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Predicting Lodging Manager Annual Salary Based on Metropolitan Statistical Area Attributes and Lodging Industry Performance: Exploring the Concept

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Predicting Lodging Manager Annual Salary Based on Metropolitan Statistical Area Attributes and Lodging Industry Performance: Exploring the Concept

Abstract
Using multiple regression analysis, lodging managers’ annual mean salaries in 143 Metropolitan Statistical Areas (MSA) within the U.S. were analyzed to identify what relationships existed with variables related to general MSA characteristics, along with the lodging industry’s size and performance. By examining the relationship between these variables, the authors predict the long-term possibility of predicting lodging industry managers’ salaries. These predictions may have an impact on financial performance of an individual lodging property or organization. Through this paper, this concept was applied and explored within U.S. MSAs. These findings may have value for a variety of stakeholders, including human resources practitioners, the hospitality education community, and individuals considering lodging management careers.

Keywords
Compensation, Lodging, Human Resources, Salary, MSA

This article is available in Hospitality Review: http://digitalcommons.fiu.edu/hospitalityreview/vol31/iss4/5
INTRODUCTION

This analysis, based on results from empirically based research, provides a new and valuable contribution to hospitality industry literature, primarily literature pertaining to the management of human capital (human resources management) and operations within the lodging sector. Through regression analysis, the annual mean salary for the occupation of Lodging Managers in 143 Metropolitan Statistical Areas (MSA) of the U.S. and its territories (Guam, Puerto Rico, and the U.S. Virgin Islands) were analyzed to identify relationships with a series of variables related to lodging industry size, performance, and general MSA characteristics. These salary predictions may have an impact on overall financial performance of an individual lodging property, or an organization as a whole. These findings may have value for a variety of stakeholders, including ownership, industry practitioners, the hospitality education community, and individuals considering careers in the lodging segment of the hospitality industry.

In their 2013 Lodging Industry Profile, the American Hotel & Lodging Association (AH&LA) provides a snapshot of the lodging segment of the hospitality industry. According to the AH&LA, there are 52,259 U.S. lodging properties with more than 15 guest rooms. In 2013, these properties accounted for more than 4.9 million guest rooms, $155.5 billion in sales, and had an average occupancy of 61.4% (AH&LA, 2014). In terms of employment figures, the Bureau of Labor Statistics (BLS) National Employment Matrix, a report that provides a 10-year industry forecast using the years 2010-2020, shows the number of employees increasing from approximately 1.7 million in 2010 to 1.9 million by the year 2020.

The hospitality-specific research related to predicting compensation in the lodging segment is limited, although research pertaining to compensation in general is wide-ranging and contains a complimentary mixture of theoretical and practical results that are of value to both industry and academics. Additionally, no study has looked at predicting lodging manager compensation levels using lodging industry performance, size, and MSA variables on the scale that this study does. By researching this topic in more depth, the results of this research will begin to fill an existing gap in the literature.

According to the BLS, there were 381 MSAs in the U.S. in 2012; this number may fluctuate each year, but changes are not likely to be significant. These MSAs, also referred to as “major urban areas,” differ from their non-metropolitan counterparts in a variety of attributes, the most notable of which are size, population, and overall economic impact. This study looks at BLS data from 143 MSAs in correlation to the 143 MSA performance data available from Smith Travel Research. Therefore, the researchers created a study designed to explore if the mean salary of lodging managers in an MSA can be predicted by, or is at least
related to, the MSA’s Managerial Employee Mean Salary, ADR, Rev Par, Occupancy Percentage, Property Total, and Total Room Inventory.

**REVIEW OF LITERATURE**

This review of applicable literature includes three core sections to lay the foundation and justification for this research. First, an overview of the lodging manager occupation, including the total quantity of U.S. lodging managers, and data on how various states and metropolitan areas contribute to lodging management occupational landscape. Second is a review of applicable compensation literature that defines compensation’s role in recruiting, service level impacts, and employee motivation. Finally is an overview of widely accepted performance indicators for the lodging industry.

**Lodging Managers**

Lodging Manager data was obtained from the Occupational Employment Statistics (OES) survey (BLS, 2012). This survey is available to the public through the U.S. Bureau of Labor Statistics (BLS), and is a semiannual survey that measures occupational employment and compensation rates for wage and salary workers in nonfarm establishments in all 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands. According to the BLS (2012), the job description of a Lodging Manager is as follows: “Plan, direct, or coordinate activities of an organization or department that provides lodging and other accommodations.” While the tasks a specific manager is responsible for may differ depending on a lodging organization’s requirements and the property’s needs, the categorization of Lodging Managers’ responsibilities are established by the federal government, and thus generalizable to the U.S. lodging industry as a whole.

Because the 2013 BLS Lodging Manager data was not available at the time that this study was undertaken, the 2012 data was used. Trade and academic publications have shown only a slight positive change in performance data for the lodging sector in 2013, so the 2012 data is still applicable for presenting implications in 2014. For this research, the term “wages” is adopted from the OES survey and is defined as “straight-time, gross pay, exclusive of premium pay. Base rate; cost-of-living allowances; guaranteed pay; hazardous-duty pay; incentive pay, including commissions and production bonuses; and tips are included” (OES, 2013). Lodging Manager wages do not include overtime pay, severance pay, shift differential pay, non-production bonuses, tuition reimbursement, or the cost incurred by an employer for supplementary benefits.

According to BLS, there were 50,400 U.S. lodging managers in 2012; the mean hourly wage for this position was $26.35, and the mean annual salary was $54,800. The state with the most lodging managers was California (4,020), while Delaware was identified as the top paying state with an hourly mean wage of
$42.93 and an annual mean salary of $89,280 (BLS, 2012). At a more granular level, the U.S. Department of Commerce’s Bureau of Economic Analysis identified 381 metropolitan areas in the U.S. (U.S. Department of Commerce, 2013). The Los Angeles, Long Beach, and Glendale, California MSA was found to have the highest concentration of lodging managers with 810 positions. The Bethesda, Rockville, and Frederick, Maryland metropolitan area had both the highest hourly mean wage of $52.80 and annual mean salary of $109,830 (OES, 2012).

**Compensation**

Academic research related to predicting compensation levels of lodging managers is non-existent in hospitality literature. With this in mind, there is still a strong presence of literature pertaining to the management of employee compensation in the lodging sector of the hospitality industry. Though compensation may not be the primary motivator, compensation is an important motivator for employees when making job-related decisions (Rynes, Gerhart, & Minette, 2004). Employee compensation, however, was the most significant factor used to attract hospitality employees in the restaurant segment to switch to a different company (DiPietro & Milman, 2004). Often combinations of factors motivate hospitality employees, including: compensation, job responsibilities, and management interactions, among other reasons.

Kline and Hsieh (2007) determined that pay ranges were higher in operations based on service level and property size, with full-service hotels paying higher wages in comparison to limited-service hotels in California. Pay is potentially a major consideration for hospitality operations of all types when attempting to attract and retain employees and managers. Wages and benefits had a greater influence on U.S. hotel managers when compared to non-managerial employees (Namasivayam, Miao, & Zhao, 2007). When examining hotel employees in China, pay is not the single motivator; instead, pay, along with perceptions of fairness in compensation and procedures of compensation practices, had a motivational effect (Wu, Sturman, & Wang, 2013).

Torres and Adler (2012) identified that lodging executives place an importance on experience and interpersonal skills when determining compensation. Their findings also indicated that lodging organizations should strategically design their compensation system to reach financial, customer satisfaction, and human resource goals. From a list of multiple employee benefits, health insurance was the top benefit and time off was the second most important benefit for all hourly and management lodging employment categories. The researchers also placed a greater emphasis on work-life balance, to help reduce the high lodging employee turnover rate.

Research conducted by Gursoy, Maier, and Chi (2008) indicated that employee motivations may be dependent on the employee’s specific background,
particularly their generational characteristics. The Baby Boomer generation has a “live-to-work” attitude and a need for leadership positions, public recognition, and job security. Unlike the Boomer generation, a member of Generation X works to live, wanting instant gratification, and being impatient for promotions and raises. Like the X-ers, the Millennials are not loyal to an organization and prefer flexible schedules. Work is not a priority for them; family and friends are the priority. A paycheck is primarily to pay rent and a car payment, because most are not old enough for mortgages or a family of their own. Therefore, when creating a compensation plan, employers need a better understanding the needs of the different generations. Modifying their job offer to meet these needs could increase the attractiveness of a lodging manager initial job offer or promotion.

**Lodging Industry Performance Indicators**

Employee productivity, customer satisfaction, market share, and revenue forecasting are the primary indicators that can be ascertained when examining Revenue Per Available Room (RevPAR) of a single hotel property or when comparing a property to its likely competitors (Ismail, Dalbor, & Mills, 2002). Though RevPAR has been a strong indicator of performance commonly utilized in research, other researchers suggest using Average Daily Rates (ADR). By examining hotel properties using ADR, a clearer understanding when comparing hotel properties’ performance is possible (Kim & Canina, 2011). Given the variability of both ADR and RevPAR, hotel comparisons on hotel performance should take place by comparing hotels across cluster competitive groups rather than grouping them by product type (Kim & Canina, 2011). In research, ADR and occupancy percentages often move in a similar direction. When examining guest satisfaction, Mattila and O’Neill (2003) found that guest satisfaction was correlated with ADR. No known research has attempted to identify the impact compensation may have on RevPAR, ADR, and occupancy percentage.

Hotel performance is affected by many factors; some research has shown significant impact by factors related to human resources management besides compensation, including: rewards, turnover, and employee relations. The reward systems hotel organizations have in place have an effect on RevPAR (Namasivayam et al., 2007). Tracey and Hinkin (2006) found hotel operations with higher ADRs, higher number of rooms, and high occupancy, when compared to other hotel properties, showed increases in the costs associated with employee turnover. For Australian hotels, hotel operational performance indicators change when hotels are experiencing high turnover rates in all management positions (Davidson, Timo, & Wang, 2009). Cho and Erdem (2006) reported that RevPAR and employee productivity changes positively by implementing employee relations programs in hotel operations.
METHODOLOGY

The use of secondary data is common in social science academic research; the use of this type of data is increasingly popular (Atkinson & Brandolini, 2001). Secondary data is frequently used to examine research questions not addressed in an original study (Glass, 1976), and is commonly gathered and recorded by a secondary party prior to and for a purpose other than a current project (Zikmund, 2003). Secondary data is used in hospitality literature as well (Ritchie, Crotts, Zehrer, & Volsky, 2014; Thomas, Thomas, Brown, & Kim, 2014; Yoo & Kitterlin, 2012). With this in mind, this study utilized secondary data from two widely respected and validated sources.

Data pertaining to specific Metropolitan Statistical Areas (MSA), including: number of employees, lodging manager mean salary, and overall managerial mean salary, were obtained from the Bureau of Labor Statistics (BLS) Occupational Employment Statistics (OES) survey results. Data related to lodging property operational performance and industry size were obtained through a custom dataset created by Smith Travel Research (STR). STR collects and disseminates lodging industry analytics and is considered a leader by hospitality and tourism industries and academia. The data set obtained for this research contained MSA specific information pertaining to lodging industry size (total number of properties and total number of rooms). Additionally, the data set contained annual averages for the MSAs lodging industry performance (ADR, RevPAR, and Occupancy Percentage).

Variables

For this research, there was one dependent variable, the Lodging Manager mean salary for MSA. There are six independent variables used in this regression analysis. All variables were representative of the 2012 data because the 2013 data was not presently available for analysis.

X1 Average Daily Rate: ADR refers to the average room rate for all lodging properties within a calendar year within a respective MSA.

X2 Managerial Employee Mean Salary for MSA: The OES contains values that indicate the mean salary for all managerial positions in a respective MSA. This variable was used a proxy for other variables more difficult to collect for these specific MSAs, such as cost of living or other variables that may commonly affect all employee pay in an area.

X3 Occupancy Percentage: The values for this variable represent the average occupancy percentage for a respective MSA during a calendar year. Occupancy percentage is calculated by comparing the total number of lodging rooms available and the number of lodging rooms occupied.
**X4 Property Total**: The values for this variable represent the total number of lodging properties in a respective MSA in a calendar.

**X5 Revenue Per Available Room**: RevPAR is calculated by dividing the total number of guest rooms at a lodging property by the room count and the number of days in the period being measured. For the purpose of this research, the period was a calendar year for the respective MSA.

**X6 Room Inventory**: The value represented by the total number of lodging property rooms in a specific MSA during a calendar year.

In order to determine if the average wages of a lodging manager (independent variable Y) within an MSA can be predicted by, or is related to, ADR, managerial employee mean salary for an MSA, occupancy percentage, total number of lodging properties, RevPAR, and total room inventory, the following regression model and corresponding hypotheses were proposed:

\[ y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 \]

H₀: The mean wage of a lodging manager in an MSA cannot be predicted by the ADR, Managerial Employee Mean Salary, Occupancy Percentage, Property Total, RevPAR, and Total Room Inventory.

H₁: The mean wage of a lodging manager in an MSA can be predicted by the ADR, Managerial Employee Mean Salary, Occupancy Percentage, Property Total, RevPAR, and Total Room Inventory.

**RESULTS**

After testing the applicable assumptions, the researchers used SPSS Version 19 for the quantitative analysis. There were 143 out of the 381 MSAs with complete data in both the STR and OES datasets; therefore, the sample size was 143 MSAs. In order to test the hypothesis, the researchers used linear regression with all variables. The regression coefficients and significance test results are available in Table 1. The regression model was found to be significant [F (6,136) = 19.78, p < .001], and therefore the null hypothesis was rejected.
Table 1

Hypothesized model of lodging managers mean wage in an MSA (N = 143)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-6,883.35</td>
<td>-0.27</td>
<td>.788</td>
</tr>
<tr>
<td>MSA Average Daily Rate</td>
<td>480.48</td>
<td>2.11</td>
<td>.037*</td>
</tr>
<tr>
<td>MSA Managerial Mean Salary</td>
<td>0.15</td>
<td>2.25</td>
<td>.026*</td>
</tr>
<tr>
<td>MSA Occupancy</td>
<td>40,877.53</td>
<td>1.03</td>
<td>.305</td>
</tr>
<tr>
<td>MSA Properties</td>
<td>-33.73</td>
<td>-3.99</td>
<td>.000*</td>
</tr>
<tr>
<td>MSA Rev Per Available Rooms</td>
<td>-487.14</td>
<td>-1.39</td>
<td>.165</td>
</tr>
<tr>
<td>MSA Room Inventory</td>
<td>.35</td>
<td>6.18</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Note. $R^2 = .466$
* = Statistically significant

Of the six independent variables, four were statistically significant. These variables included the managerial employee mean salary for the MSA, ADR of the MSA, number of properties in the MSA, and number of rooms in the MSA. The occupancy percentage and RevPAR were not significant in the hypothesized model and were removed from the reduced regression model; the resulting coefficients can be found in Table 2. This model remained a significant predictor of a lodging manager’s mean wage within the MSA [$F(4,138) = 28.94, p < .001$].

Table 2

Significant predictors of lodging managers mean wage in an MSA (N = 143)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>20,899.63</td>
<td>3.290</td>
<td>.001*</td>
</tr>
<tr>
<td>MSA Average Daily Rate</td>
<td>156.93</td>
<td>4.722</td>
<td>.000*</td>
</tr>
<tr>
<td>MSA Managerial Mean Salary</td>
<td>0.16</td>
<td>2.249</td>
<td>.026*</td>
</tr>
<tr>
<td>MSA Properties</td>
<td>-33.99</td>
<td>-4.027</td>
<td>.000*</td>
</tr>
<tr>
<td>MSA Room Inventory</td>
<td>0.35</td>
<td>6.049</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Note. $R^2 = .456$
* = Statistically significant

$$y = 20,899.63 + (156.93 \times X_1) + (0.16 \times X_2) - (33.99 \times X_4) + (0.35 \times X_6)$$

This regression equation indicates that the annual mean salary for a lodging manager for a MSA has an intercept of $20,899.63$ plus $156.93$ multiplied by each dollar of the MSA’s ADR, plus $0.16$ multiplied by the average of all
managerial salaries in the MSA, minus 33.99 multiplied by the number of the MSA’s lodging properties, plus 0.35 multiplied by the MSA’s total room inventory.

DISCUSSION

A factor identified in this study’s regression equation that could increase a lodging manager’s salary is the MSAs ADR ($156.93 multiplied by the MSA’s ADR). This is consistent with the findings of Kline and Hsieh (2007) who identified that lodging pay ranges were higher in operations with a higher ADR. A second factor that indicated a slight increase in a lodging manager’s salary is the MSAs total room inventory ($0.35 multiplied by the MSA’s total room inventory). The one factor in the regression that decreased a lodging manager’s salary was the MSAs lodging properties (-$33.99 multiplied by the number of the lodging properties within that MSA).

Using this formula, rough estimates of a lodging manager’s salary can be calculated in different MSAs throughout the U.S. Because the researchers used all available data to create the equation, no remaining data were available to test. Therefore, the researchers randomly selected El Paso, TX, as an example. The El Paso MSA has an ADR of $73.08, a mean salary of all management positions of $92,060, 63 lodging properties, and 7,452 rooms. This results in an estimated lodging manager’s salary of $47,564.50. The El Paso, TX, MSA lodging manager wage was $50,290 according to the BLS data, which is $2,725.50 higher than estimated with the regression analysis.

Due to the transient nature of hospitality careers, developing a sense of what salaries may be in a specific MSA could be useful for industry practitioners and university academic career advisors. For example, an employee is considering a lodging manager job either in a MSA in California or Florida. The employee could use the variables presented in this research to identify what a potential benchmark salary may be, based on the STR performance and MSA employment data. The researchers recognize this data is available elsewhere, but his research provides a starting point, or a proof of concept, that a potential equation that could predict salary may be possible.

From a human resources department standpoint, this formula could determine a competitive salary to entice individuals to join a lodging property or to develop internal candidates to promote to available lodging manager positions. Pay is potentially a major consideration for hospitality operations of all types when attempting to attract and retain employees and managers (Kline & Hsieh, 2007). Because Torres and Adler (2012) reported that experience and interpersonal skills were important factors to lodging executives, lodging manager candidates with a higher experience level in certain areas could increase the annual salary from the calculated level when determining compensation offered.
The service level of the lodging property may also require a higher salary in comparison to limited service hotels (Kline & Hsieh, 2007), particularly because guest satisfaction has been correlated with ADR (Mattila & O’Neill, 2003).

Determining the annual salary is not the only consideration for determining a competitive compensation system’s design, which is critically important for hospitality organizations (Torres & Adler, 2012). When choosing a compensation strategy, additional attractive employee benefits must be added on top of the compensation level, particularly with U.S. hotel managers (Namasivayam et al., 2007). With health insurance identified as the most important benefit and time off as the second critical benefit for lodging managers (Torres & Adler, 2012), including quality healthcare and an attractive time-off package would create a greater emphasis on work-life balance that multiple generations, such as Gen X and Millennials require (Gursoy, et al. 2008). Designing a salary with an attractive benefit package could be a factor in reducing the high employee turnover rate known to exist within the lodging industry, particularly because Tracey and Hinkin (2006) identified that hotel operations with high ADR and occupancy rates showed increased employee turnover costs. With a strategic compensation plan in place, a lodging organization can attain its multiple goals, including financial, customer satisfaction, and human resources (Torres & Adler, 2012).

Limitations and Future Research

All academic research has limitations and this research is no exception. First, this research looked at 143 of the 381 MSAs within the U.S. While no similar research is available, looking at additional MSAs, as more data becomes available, could enhance the results. Second, this research focused only on MSA data. The BLS recognizes that lodging managers do exist in jobs outside of a MSA, and future research should investigate if the same variables relate to annual mean salary for non-MSA lodging managers. Third, this research looked only at the occupation of lodging manager. Finally, the granularity and predictors within this data was not at the level needed to predict lodging managers’ salaries and therefore the researchers present this analysis and discussion as a starting point for future research and discussion. Because the researchers intended this as a starting point, there were no additional control variables available based on the current methodology. We feel these limitations are inevitable and look forward to future research that can address these limitations.

Future research could examine other managerial and non-managerial positions in lodging properties, as well as other hospitality sectors (i.e. Food and Beverage, Private Clubs) in both MSAs and non-MSAs to validate the best ways to predict compensation levels. In addition, future research could address comparisons of actual lodging manager salaries with the formula derived from this study. Future research could also focus on different regions of the globe,
though data may not be as readily available. These findings would be particularly interesting as research findings indicate that pay is not the single motivator for Chinese hotel employees; instead, pay, along with perceptions of compensation fairness and compensation practices procedures, had a motivational effect (Wu et al., 2013). Having a better understanding of compensation practices can aid practitioners and academics around the globe, with the goal of lodging manager satisfaction and lodging goal success. These salary relationships could affect the overall financial performance of an individual lodging property, or an organization as a whole.

REFERENCES


