a clear relationship between RevPAR and GOPPAR. Schwartz et al. (2017) demonstrated theoretically the concepts of Suboptimality and Bidirectionality; using RevPAR to assess the performance of the revenue management system might be both suboptimal and directionally misleading, even when one only assumes a single revenue-generating department and a simple linear demand function. The ‘suboptimal’ single linear regression model theoretically shows that GOPPAR is not optimized when RevPAR is optimized (Schwartz et al. 2017). The proof for Suboptimality is as follows: when the demand and the variable costs are linear, even with the least complicated situation of a single revenue-generating center (the rooms department), RevPAR-based maximization always generates less than the desirable maximum GOPPAR. Therefore, if the gap is considerably large, relying on RevPAR as a proxy for the GOPPAR maximization might be misleading and harmful to the hotel (Schwartz et al. 2017). The Bidirectionality theoretical model shows that RevPAR increases while GOPPAR decreases at certain room rate levels and amount of sold rooms; these levels could possibly be a result of chain affiliation vs. independent as well as the service level of a hotel (Schwartz et al. 2017). According to the Bidirectionality theory, RevPAR as a proxy for profitability measures such as GOPPAR might be misleading because at times the correlation between the two measures of RevPAR and GOPPAR is negative. Consequently, relying on RevPAR to assess the effectiveness of revenue management decisions when the true goal is to improve GOPPAR might be

wrong (Schwartz et al. 2017). When Bidirectionality is present it means that performance measures encourage maintaining, or even increasing, the levels of certain revenue management controls when these control levels should in fact be reduced or eliminated according to the theoretical proof (Schwartz et al. 2017).

Another factor that enhances the necessity to investigate this issue is the amount of ancillary revenue streams, more specifically non-room revenue, in hotels and their effects on benchmarking. Simply put, hotels are seeking to apply RM to other revenue centers within the property (Anderson and Xie 2010). FRHI Hotels and Resorts takes ancillary RM implementation to a new level: by using Avero and a suite of internally developed tools, restaurants within FRHI properties have the capability to visualize key data (e.g., RevPASH by day of week, arrival patterns, menu item performance), and to use those data to forecast and make informed demand management and menu-based decisions (Noone et al. 2017). Most importantly, learning RM concepts and having access to data on restaurant performance has helped the food and beverage team devise strategies and innovations to lift revenue (Noone et al. 2017). Implementation in this regard subsequently affects pricing decisions and strategies regarding rates and ancillary stream prices. The opportunity to apply differential pricing in the function space arena was highlighted by Greg Cross, senior vice president of revenue management for Hyatt Hotels, who explained that, while public space inventory pricing formerly tended to be based on flat fees, the characteristics of different units, for example, their location or view, provide the opportunity to apply variable pricing (Noone et al. 2017). Hyatt Hotels Corporation has implemented a complete suite of tools to enable catering managers to

better quote and understand the pricing differential for public space rooms (Noone et al. 2017).

The contemporary incorporation and cohesion among lodging ancillary departments emerges as a leading cause of the evolution of RM. Industry practitioners reinforced the importance of fostering a cross-functional organizational culture focused on total hotel performance as a starting point for developing incorporating, advanced RM systems which exhibits a relationship with Total Quality Management (Noone et al. 2017). Leading brands, especially among the higher service levels, recognize the importance of fully developing RM practices and strategies for ancillary streams thus displaying the necessity for analyzing ancillary/auxiliary revenue streams and their impacts on the relationship between revenue and profitability. Craig Eister, senior vice president of global revenue management and systems for the InterContinental Hotels Group (IHG), said his company's approach to total hotel revenue management (THRM) comprises three components: (1) looking beyond rooms to the application of RM principles to other revenue streams, primarily food and beverage and function space; (2) building more intelligence around each customer segment and applying knowledge to those segments; and (3) viewing RM from a profit perspective, as well as a revenue perspective (Noone et al. 2017).

In allegiance with previous research, Schwartz et al. (2017) found that higher proportion of ancillary revenue streams was found to be associated with lower correlation of RevPAR and GOPPAR; particularly their rent/other income and food and beverage coefficients produced a negative significant relationship thus reducing the strength of the relationship between RevPAR and GOPPAR. Properties that generate substantial non-

room rents, food and beverage revenue, and are higher in scale are instances where GOPPAR may be a more appropriate measure of performance than RevPAR and therefore the need to establish the correlation between the two is more urgent if the hotel is using RevPAR and not GOPPAR (Schwartz et al. 2017). Given that some revenue streams, such as restaurants, have high variable costs associated with them, previous research has exclaimed the need to shift focus from revenue to profitability and this exclamation is supported by the significantly negative correlation between RevPAR and GOPPAR (Thompson 2010; Noone et al. 2017; Schwartz et al. 2017). Therefore, the future of RM will require consideration of both the revenue and costs associated with other revenue streams as it expands its focus beyond the management of rooms revenue to a more complete profit-based approach (Kimes 2011; Noone et al. 2017).

If the goal of the hotel is to maximize profits, and, as properties have started to shift to multiple, non-rooms profit centers, then the assumption that revenue maximization or even net revenue maximization is ultimately leading to near profit maximization may no longer hold true (Schwartz et al. 2017). For example, the hotel might shift rooms to high-volume segments in its quest to maximize revenues or net revenues (Schwartz et al. 2017). However, compared with the displaced segments, these high room-volume segments might be spending considerably less in other, more profitable, centers in the hotel such as the hotel's food and beverage outlets, meeting space, SPA, retail shops, golf course and casino, and as a result the hotel's overall profitability might decline (Worgull 2013; Schwartz et al. 2017). This could be a result of increased hotel size due to stream incorporation. Chen (2015) found that hotel firm size has a significantly positive impact on RevPAR, but a significantly negative effect on

hotel profitability (measured by ROA and ROE), revealing that in Taiwan, large hotel firms have higher sales earnings, but yield worse corporate performance in terms of profitability; these findings imply that large hotels in Taiwan should be cautious about cost control. Also, the sizes of the ancillary revenue streams (correlated with room and property size) matter in their ability to display the relationship between revenue and profitability as well as RM strategies and implementation. Even though recent interview participants indicated a strong interest in non-rooms RM initiatives, they noted that the presence of such practices at the individual hotel level is a function of the size of the hotel's non-rooms operations and their associated revenue contribution (Noone et al. 2016). Hotel companies are investing in a more systematic RM implementation in hotels where the amount of real estate dedicated to a non-room revenue stream, along with the revenue potential of that revenue stream, is significant with the luxury service level taking the forefront in this major RM trend (Noone et al. 2017). However, a one-size-fits-all approach to RM for non-room revenue is not advocated (Noone et al. 2017). Mark Molinari, corporate vice president of revenue optimization, marketing performance, and strategic initiatives for Las Vegas Sands Corp., provided the example of a meeting space optimization project that was limited specifically to Sands properties in the Las Vegas market; this initiative, designed to maximize the availability of meeting rooms, was spurred by a lack of space availability to meet the strong demand for meeting rooms in the Las Vegas market, a problem not shared by their properties in other markets (Noone et al. 2017). In addition, multiple meeting and banquet room sizes and configurations, different types of on-site restaurant outlets, and the many different menu options and

items used across events and outlets, makes managing these revenue streams complex in a general sense (Noone et al. 2017).

Despite the limitations of both RevPAR and GOPPAR, even though GOPPAR is the more desirable metric, RevPAR and the RevPAR Index continue to be the industry-wide staple, especially when it comes to assessing the effectiveness and performance of frequently made RM decisions such as room rates, allocation of rooms to rate fences and overbooking levels; the primary reason for this the ease of data accessibility and availability (Schwartz et al. 2017). Previous interviews indicated that no financial indicators were without deficiency and RevPAR was the most widely used measurement, internally and externally, and accepted by lodging firms as an extremely vital benchmark (Higgins 2006; Chen et al. 2011). In a series of interviews conducted by Noone et al. (2017), leading industry practitioners pointed to several data-related challenges associated with the implementation of strategic profit management, including poor quality data, problems with data extraction, and a lack of industry-wide definitions and measures. To permit detection of patterns in data that allow for meaningful decisions, the data must be accurate, available in enough volume, extractable from existing systems, and presentable in a format that is meaningful to the decision-maker (Noone et al. 2017). Even though RM vendors are aware of this issue and are working to make performance data readily available to decision makers across functional areas, accessibility to profitability data (pro-forma, industry-wide, competitive set, etc.) remains a major hindrance in determining performance thus reversion back to RevPAR and other standard revenue measures (Noone et al. 2017). When considering the prevalent use of RevPAR in the lodging industry for the past several decades, an immediate replacement of RevPAR

may not be the wisest move and that may substantially remain the case solely because of the prevalence as a result of simpler computation and accessibility (Chen et al. 2011). The lodging industry may want to adopt the front running benchmarking standard substitute of GOPPAR gradually; lodging firms should still report RevPAR for a while and make a cautious transition toward more dependence on GOPPAR (Chen et al. 2011).

The critical issues listed above are the reasons why profitability measurement and optimization has emerged as an emergent trend in academic studies as well as RM implementation strategies. The biggest factor surrounding these critical issues is the analysis of variable and fixed costs following revenue accountability. In general, Marn and Rosiello (1992) found that a 1% reduction in variable costs contributes to profit improvement of 7.8% and that same reduction in fixed costs contributes to a profit improvement of 2.3% (Rushmore and O'Neill 2015). From a hotel managerial perspective, Rushmore (1997) suggested that the fixed to variable cost ratio is important to determine the break-even point for hotel performance, and he also articulated that profitability grows rapidly with occupancy beyond that break-even point (Rushmore and O'Neill 2015). Rushmore's (1997) argument was that occupancy raises profitability at a rate that increases faster than the variable cost rate, so every occupancy point that surpasses the breakeven point produces larger gains for the hotel than the previous occupancy point achieved (Rushmore and O'Neill 2015).

A plethora of factors influence cost amounts; therefore, analysis of these issues needed to filter down to specific factors. For example, a hotel that wishes to assess the inadequacy of using RevPAR-based monitoring/maximization rather than a GOPPAR one, needs to assess the demand characteristics (Schwartz et al. 2017).

Also, analysts (academic and industry) need to consider resource allocation toward RM implementation and forecasting; while assessing the hotels variable cost is not too complicated, the task of assessing the slope of the demand curves among other advanced academic concepts is, realistically speaking, beyond the scope of a typical hotel (Schwartz et al. 2017). Leading chains are changing their contemporary approaches to forecasting and implementation. Sharon Hormby, senior director of total yield systems, global revenue management, for Marriott International, described the significant progress that Marriott has made in terms of forecasting, by shifting from individual functional area forecasts to a single hotel forecast (Noone et al. 2017). As discussed in this literature review, implementation is significantly affected by brand and resource availability, but forecasting and implementation methods affect bottom-line performance and the relationship between revenue and profitability. Results show strong empirical support to the notion that the hotel's strategic RM implementation choice affects its relative financial performance (Altin et al. 2017). Strategic implementation decision appears to have a significant impact on the hotel's level of performance compared to its competitive set (Altin et al. 2017). This study analyzes RM monitoring via the relationship between RevPAR and GOPPAR among chain-affiliated and independent hotels as well as hotel service level; therefore, this study will show the impact of these variables on RM monitoring, implementation, maximization, and optimization efforts/strategies via the relationship between RevPAR and GOPPAR.

In terms of examining the relationship between RevPAR and GOPPAR empirically, results show that higher proportional revenue from food and beverage operations and other revenue generating centers, and the hotel having a lower scale

(being more luxurious) are associated with a less strong correlation between RevPAR and GOPPAR (Schwartz et al. 2017).

As mentioned above, a significant relationship exists between nonfinancial performance measures and financial performance; Banker et. al (2005) investigated the relationship between nonfinancial performance (measured via LRETURN- likelihood of return and COMPLNTS- customer complaints) and financial performance (TRevPAR, CostPAR – operating cost per available room, AVGRATE – average rate for 72 months, OCCRATE- occupancy, GOPPAR). Results revealed that LRETURN is positively associated with TREVPAR and GOPPAR at a 99% confidence level; there was a 0.10 increase in LRETURN that resulted in a \$2.75 increase in TREVPAR per day and about a \$1.64 increase in GOPPAR per day (while costs also increased, \$0.53, the amount was not significantly different than zero) (Banker et al. 2005). Results revealed that COMPLNTS is negatively associated with revenues and profit per available room (but it is not significantly so at $p < .01$, 95% confidence level). Findings reported that a 1.0 decrease in COMPLNTS would result in about a \$1.00 increase in TREVPAR per day and about a \$0.40 increase in operating profit per room per day. (while costs also increased, about \$0.70, the amount is not different from zero) (Banker et. al 2005). In summary, likelihood of return and amount of customer complaints as nonfinancial performance proxies significantly affects revenue and profitability (TRevPAR and GOPPAR as respective proxies) in this case (Banker et al. 2005); however, there are substantially more nonfinancial performance measures and one must consider that these figures are well before the 2008 financial crisis.

This literature review will go one step further in the role of the guests in analyzing revenue and profitability. Amount of foreign tourist arrivals have a significantly positive effect on Occupancy, RevPAR and ROE, suggesting that an increasing inflow of foreign tourist arrivals can enhance occupancy rate, RevPAR and ROE of hotel firms (Chen 2015). Interestingly, international tourist hotels are much more upscale than general tourist hotels and general hotels and provide higher quality of guest rooms and amenities such as restaurants, swimming pools, gymnasiums and conference halls (Chen 2015). This finding does not align with a reduced correlation strength between RevPAR and GOPPAR found by Schwartz et al. (2017). This bodes the question of what truly determines the relationship between revenue and profitability at the very least from a guests' role perspective? This finding also further challenges the validity of staple hotel financial performance measurements.

Analyzing tourist behaviors forays into analyzing behavioral trends and their impact on forecasting which heavily affects the adoption of an optimization approach. How does tourist behavior affect financial performance of a hotel? In terms of service management and offerings, travelers with different needs and interests differently weigh attributes of hotel services, such as the offering of continental breakfast, the distance of the hotel from downtown or from a particular attraction, and the availability of complimentary services, such as free Wi-Fi, laundry, a gym, a swimming pool, baby-sitting services and amenities for kids just to name only a few offerings (Neirotti et al. 2016). What do tourists want from their overall hotel experience? What does tourist segmentation mean for this analysis? Even more pertinent to the variables of this study, how do behavioral trends overall and segmented behavioral trends impact hotel revenue

and profitability? From a more practical perspective and to reiterate a previous question, can identification and knowledge of consumer's backgrounds and behaviors provide a basis for segmentation strategies that might ultimately result in RM practices and approaches to increase a service firm's sales and profits as well as customer satisfaction (Dacko 2008)? To build off another question asked previously in literature, to what extent are there opportunities to strengthen the firm's marketing strategy and enhance the marketing mix for any given service targeting specific tourist behavioral trends with the objective being to increase the firm's profitability and revenues even further (Dacko 2008)? Well, online marketing seems to be the dominant domain to solidify this link. The development of e-relationship marketing on hotel websites is strongly correlated with financial performance of hotel organizations (Jang et al. 2006). One other such trend is last-minute travel. Although the tourism/travel market has generally adapted to RM principles and practices, a segment of the worldwide tourism/travel services market that became increasingly large and still growing is that of last-minute travel and tourism—travel/ tourism by individuals that do not book or purchase such services far in advance, but rather book or purchase anywhere from two weeks to three hours in advance of service use (Dacko 2008). The rapid growth of the last-minute travel segment, combined with an equally rapid increase of firms offering last-minute services, suggests a need to understand the important RM implications of this identifiable, yet relatively heterogeneous, late purchasing segment of a market potentially characterized by greater variability in demand (Dacko 2008).

As far as the relationship between revenue and profitability goes, while it is possible that costs may increase, Banker et al. (2005) expected that any cost increase

would be lower than the corresponding revenue increase, meaning that profits are expected to increase as a consequence of an increased emphasis on customer satisfaction; the findings show a significant increase in both TRevPAR and GOPPAR as a result of customer satisfaction due to their incentive plan model. Because the incentive plan capped the bonus payouts as a percentage of operating profit, the incentive plan was able to cover its expenses and produce a net profit, Banker et. al (2005) concluded that customer satisfaction via the incentive plan model possessed a significant positive impact on profitability. In summary, previous research shows that nonfinancial performance measures significantly affect both revenue and profitability. However, nonfinancial performance measurements (especially just likelihood of return, customer complaints, and customer satisfaction levels due to managerial/employee incentives) are not a total indicator of financial performance; therefore, on the surface, nonfinancial performance measures in this study can only be viewed as characteristics of the hotels and service levels when assessing the strength of the relationship between RevPAR and GOPPAR.

2.6 CHAIN VS. INDEPENDENT

Substantial differences exist in operational characteristics between chain-affiliated and independent hotels. Compared to other factors that are well recognized in previous literature as related to a hotel's operating performance, the owner appears to be the most significant factor in that it accounts for the largest variance of a hotel's operating performance which means affiliation significantly affects hotel financial and nonfinancial performance (Xiao et al. 2012). Concerning systems and organizational procedures, the lodging industry and hospitality sector is largely dominated by chain firms which

increases the probability of survival (Ingram 1996; Ingram and Baum 1997; Sainaghi et al. 2013). Among several benefits of brand affiliation is the positive influence on hotel sales and profitability (Hayes and Ninemeier 2007; Xiao et al. 2012). Previous literature also suggests a link between brand and hotel value indicators such as ADR, occupancy, RevPAR, NOI, and hotel sale price (O'Neill and Xiao 2006; O'Neill and Mattila 2010; Xiao et al. 2012). For both independent and chain-affiliated hotels, hiring experienced revenue managers in hotels will likely improve performance (Noh et al. 2016). In conclusion to the above analysis regarding brand/chain affiliation, independent hotels still maintain enough presence in the lodging industry to promote affiliation as a significant variable in explaining the relationship between RevPAR and GOPPAR.

In terms of implementation, a chain affiliated hotel has a higher level of access to their brand-specific resources and subsequently a clearer understanding of successful revenue management solutions (Altin et al. 2017). A practical example of this comes from Marriott: A centralized view of the customer is key to driving revenue at Marriott, which has moved the RM function to a broader consumer insight and revenue strategy team; this organizational restructuring allows the team to derive data-driven insights about customer behavior to support strategic decisions and personalization efforts (Noone et al. 2017). This type of advantage allows chain properties to enjoy the benefits of more informed revenue management decisions which significantly results in better financial performance (Altin et al. 2017). Findings indicated that when compared to in-house strategy, corporate and mixed strategies generate a statistically significant higher RevPAR Index and that third-party implementation is not different from in-house (Altin et al. 2017). This is simply due to resource accessibility and support among chain-

affiliated hotels compared to independent hotels. However, exposure through online travel agencies (OTA's) seems to behoove independent hotels more than chain-affiliated hotels. The effect of using tracking software on room occupancy rate is stronger for independent hotels, and so is the direct effect of frequently using TripAdvisor information on RevPAR (De Pelsmacker et al. 2018). Regarding the respective hotel's own website, the effect of integrating third-party reviews on the hotel website has a negative effect on chain hotels, and no effect on independent ones (De Pelsmacker et al. 2018).

Next, differences in pricing strategies between chain-affiliated and independent hotels aligns with other literature in that a relationship exists between pricing strategies and revenue and profitability. In that case, what are the differences in pricing strategies between chain-affiliated and independent hotels when examining the relationship between revenue and profitability? Price positioning in chain-affiliated hotels higher than competitors is significantly associated with stronger RevPAR performance over time (Enz et al. 2015). However, in European chain-affiliated hotels, only price positioning was a significant predictor of RevPAR performance (Enz et al. 2015). At least in Europe, the pattern of gaining occupancy but losing RevPAR when positioning with lower relative prices held true for independent hotels, as it did for chain-affiliated properties (Enz et al. 2015). There were also substantially lower RevPAR's for independent and chain hotels that priced below their competitive set, and particularly for independent hotels (Enz et al. 2015). In summary, the strategy of pricing above the competitive set appeared to be somewhat more beneficial for the chain-affiliated hotels in the study, while both independents and branded hotels benefited from higher RevPAR's when

adopting a premium price position (Enz et al. 2015). This finding is particularly true for independent hotels in The Netherlands; the pricing strategy of independent hotels to price just a small amount above their competitive set delivered both high occupancy and RevPAR values relative to competitors (Enz et al. 2015). Previous data also revealed that both chain-affiliated hotels and independent hotels gained higher levels of occupancy and lower RevPAR losses; this effect was more profound for chain-affiliated hotels (Enz et al. 2015). Results also showed that independent hotels were not able to yield as substantial RevPAR gains from pricing at higher levels than their competitors when compared to chain-affiliated hotels (Enz et al. 2015).

The effects of marketing and guest satisfaction/managing satisfaction on revenue and profitability extends into the analysis of chain-affiliated and independent hotels. It would be valuable to both branded operators and hotel owners to know whether the positive effect of online review volume and online reputation affect the brand itself as it does property performance (Blal and Sturman 2014). Banerjee and Chua (2016) studied differences in online reviews for independent and chain hotels and find review patterns to differ substantially between them; however, they did not explicitly study what drives these differences and how they relate to hotel performance (De Pelsmacker et al. 2018).

Since marketing management appears to function differently between chain-affiliated and independent hotels, both types of hotels possess different patterns of marketing investment therefore producing different dividends. In addition to analyzing the relationship of marketing expenses to hotel revenue and profitability among each service level, O'Neill et al. (2008) analyzed the same relationship between chain-

affiliated and independent hotels and the results are as follows (chain-affiliated are described more in-depth in **Service Level/Scale**):

- Independent Hotels: (Revenues and Marketing Expenditures) Independent hotels showed a significant positive relationship between other marketing expenses and room revenue (standardized $B = .427$). Other marketing expenses had the highest beta weight of all three variables. Moreover, there was no significant relationship between franchise fees and room revenue. (In this instance, franchise fees represent the expense of affiliation with referral groups such as Preferred Hotels.) Nor was there a significant relationship for marketing payroll and room revenue. Oddly, unlike all other chain scale segments, independent hotels showed no significant relationship between the number of guest rooms and room revenue.

(Profitability and Marketing Expenditures) For independent hotels, there was a significant and positive relationship between other marketing expenditures and NOI, and this beta coefficient was the highest of the three types of marketing expenditures. There was no significant correlation between marketing payroll and NOI, but there was a significant and negative one between franchise fees and NOI. (Franchise fees for this hotel type include costs of referral groups, such as Preferred Hotels or Leading Hotels. Thus, we could find no evidence that such costs have a positive effect on the profitability of independent hotels.) (O'Neill et al. 2008)

Another issue that emerges in this study, as stated before in **RevPAR – Revenue Measures**, is the distortion of data reporting among large chains (Slattery 2002; Schwartz et al. 2017). Hotel chains inflate the number of room nights sold during a reporting period and as a result inflate reported RevPAR (Slattery 2002). The evidence as it stands shows that the cash flows of the hotels are unchanged or decline with inflated RevPAR thus affecting the relationship between revenue and profitability (Slattery 2002). Particularly, reported RevPAR data published by the consultants as industry wide performance measures are not representative of the industry as a whole (Slattery 2002). Therefore, it is necessary to also compare/contrast the reporting and measurement practices of chain-affiliated and independent hotels.

Another issue that separates chain vs. independent hotels in this study are the variables associated with equity returns or lack thereof. As Chen et al. (2011) previously identified, RevPAR is not a significant predictor of investor returns. Yet, the issue of equity returns is a completely different issue regarding privately-owned chain hotels and independent hotels.

How do nonfinancial performance measures impact the financial performance of chain and independent hotels? What are the differences between the two affiliations? Overall, hotel management companies with large franchise operations are concerned with the quality of their franchisees' properties (Banker et al. 2005). As stated before, managers believe that a customer-focused strategy is essential not only for the long-term profitability of an individual hotel but also for enhancing the hotel chain's brand value (Banker et. al 2005).

The literature supports a need for further examining revenue and profitability as well as financial performance among independent hotels thus solidifying chain affiliation vs. independent hotels as a potential moderator of the relationship between RevPAR and GOPPAR. An examination of independent properties regarding RevPAR will certainly enrich the literature by providing more comprehensive findings because property level managers may have different views on revenue and profitability analyses as well as performance measurement and management overall (Chen et. al 2011).

2.7 SERVICE LEVEL/SCALE

An essential element of RM practice involves finding ways to set prices to avoid commoditization of the service and these strategies are usually dependent on service level which dictates the amount of expected service involved (Anderson and Xie 2010). The implications for services are threefold: customer satisfaction may decline with no consumption; ancillary sales may decrease as no-shows tend to be higher with bundled items and repeat sales may decrease with no consumption (Anderson and Xie 2010).

Nonfinancial performance measurement is an extensive and essential area of analysis among hotel service levels and as identified before these performance measures impact financial performance and vice versa. In terms of employee satisfaction and pricing strategies, if discounting overtakes the staff and facilities, the long-run benefit may be diminished (Enz et al. 2009). In the hotel business, this happens when extremely high levels of occupancy due to attempting to gain additional revenues due to selling more rooms make it difficult to maintain the physical facility and put stress on staff to deliver consistent service quality (Enz et al. 2009). This could cause higher turnover, less

visitation (interchangeable with consumption in this study), higher cost percentages and other detrimental results. Thus, it is imperative to note nonfinancial operational performance as a value commodity that heavily influences revenue and profitability benchmarking. Consequently, satisfied employees are likely to provide better services to hotel customers and improve hotel performance (Chi and Gursoy 2009; Amin et al. 2017). In providing services with appropriately trained and motivated staff in the organizations of both the final service provider as well as that of marketing intermediaries, customer satisfaction, repeat purchases, and longer-term revenue generation are much more likely to increase when compared to that for services offered by un-knowledgeable or unmotivated staff (Dacko 2008). More specifically, increasing employee fulfilment and participation in decision-making regarding their career plans will enhance hotel performance (Amin et al. 2017). In addition, Jun et al. (2006) suggested that well-trained employees will become qualified for higher levels of employee empowerment and teamwork which significantly improves employee satisfaction and organization performance (Amin et al. 2017). Employees who are satisfied with their jobs are significantly associated with both improved profit margins and improved productivity (Silvestro, 2002; Jun et al., 2006; Wangenheim et al., 2007; Decramer et al., 2013; Al-Refaie, 2015; Amin et al. 2017). Regarding the lodging industry specifically, employees with high levels of job satisfaction will produce satisfied customers and increase hotel revenue and profitability (He et al. 2011; Al-Refaie, 2015; Amin et al. 2017). However, service level and hotel performance is defined by more than unaffiliated nonfinancial measures and satisfaction levels; both total quality management and employees are critical management approaches in the hotel industry because the

customers expect high standards of hotel service delivery and facilities (Amin et al. 2017).

Customer expectations clearly differ by service level (Blal and Sturman 2014). In economy hotels, value for money, consistent accommodation standards, hygiene and cleanliness are the most important factors for customers (Brotherton 2004; Blal and Sturman 2014). Midscale customers put a greater emphasis on location and luxury consumers rate location and service quality as their first key factors (Zhang et al. 2011; Blal and Sturman 2014). This introduces total quality management analyses among service levels to this literature review. A remarkable difference among hotel service levels is the level of quality management (QM) associated with brands and the service levels.

Research has shown that the strategic benefits of TQM will result in improved competitive advantage, continuous improvement and increased organizational performance (Antony et al. 2002; Samat et al. 2006; Talib et al. 2011; Talib et al. 2013; Nadarajah and Kadir 2014; Sanchez and Blanco 2014; Talib et al. 2014; Lam et al. 2015; Amin et al. 2017). Bouranta et al. (2017) suggest that for improving hotel performance, it is important for hotel managers to implement TQM practices holistically and systematically which ultimately leads to higher employee satisfaction and hotel performance (Amin et al. 2017). Regarding the relationship between TQM and hotel performance, previous research suggests that hotels experience improved financial performance after TQM implementation (Amin et al. 2017). Benavides-Velasco et al. (2014) investigated the effect of TQM on hotel performance in Spain, and the results of the study showed that TQM plays an important role in increasing hotel performance

(Amin et al. 2017). Wang et al. (2012) revealed that TQM practices significantly affect both hotel financial performance and customer satisfaction/perceptions (Amin et al. 2017). More specific to this study, Claver-Cortés et al. (2008) explain that hotels with higher degrees of TQM commitment will obtain a significantly GOPPAR per day (Amin et al. 2017). According to previous analyses, top management should actively promote TQM goals, missions and benefits to increase firm's performance and competitive advantages (Amin et al. 2017). However, managing guest satisfaction in TQM is an arduous task and this can skew/distort the analysis of TQM on the relationship between revenue and profitability. First, travelers have idiosyncratic preferences, and there are many attributes of hospitality services for which customers disagree about their desirability (Becerra et al. 2013; Silva 2015; Neirotti et al. 2016). When managers analyze and react to online reviews in this specific task of TQM, managers and analysts must know that travelers with different preferences may thus express disagreement about some attributes of the lodging services they have purchased (Neirotti et al. 2016).

Chi and Gursoy (2009) find an indirect relationship between employee satisfaction and financial performance, which is mediated by customer satisfaction (Sainaghi 2010). Previous research shows that employee satisfaction plays an important role in enhancing financial performance (Gursoy and Swanger 2007; Chi and Gursoy 2009; DiPietro et al. 2014). A noticeable difference in QM among the scales exists in the form of incentives. A survey conducted by Hotelcorp indicated that in the 1990s other hotel chains had implemented incentive programs for their senior managers based on profit levels and on nonfinancial measures, such as quality of rooms and food, safety, guest satisfaction, and employee satisfaction thus a practical relationship between

property-level financial and nonfinancial performance exists from a managerial perspective (Banker et. al 2005). The incentive programs at major hotel chains differed in target setting, bonus-pool creation, maximum bonus as a percentage of salary, and weights placed on financial and nonfinancial performance measures; however, all of them emphasized nonfinancial measures (Banker et. al 2005).

Banker et al. (2005) found that the implementation of an incentive plan and its impact on customer satisfaction can affect financial performance either indirectly by improving nonfinancial performance measures, which then affect financial performance, or directly through enhanced cost efficiency or value-added activities. Implementation of an incentive plan based on customer satisfaction-oriented nonfinancial measures increases customer service activities and, consequently, installing such a plan is likely to increase customer satisfaction (Banker et. al 2005). Banker et al. (2005) found an estimated TRevPAR increase of \$1.56 in the incentive plan model; the impact of incentive plan changes on GOPPAR estimated at approximately \$1.00 per available room. The emphasis on customer satisfaction can lead to improved overall brand-name reputation and increased profitability for the whole chain (Banker et. al 2005).

Furthermore, the rationale for profitability is that the firm chooses to forgo short-term profits in exchange for increasing satisfaction among its more loyal clientele, thereby leading to greater longer-term profitability (Dacko 2008). Also, Banker et. al (2005) examined the growth in the available number of rooms under the Hotelcorp brand name after controlling for the overall industry growth as measured by the number of rooms added in a year by the upscale and midscale hotel chains in the United States. In addition, they examined the growth in annual revenues generated by all Hotelcorp hotels relative to

annual revenues generated by the upscale and midscale hotel chains in the United States (Banker et al. 2005). Total revenues increased more for Hotelcorp than for its competitors following the implementation of its new incentive plan (Banker et al. 2005). This finding provides further rationale for the use of customer satisfaction measures and the impact on financial performance evaluation among service levels (Banker et. al 2005). These results show that there is a relationship between chain-affiliation and service level on revenue and profitability through nonfinancial performance measures thereby furthering the need to analyzing the effects on the relationship strength between revenue and profitability because of the qualitative and quantitative characteristics of these variables.

This analysis of Hotelcorp leads to the discussion of branding impact on each service level and how brand affiliation affects financial performance at each service level. While the link between brand and guest satisfaction had been well established, brand names are also relevant to hotel revenue, profit, pricing and return on investment (O'Neill and Mattila 2010; Xiao et al. 2012). Brand affiliation has shown a consistently larger impact on both revenue and profit than location and operator (Xiao et al. 2012). A study by Kim et al. (2003) on 12 upscale hotel brands revealed that a strong brand can contribute to hotel RevPAR through increased brand image, brand awareness, perceived quality, and brand loyalty (Xiao et al. 2012). These effects even extend to marketing expenditures where marketing is usually a more enhanced effort and support operation among higher scale hotels.

Arguing that advertising can enhance brand name and hotel recognition, O'Neill et al. (2008) detected a positive effect of marketing expenses on room revenue for nearly all categories of US hotels except for economy properties (Chen 2015). More

specifically, O'Neill et al. (2008) investigated whether there are significant differences in the relationship between sales and marketing expenditures and hotel performance for properties in the different hotel segments. Following is the breakdown of the results found by O'Neill et al. (2008) when they examined the relationship between hotel revenue and profitability among each service level:

- **Luxury Hotels: (Revenues and Marketing Expenditures)** For the luxury chain scale segment, the number of guest rooms was a significant, positive predictor of room revenue. After controlling for this factor, they also found significant positive relationships between room revenue and both marketing payroll and other marketing expenses. Interestingly, there was no significant relationship between franchise fees and room revenue (after controlling for ADR) for luxury hotels. Other marketing expenses generated the highest beta weight, indicating it had the relatively highest correlation with room revenue (higher than marketing payroll and franchise fees).

(Profitability – measured in NOI – and Marketing Expenditures) For luxury hotels, there was a significant and positive relationship between other marketing expenses and NOI after controlling for the number of guest rooms. There was also a significant positive relationship between marketing payroll and NOI, but no significant relationship between franchise fees and NOI. As with the room revenue analysis, other marketing expenses had the highest beta coefficient for luxury hotels (after controlling for ADR), indicating it had the relatively highest correlation with NOI (higher than marketing payroll and franchise fees).

- Upper Upscale: (Revenues and Marketing Expenditures) For upper upscale hotels, results were similar to those of luxury hotels. The number of guest rooms was once again a significant, positive predictor of room revenue. They found significant positive relationships between both marketing payroll and other marketing expenses and room revenue. They found no significant relationship between franchise fees and room revenue (after controlling for ADR).

(Profitability and Marketing Expenditures) For upper upscale hotels, there was a significant and positive relationship between other marketing expenses and NOI. There was also a significant positive relationship between marketing payroll and NOI, but no significant relationship between franchise fees and NOI.

- Upscale: (Revenues and Marketing Expenditures) Franchise fees appeared as a significant factor for upscale hotels. Other than that finding, results for upscale chains were similar to those of upper upscale hotels. The significant, positive relationship between franchise fees and room revenue stands in contrast to the finding of no significant relationship between marketing payroll and room revenue for hotels in this tier. However, other marketing expenses still generated the highest beta weight, indicating that it had the relatively highest correlation with room revenue.

(Profitability and Marketing Expenditures) The results for upscale hotels were similar to those of luxury and upper upscale hotels, except that the relationship between marketing payroll and NOI was negative. There was also

a weak significant relationship between franchise fees and NOI, indicating that unlike luxury and upper upscale hotels, franchise fee expenditures are associated with increased hotel profit. Other marketing expenditures had the highest beta coefficient.

- Upper Midscale: (Revenues and Marketing Expenditures) For upper midscale hotels, all marketing expenditures were significantly and positively correlated with room revenue, although the standardized beta coefficient for other marketing expenses was only .423. However, other marketing expenses still showed a higher beta coefficient than did marketing payroll (standardized B = .298) and franchise fees (standardized B = .075).

(Profitability and Marketing Expenditures) For upper midscale hotels, results were like upscale hotels, including that other marketing expenses had the highest beta coefficient, while marketing payroll and franchise fees also had a significant effect on NOI.

- Midscale: (Revenues and Marketing Expenditures) For midscale hotels, results were like those of upscale hotels, although the standardized beta coefficient for other marketing expenses again was small, at .362, and the beta coefficient for franchise fees was also small, at only .332.

(Profitability and Marketing Expenditures) For midscale hotels, results were similar to those for upscale and midscale hotels with F&B, including that other marketing expenditures had the highest beta coefficient.

- Economy: (Revenues and Marketing Expenditures) For economy hotels, there was no significant relationship between franchise fees and room revenue.

Furthermore, there was a significant and negative relationship between other marketing expenses and room revenue (standardized $B = -.225$) but an insignificant positive relationship between marketing payroll and room revenue. Other marketing expenses had the highest beta. As was also true of the other hotel tiers, there was a significant, positive relationship between the number of guest rooms and room revenue (standardized $B = .581$).

(Profitability and Marketing Expenditures) Economy hotels, in contrast, showed a significant and negative relationship between other marketing expenses and NOI. There was no significant relationship between franchise fees and NOI or between marketing payroll and NOI. These results show that economy, upper upscale, and luxury hotels behave differently than other chain scale segments regarding marketing expenditures. These hotel types may not benefit from hotel branding in the same way as do hotels in the vast midmarket. This finding is consistent with previous research showing that brand is a significant predictor of market value for hotels in the upscale and midscale tiers, regardless of whether the hotels have food and beverage operations. This is not the case, however, for brands of luxury and economy properties. In other words, franchise branding appears to have more influence on profit in the tangle of the middle of the hotel market.

To summarize the results from O'Neill et al. (2008):

- Higher other marketing expenses are consistent with higher room revenue except for economy hotels.
- There is a significant and positive relationship between marketing payroll and room revenue for the luxury, upper upscale, and upper midscale chain scale segments. For these segments, higher marketing payroll is consistent with higher room revenue.
- There is a significant and positive relationship between franchise fees and room revenue for the upscale, upper midscale, and midscale chain scale segments. Higher franchise fees are consistent with higher room revenue for these three chain scale segments.
- Higher other marketing expenditures are consistent with lower room revenue for economy hotels.
- There is a significant and positive relationship between other marketing expenditures and NOI for the following segments: luxury, upper upscale, upscale, upper midscale, and midscale hotels. For these tiers, higher amount of other marketing expenditures is consistent with higher NOI.
- There is a significant but negative relationship between marketing payroll and NOI for economy hotels. Thus, higher marketing payroll is correlated with lower NOI for this service level.
- There is a significant and positive relationship between franchise fees and NOI for upscale, upper midscale, and midscale. For these properties, higher franchise fees are consistent with higher NOI. (O'Neill et al. 2008)

Now, what happens to revenue and profitability when a hotel decides to rebrand and move down-scale or up-scale? Tsai et al. (2015) analyzed the effects of converted hotels before and after between 1994 and 2012 and found a 6.3% increase in occupancy rates for converted hotels overall. More intriguingly, the other performance measures—total revenue, ADR, RevPAR and GOPPAR also significantly increased (Tsai et al. 2015). For franchised hotels that converted during the period 1996 through 2010, there was an increase in average RevPAR of 4.43%, and an increase in GOPPAR of 2.85% (Dev 2015). Hotels that converted realized an average increase of \$163,000 in gross operating profit (Dev 2015). However, results suggested that moving upscale in price tier may be problematic, whereas a shift from a higher price tier to a lower one is more likely to improve the hotel's performance (Dev 2015). When a hotel converted to a higher price tier, it experienced a 6% increase in RevPAR, while a hotel that converted to a lower price tier experienced an 11% increase in occupancy (Dev 2015). Upscale and luxury brand conversions exhibited higher RevPAR but not higher occupancy rates, while economy brand and midscale brand conversions both exhibited significantly higher occupancy rates than upscale and luxury brands (Dev 2015). These differences in RevPAR and occupancy rates among brand conversions supplement the notion of investigating the relationship between RevPAR and GOPPAR among service levels with brand being one defining characteristic among several defining characteristics. More toward the service aspect, even though a downscale move implies less service and fewer amenities, a given property probably will still have some services or physical attributes left over from the higher tier brand, leading to greater guest satisfaction in the downscale version of the hotel (Dev 2015). Conversely, an upscale switch will create higher

expectations in guests that the former midscale property may be unable to meet, at least in the short term; an upscale shift might also cause confusion about a hotel's market positioning, perhaps lowering previously strong evaluations (Kim and Lavack 1996; Dev 2015).

However, pricing is a fickle matter among the higher service levels, particularly luxury properties. A potential cause is because properties classified between midscale and luxury have greater flexibility related to price because they have freedom to compete with those properties that are above or below them in related hotel class (Anderson and Lawrence 2014). Although luxury properties with excess capacity might benefit from higher RevPAR in the short run by lowering the price of unsold rooms, lowering the price might negatively impact brand equity (Anderson and Lawrence 2014). Based on previous research, extensive price fluctuations will diminish revenue performance due to the impact of price variability on customer risk and perceptions of brand equity (Swait and Erdem 2002; Aaker 2012; Noone et al. 2013; Enz et al. 2015). Consequently, high star-rating hotels apply price premiums for their superior quality and attract less price sensitive customers, who have a higher willingness to pay for quality (Baker & Crompton 2000; Neirotti et al. 2016). Brands in the upscale or luxury tier have the greatest brand strength as measured by RevPAR but not in terms of occupancy thus showing that discounted pricing does weaken the brand which is more of a hallmark characteristic among the luxury and upper scales (Dev 2015). Midscale properties are constrained in their ability to lower price given their tight margins (Anderson and Lawrence 2014). Midscale properties are also limited in their ability to raise price given that competition with higher-class properties requires a greater selection of amenities (Anderson and

Lawrence 2014). In summary, brand strength and tactical pricing significantly impact RevPAR; however, service level determines the sensitivity of the relationship between pricing and brand thus affecting RevPAR. Thus, it is important to recognize that pricing approaches and brand affiliation significantly affect revenue and profitability but neither variable fully depict an impact on the relationship between RevPAR and GOPPAR. Even these relationships are not reflective of the whole industry and must be examined at each service level. In conclusion, pricing strategies and brand affiliation will be included as important characteristics of each service level and will not serve as mediating/moderating variables in this study. Rather, these analyses will reflect the impact of service level on the relationship between RevPAR and GOPPAR by further presenting information depicting revenue and profitability analyses where service level serves as an independent/mediating/moderating variable.

Yet, it is important to remember that nonfinancial performance measures are not a total indicator of financial performance (Banker et al. 2005); therefore, this study will only identify the nonfinancial performance characteristics of the service levels and their effects on revenue and profitability rather than classifying nonfinancial performance as a separate relationship variable. They will be used as characteristics/variables among the scales as well as affiliation rather variables for the relationship between RevPAR and GOPPAR. Not only are nonfinancial performance measures not a total indicator of financial performance, but the term nonfinancial performance itself can encompass a litany of variables which means there is no consensus on a definition and measurement of the term. Therefore, nonfinancial performance will be used in this capacity which means that scale will henceforth be termed as service level to reflect the importance of

nonfinancial performance characteristics and the differences among each scale that reflect perceptions from all angles (including guests). Related to the previous stance on nonfinancial performance measures, the sample size for this study is too large to encompass nonfinancial performance as a moderating variable due to time and labor constraints. Restated, the study hones on the effects of affiliation and service level as determiners of strength of the correlation between RevPAR and GOPPAR and nonfinancial performance measures are solely characteristics for the variables. However, the importance of nonfinancial performance measurement and its impact on revenue and profitability must be acknowledged in examining the relationship of RevPAR and GOPPAR due to the measures and characteristics playing a vital role in determining hotel service level.

A plethora of previous research exists on RevPAR performance revenue relationships among the service levels. Extensive performance analyses exist that depict relationships between competitive set placement and property revenue/profitability figures with service level as an important variable. Enz et al. (2009) investigated the relationship between RevPAR performance and competitive set pricing comparisons in competitive sets before the 2008 Financial Crisis. The findings revealed a pattern of relationships connecting competitive price differences with the comparisons of occupancy levels and RevPAR performance (Enz et al. 2009). Results showed that upscale and upper upscale hotels that priced within 2% of their competitive set (whether above or below) are quite similar in their RevPAR and occupancy performance (Enz et al. 2009). Luxury hotels fared better by pricing 2 to 5% above their competitors, in that the occupancy loss (at 0.49%) is smaller than when pricing less than 2% above the

competition, and RevPAR performance is 3.00% above competitors (Enz et al. 2009). Economy hotels that price above their competitors lose occupancy but gain modest RevPAR benefits (Enz et al. 2009). Midscale hotels without food and beverage that price above the competition appear to have the most dramatic RevPAR benefits of the lower-segmented hotels; in contrast, midscale hotels with food and beverage have the largest RevPAR losses when they price below the competition (Enz et al. 2009). Lower occupancies and higher RevPAR's are the norm for hotels that price above their competition in midscale and economy segments (Enz et al. 2009). This study displays in-depth a relationship with RevPAR performance among each service level thus providing an insight onto service level and competitive sets' impact on benchmarking and financial performance via associated pricing strategies. However, this study did not examine the impact of competitive price positions on costs and income thereby expressing the need to examine pricing strategies on profitability (Enz et al. 2009).

Obviously and operationally, each service level is also defined by price points which is average rates for hotels in their respective service level. One aspect of mediating price points is analyzing the effects of guest satisfaction primarily through online reviews. This aspect wholeheartedly depicts the relationship between pricing strategies, TQM and revenue/profitability. Online reviews and associated management responses are a form of customer relationship management which is arguably the most vital characteristic of TQM (Gu and Ye 2014; De Pelsmacker et al. 2018). When analyzing online reviews' relationship with hotel financial performance via RevPAR, luxury and midscale properties have less pricing power than other hotel classes, resulting in different strategies related to maximizing RevPAR (Anderson and Lawrence 2014). Therefore,

empirical results exist that prove pricing strategies affect the relationship between RevPAR and GOPPAR. Overall, service level moderates the relationship between electronic word-of-mouth and sales performance (Blal and Sturman 2014). Depending on service level, sales performance, measured in terms of RevPAR, would be sensitive to the score and the number of reviews (Blal and Sturman 2014). Anderson and Lawrence (2014) found that the RevPAR impacts of WOM (word-of-mouth) decrease as properties move up in hotel service level (from midscale to luxury). Interestingly, for luxury and midscale properties, the impact of electronic-WOM via online reviews on RevPAR is driven less by price management and more from occupancy thus showing different maximization approaches among those scales; this result also shows that pricing strategies based on online reviews as a proxy for customer satisfaction and its effect on RevPAR is non-linear among service levels (Anderson and Lawrence 2014). Previous research also shows the impact of review valence on performance is greater for higher-end hotels than for lower-end hotels, while the effects of the amount of online reviews on sales performance across segments are in the opposite direction of valence (Blal and Sturman 2014). For economy hotels, there is no significant effect from the amount of online reviews and their ratings (Blal and Sturman 2014).

Scale does significantly affect the relationship between RevPAR and GOPPAR; more specifically, the higher (more luxurious) the scale (used reverse scale) of the hotel, the lower the correlation of RevPAR and GOPPAR (Schwartz et al. 2017). More specifically, the results of a robustness test (0.79 - Luxury, 0.87 – Upper Upscale, 0.94 - Upscale, 0.88 – Upper Midscale, 0.91 - Midscale and 0.96 - Economy, for Scales 1 through 6, respectively) provide support to the notion that the strength of the correlation

between RevPAR and GOPPAR declines with more luxurious (lower-scale) hotels; the sole exception is Scale 3 where the correlation is higher than Scales 4 and 5 (Schwartz et al. 2017).

This study will extend the investigation of examining the relationship among each individual scale and determine if scale is a significant mediating variable for the relationship between RevPAR and GOPPAR. More specifically, this study will determine the most efficient benchmarking option for each scale and the factors that influence the determiner level.

CHAPTER 3

METHODOLOGY

3.1 DATA/SAMPLE

The sample of firms will be collected from data provided by STR Global, Inc. STR benchmarks daily, weekly, monthly and yearly hotel performance figures in 16 countries throughout North America, Europe and the Asia-Pacific region (STR 2018). STR's data set provides RevPAR figures for all hotels but selectively reports GOPPAR for hotels only within the United States and this is completely up to the property's discretion. Due to the selective reporting of GOPPAR, STR's data set provides profit-and-loss statements for 1887 hotels from 2012 to 2017. The data set from STR will show multiple revenue and expense accounts in addition to payroll, taxes, fees and profit exactly like the foundation article by Schwartz et al. (2017). STR abides by the standard definitions of the Uniform System of Accounts for the Lodging Industry (AH&LA 2018). These standards follow the Generally Accepted Accounting Principles (GAAP) to ensure fair and consistent reporting among all properties. For each property, STR provides a unique hotel identification number to protect the identity of properties, number of rooms, scale of the property, and revenue and expense-related variables.

This analysis aligns service level with each of STR's chain scales which are as follows: luxury, upper upscale, upscale, upper midscale, and midscale. Economy service level was excluded from the data set due to the lack of reporting among U.S. economy

hotels for GOPPAR. Also, STR provides a separate chain scale for independent hotels. STR places hotels into their respective chain scales based primarily on actual average room rates (STR 2019).

3.2 METHODS

The empirical analysis of this thesis will examine the relationship between RevPAR and GOPPAR and determine whether service levels and/or chain-affiliation or lack thereof determines the strength of the relationship between RevPAR and GOPPAR. The relationship between RevPAR and GOPPAR will be measured using Pearson's product-moment coefficient. This relationship will be calculated using the entire data set of 1887 hotels/6 total years. This data received from STR is total aggregated data among the respective service levels/chain scales.

RevPAR and GOPPAR are the Dependent Variables of this study. In addition, the study examines the effects of Service Level and Property Affiliation on RevPAR and GOPPAR. The study will calculate correlation using $n=6$ pairs of RevPAR and GOPPAR observations where n corresponds to the amount of years observed.

RevPAR values will be acquired straight from the STR data set and GOPPAR (which abides by the STR formula) will also be acquired from the selective data set; therefore, this study will only focus on American hotels due to the exclusivity of GOPPAR benchmarking to STR.

The equations for RevPAR and GOPPAR are as follows:

1. RevPAR: Total Revenue/Room Supply OR $ADR * Occupancy$
2. GOPPAR: $(Revenue - Departmental Expenses - Undistributed Operating Expenses) / Room Supply$

The Independent Variables (IV) are two-fold in this study: 1. Property affiliation and 2. Service level.

3.3 PLANNED ANALYSIS

Overall, the empirical analysis will focus on whether service level and affiliation or lack thereof affect the level of strength between RevPAR and GOPPAR which are the main proxies for hotel revenue and profitability respectively. The analysis will also see if both property affiliation and service level are exclusively related to RevPAR and GOPPAR.

Descriptive Statistics will display the averages and empirical characteristics of the variables involved in this analysis. For all research questions, correlational analyses will show what characteristics affect the relationship between hotel revenue and profitability via RevPAR and GOPPAR. The data will show what strengthens or reduces the strength of this relationship depending on significance of an analysis of variance between RevPAR, GOPPAR and the Independent Variables. The conclusion will involve managerial/practical implications and further research gaps for future lodging revenue and profitability studies.

CHAPTER 4

ANALYSIS/DISCUSSION

4.1 DESCRIPTIVE STATISTICS

The mean number of rooms of each service level by year is 94,209.47. The mean number of rooms for independent levels by each year is 11,764.50. The mean number of properties for each service level by year is 366.20. There were 56 independent properties that reported each year to STR.

The mean number of rooms for Midscale hotels by year is 17,160.67. The mean number of rooms for Upper Midscale hotels by year is 34,803.67. The mean number of rooms for Upscale hotels by year is 116,817.33. The mean number of rooms for Upper Upscale hotels by year is 254,345.17. The mean number of rooms for Luxury hotels by year is 47,920.50.

The number of properties for Midscale reported each year in the data set is 130. The number of properties for Upper Midscale reported each year in the data set is 306. The number of properties for Upscale reported each year in the data set is 732. The number of properties for Upper Upscale reported each year in the data set is 545. The number of properties for Luxury reported each year in the data set is 118.

The mean RevPAR for Property-affiliated hotels for each year is \$122.35 and the mean GOPPAR for each year is \$62.63. The mean RevPAR for RevPAR for Independent hotels each year is \$138.37 and the mean GOPPAR is \$71.10. The mean RevPAR for

Midscale hotels for each year is \$59.51 and the mean GOPPAR is \$28.69. The mean RevPAR for Upper Midscale hotels for each year is \$83.12 and the mean GOPPAR is \$35.74. The mean RevPAR for Upscale hotels for each year is \$99.65 and the mean GOPPAR is \$50.31. The mean RevPAR for Upper Upscale hotels for each year is \$135.42 and the mean GOPPAR is \$75.93. The mean RevPAR for Luxury hotels for each year is \$234.07 and the mean GOPPAR is \$122.49.

4.2 INFERENTIAL STATISTICS

Table 4.1 – Test of Normality

	Hotel Service Level	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Mean RevPAR by Year	Independent	.225	6	.200*	.876	6	.252
	Lower Midscale	.254	6	.200*	.854	6	.169
	Upper Midscale	.253	6	.200*	.862	6	.196
	Upscale	.220	6	.200*	.905	6	.405
	Upper Upscale	.205	6	.200*	.924	6	.537
	Luxury	.215	6	.200*	.925	6	.540
Mean GOPPAR by Year	Independent	.190	6	.200*	.897	6	.354
	Lower Midscale	.254	6	.200*	.881	6	.275
	Upper Midscale	.220	6	.200*	.879	6	.264
	Upscale	.255	6	.200*	.858	6	.183
	Upper Upscale	.220	6	.200*	.900	6	.372
	Luxury	.248	6	.200*	.848	6	.150

The table above shows that the aggregated data is a normal distribution because the p-value in each category for the Kolmogorov-Smirnov test is greater than .05 (all values are .200).

An independent sample t-test was conducted to determine if property affiliation is significantly related to RevPAR and GOPPAR exclusively. Both p-values were greater than .05 (p(RevPAR): .195, t(RevPAR): -1.323; p(GOPPAR): .243, t(GOPPAR): -1.188) showing that Property Affiliation is not significantly related to RevPAR and GOPPAR exclusively.

One-way ANOVA was conducted to see if Service Level is significantly related to RevPAR and GOPPAR. Both p-values were less than .05 (p(RevPAR): .000, F(RevPAR): 254.556; (p(GOPPAR): .000, F(GOPPAR): 139.787) showing that Service Level is significantly related to RevPAR and GOPPAR.

Since the relationships are significant, a Tukey's post-hoc test was conducted showing effects. In terms of RevPAR, Midscale possessed significant difference from every other Service Level (p-values: Upper Midscale = .005, All Other Service Levels = .000). Upper Midscale possessed significant difference from every other Service Level besides Upscale (p-values: Upscale = .077, Midscale = .005, All Other Service Levels = .000). Upscale possessed significant difference from every other Service Level besides Upper Midscale (p-values: Upper Midscale = .077, All Other Service Levels = .000). Lastly, Upper Upscale and Luxury possessed significant difference from every other Service Level in their respective post-hoc results (all p-values = .000).

In terms of GOPPAR, Midscale possessed significant difference from every other Service Level besides Upper Midscale (p-values: Upper Midscale = .542, Upscale = .001,

Upper Upscale/Luxury = .000). Upper Midscale possessed significant difference from every other Service Level besides Midscale (p-values: Midscale = .542, Upscale = .028, Upper Upscale/Luxury = .000). Upscale possessed significant difference from every other Service Level (p-values: Midscale = .001, Upper Midscale = .028, Upper Upscale/Luxury = .000). Lastly, Upper Upscale and Luxury possessed significant difference from every other Service Level in their respective post-hoc results (all p-values = .000).

Table 4.2 – Correlation between RevPAR and GOPPAR for Each Year

	2012	2013	2014	2015	2016	2017
Correlation	.994 (p = .000)	.994 (p = .000)	.994 (p = .000)	.995 (p = .000)	.993 (p = .000)	.993 (p = .000)

According to this correlational analysis, RevPAR and GOPPAR produces an extremely high correlation for each year in the data set confirming Schwartz's et al. (2017) research that RevPAR and GOPPAR originally have an extremely strong correlation.

Table 4.3 – Correlation between RevPAR and GOPPAR for Affiliation

	Independent	Chain-Affiliated
Correlation	.992	.991

There remains a high correlation between RevPAR and GOPPAR among Independent and Chain-Affiliated hotels.

Table 4.4 – Correlation between RevPAR and GOPPAR for Each Service Level

	Midscale	Upper Midscale	Upscale	Upper Upscale	Luxury
Correlation	.941 (p = .005)	.980 (p = .001)	.997 (p = .000)	.999 (p = .000)	.989 (p = .000)

Among each service level, a high correlation remains between RevPAR and GOPPAR according to this data set. However, the lowest correlation exists among

Midscale without Food and Beverage (.941) while the highest correlation exists among Upper Upscale (.999).

Furthermore, ANCOVA was conducted among Property Affiliation and Service Levels to see differences in RevPAR and GOPPAR performance each year from 2012 to 2017. There was no statistically significant difference between Property Affiliation on both RevPAR and GOPPAR after controlling for year ($F: .208$; $p\text{-value} > .05$, .813).

There was a statistically significant difference between Service Level on both RevPAR and GOPPAR after controlling for year ($F: 283.784$; $p\text{-value} < .05$, .000). Since there was a significant effect, a pairwise comparison was conducted to display specific interaction effects (Independents are included). RevPAR performance for Independents was significantly different from every service level besides Upper Upscale year-to-year ($p\text{-value}: 1.00$). Midscale, Upper Midscale, Upscale and Luxury all possessed significant differences in RevPAR performance from every other service level from year-to-year. RevPAR performance for Upper Upscale was significantly different from every other service level besides Independents ($p\text{-value}: 1.00$).

GOPPAR performance for Independents was significantly different from every service level besides Upper Upscale ($p\text{-value}: 1.00$). GOPPAR performance for Midscale was significantly different from every service level besides Upper Midscale ($p\text{-value}: .196$). GOPPAR performance for Upper Midscale was significantly different from every service level besides Midscale. GOPPAR performance for Upscale was significantly different from every service level. GOPPAR performance for Upper Upscale was

significantly different from every service level besides Independents. Lastly, GOPPAR performance for Luxury was significantly different from every service level.

Lastly, Multivariate ANOVA could not be performed due to the issue of multicollinearity because of an extremely high correlation between RevPAR and GOPPAR.

CHAPTER 5

CONCLUSION

5.1 SUMMARY OF RESULTS

Results showed that property affiliation does not significantly affect RevPAR and GOPPAR performance. What matters most though is service level. Therefore, property affiliation should not be factored into optimization and maximization strategies. Hotel managers should rather focus on their service level and primarily their brand through a service level and delivery focus. Even though previous literature shows that more effective performance analysis exists for chain-affiliated hotels rather than independents, affiliation should not be considered a factor in forming optimization and maximization strategies. In more practical terms, hotel managers and revenue analysts should let their Service Level dictate revenue and profitability maximization strategies.

The time-trend analysis for the correlation between RevPAR and GOPPAR did show an extremely high correlation between the two variables but the exact values did fluctuate (minimum: .993, maximum: .995). The fluctuation is a product of inflation, changes in pricing strategies, reporting issues among other internal and external environmental factors. Hotel managers must formulate strategies that allow for adjustments from year-to-year for their respective optimization and maximization strategies. The time-trend analysis helps confirm that revenue management is adapting to a more strategic approach.

Unlike the results from Schwartz et al. (2017), Lower Midscale possessed the least strong relationship between RevPAR and GOPPAR at .941 while Upper Upscale possessed the strongest correlation at .999. For a 6-year period from 2006 – 2011 for 1000 hotels, Schwartz et al. (2017) reported the following correlations for each Service Level: Luxury (.79), Upper Upscale (.87), Upscale (.94), Upper Midscale (.88), and Midscale (.91). The results from this study shows that overall the relationship between RevPAR and GOPPAR has become stronger in the period 2012 – 2017. The discrepancy is most likely a result of economic performance due to the Recession of 2008. Therefore, further research needs to address the impact of external environment on RevPAR and GOPPAR performance in the lodging industry.

Managers of Lower Midscale hotels must analyze the time trends of RevPAR and GOPPAR and know that this service level may move RevPAR and GOPPAR in opposite directions thus showing that revenue is not a total proxy for profitability. Therefore, according to this data, Lower Midscale managers must be more thorough in developing strategies for revenue and profitability maximization. This distortion in the relationship is possibly a cause of less extensive cost controls due to financial management standards of Midscale hotels. In addition, this could be a result of contemporary spending patterns due to the difference of the economic environment in this data set compared to the time period of the data set of Schwartz et al. (2017).

Also of particular notice is the difference of performance for Upper Midscale hotels in RevPAR and GOPPAR performance compared to other Service Levels. To summarize, in terms of RevPAR, Upper Midscale hotels act more like Upscale hotels while, in terms of GOPPAR, Upper Midscale hotels act more like Midscale hotels. This

means that Upper Midscale hotel revenue behaves closer to Upscale hotels while their Gross Profit Margins behave more similar to Lower Midscale hotels; this result signifies that revenue and profitability optimization strategies do not fully align with each other and managers plus owners must pay closer attention to revenue and profitability behavior and adjust strategies according to their respective strategic goals.

Lastly, Upscale Upper Upscale hotel managers can be more confident in revenue maximization strategies generating maximum profitability according to this data set; however, upper upscale managers should still be wary of Total Hotel Revenue Management and ancillary revenue/profitability management due to their usual number of ancillary streams and increased service delivery and quality. Future research should also address newfound issues in Midscale hotels that skew the relationship between RevPAR and GOPPAR. In addition, Luxury property managers and owners must maintain their extensive monitoring of revenue and profitability because of their access to resources which produces more extensive financial management in accordance with the THRM shift.

5.2 FUTURE RESEARCH

Major new ideas for future industry and academic research emerged from this analysis. The first major research gap discovered in the literature review was the validity of nonfinancial and financial performance benchmarking. Future research should further analyze the validity of RevPAR and GOPPAR as the discipline of revenue management rapidly evolves. Also, future research should further address the validity of traditional

financial measures (i.e. liquidity ratios, GOP, EBITDA, etc.) and their level of relevance within the contemporary lodging industry.

The next issue that future research should examine is the effects of contemporary branding and pricing strategies on hotel revenue and profitability. As discussed briefly in the literature review, pricing is changing from a tactical to a strategic perspective; dynamic pricing is not as prevalent as it once was. Future research needs to examine this change and the effects on RevPAR and GOPPAR and their relationship. Future research should also examine the tangible and intangible aspects of contemporary branding strategies and their effects on hotel revenue and profitability.

Another prevalent issue discovered in the literature review was the presence of Total Quality Management and its impact on the lodging industry including the impact on revenue and profitability. Future research should examine the impact of Total Quality Management on the relationship between lodging revenue and profitability; TQM would serve as a great internal management proxy for management's impact on hotel bottom-line performance.

Future research should also address specific types of hotels (i.e. Boutique, Convention, Resorts, etc.) to see how types of hotels differ in RevPAR and GOPPAR performance which would also analyze how the different types of hotels affect the relationship between RevPAR and GOPPAR. This proposed research gap then calls into question the total validity of STR's scale/service level division. As mentioned above, STR divides the scales according to average room rates. Further research, both academic and industry, should analyze whether this is the most effective method of scale division or if STR should update and/or totally develop a new method of scale division. Also, this

further research should address if the reporting protocols of STR affect the analysis of RevPAR and GOPPAR performance in the lodging industry.

In addition, further research needs to address the impact of the external environment and more specifically economic impact on RevPAR and GOPPAR performance. According to these results and the limited literature, future academic and industry analyses must focus on the economic impact of the lodging industry and more specifically delve deep into the impacts on hotel bottom-line performance as well as nonfinancial lodging firm performance because of the importance now of both extensive benchmarking standards.

Lastly, future research needs to address the presence and evolution of alternative benchmarks within the lodging industry such as TrevPAR, revenue per available square foot, among several others. Future research should examine the time and place where these alternative benchmarks would be appropriate as well as analyze the evolution of these benchmarks.

5.3 RESEARCH LIMITATIONS

The largest research limitation in this study was the sample size of the data set ($N = 1887$ properties divided each year for the period 2012-2017; data was observed in aggregated form by year). GOPPAR is only a selective measure that many hotels are selective to report to STR and that is if it is even monitored by the property which, as discussed in the literature, is an extensive issue because of labor involved; also, for the public hotel organizations, investors are extremely wary of revealing profitability due to investment risk and other factors. More observations would produce a better snapshot of

the lodging industry and profitability performance to show a better view of the relationship between revenue and profitability throughout the lodging industry.

Lastly, other research limitations included lack of analysis regarding external environmental characteristics, ancillary revenue's effects on RevPAR and GOPPAR performance and lack of analysis regarding specific characteristics of lodging firms (i.e. location, size, number of employees, etc.) Future research should also address these specific issues to see if there are more detailed influences on RevPAR and GOPPAR performance as well as their correlation.

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