

## Service Cost Management in Hospitality Industry: Critical Gaps Analysis

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### Abstract

The main purpose of this research is to finding out the scale and criticality of Internal Control Gaps inherent in service billings, collections and accounting eroding Hospitality Industry specifically in the Middle East. The paper further seeks to investigate the Revenue Centers mostly affected and to make these lapses apparent for the good of hospitality service cost management. Available relevant literatures are reviewed. Questionnaire interview of two hundred and ninety-two Hospitality Workers from one-hundred and forty-six hotels in Kurdistan Region were administered. SPSS software ANOVA and Parameter Analyses are employed to analyze the results with a view of testing formulated hypotheses. The research reveals that there exist differences among Revenue Centers in their levels of criticality to categorized internal control gaps. The Research also finds that while some internal control gaps are critically significant, many others are not significant currently to attract material concerns in Service Cost Management. This research contribution to a new aspect of hospitality management concept and it comes with new concept of Service Cost Management and makes apparent new critical internal control factors that demands significant Hospitality Management attentions in the Middle East.

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**Keywords:** activity based costing, hospitality management, internal control of service firms, kurdistan tourism and hospitality

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### INTRODUCTION

Development of Cities correlates highly with development of Hospitality Industry. The springs of state-of-art hospitality corporate firms comes with complex service cost management challenges. The concept of Service Cost Management relates to continuous improvement of quality of services provided, the cost-benefit weighting by Hoteliers of service provisions and Guests' service expectations. Service Cost Management decisions are usually focused on provision of services to meet up with Customers' expectations, setting up applicable pricing policy that meets the quality of service provisions, knowing the cost of services and ensuring that collections for services are properly channeled into corporate purse. Hoteliers in Erbil are concerned on how to ensure continued satisfaction of increasing leisure travelers into the city. Erbil is bubbling with establishments of new generation of hotels forced upon the town due to increasing rapid development that is erupting like wildfire. Erbil, the Capital of Kurdistan is caught-up with a supersonic development of hospitality industry, mainly hotels induced by increasing number of tourists to the region, openness to modernization, shift to capitalism, and development of human capital in all spheres hence Erbil won the title of the 2014 tourism

capital of the Arab Council of Tourism (Hawez, 2014). In 2012, for instance there were 2,216,993 number of tourists in the region. Out of the number, Erbil alone attracted a total of 1, 518,830 tourists according to Kurdistantour.net (assessed on 3/7/2014). To sustain this tempo of development of hospitality and tourism industry, Erbil need to keep-up pace with Service Cost Management standards, research and other developmental prepositions that sustain hospitality growth.

The aim of this research is to identify critical gaps that need to be filled in the current service cost management of hotels in Erbil for the good of tourism industry in the region. The specific objectives are to identify gaps in service billings, collections and accounting for the good of the hoteliers and to suggest ways of mitigating/closing such gaps. A lot of studies have been conducted on service quality dimensions and scales for measuring essential variables necessary for benchmarking acceptable quality recognition in the tourism and hospitality industry. However there are few studies that concentrated on service billing, collections and accounting for the good of hoteliers in the Middle East, especially in Erbil, the capital of Kurdistan Region. Hoteliers in Erbil are focused on finding

ways of satisfying customers' needs that are increasing in both diversity and number, resulting from influx of leisure travelers into the city but there is little or no concern about a vermin of inadequate internal controls on service billings, collections and accounting. A considerable number of existing research on Internal Controls on Service Cost centers on Service Cost Management from Cost incurred perspective but there are large vacuum on lost-earned-revenue perspective. Filling this vacuum and finding out the scale of existence of this vermin of inadequate internal controls on service billings, collections, and accounting on one hand, their critical levels and suggesting ways of their mitigations in the other hand are the focus of this research. This research is limited to variables collected from Kurdistan Region of Middle East. It lays out ground for further studies on the need for proper business documentations in Kurdistan Region. The research is significant as it will highlight internal control gaps existing in hospitality services, and give insight to larger academia on critical variables that may erode future well-being of hospitality industry in Middle East if proper checkmates are not advocated and put in place.

## **LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **Current State of Tourism & Hospitality in Erbil**

Erbil is the capital of Kurdistan Regional Government which came into being in 1992. According to Saiki (2012) Erbil apart from being the capital of Kurdistan is fast becoming the capital of the economy of Iraq. Erbil has become a big center for trade, tourism and hospitality. Hawez (2014) acknowledges Erbil's ranking among 20 cities to visit in 2013 by New York Times. This ranking was not by coincidence as Erbil won the title of the 2014 tourism capital from the Arab Council of Tourism. Khidir (n.d) also confirms that Kurdistan Region has been chosen as one of the best tourist areas in the world for 2011. Khidir (n.d) further asserts that the listing came from National Geographic magazine and the report of the American New York Times. Kurdistanour.net (assessed on 3/7/2014) has it that for the year 2012, there were 2,216,993 numbers of tourists in the region. Out of the number, Erbil alone attracted a total of 1, 518,830 tourists. It is not a surprise that due to these increases in tourism and hospitality influx into Erbil, there is increasing demand for Hotels in the city. Many hotels have sprung up and a lot are still coming into being in order to sustain the growing tourism and hospitality of the city. The rapid establishment of hotels in a developing city comes with many challenges. Service Cost Management is of one of the significant challenges of hoteliers in a rapid developing city. There exist few research studies in this area.

### **Service Cost Management concepts and Areas of Challenges**

Service Cost concept for the purposes of this research focuses on the payments for personnel directly concerned with serving customers in respect of lodging, eating and drinking, billings & collections and lost revenues (as a result of gaps in the internal controls) accruable to hoteliers. These aforementioned are the relevant current research cost centers. Ihedioha (2003:17), defined cost center as "a location or a person or an item of equipment connected with an understanding in which costs may be ascertained and used for the purpose of cost control". Service Costs are captured and reported in hotels in respect of Room use (Lodgers) and Meals, while the accounting system is expressed via billings, internal controls and record-keeping. Service cost consist of direct payments to employees and opportunity costs/revenue forgone in the use of the employee's services and/or lost revenues due to the existence of gaps in the internal control systems put in place. It is different from Activity costs which relate to cost of administering such services. Service Costing on the other hand is cost accounting method which is concerned with establishing the costs of services rendered. Brignall (1997) describes activity costing as a system that collects cost in functional activity cost pools and then applies costs to products/services using individual cost drivers. In hotel, these cost drivers are likely to be number of Eating guests, Drinking guests or Lodging guests. According to (Baird et al., 2004) Activity-Based costing is a technique that focuses attention on the costs of various activities required to produce a product or service.

Adams (1996) asserts that Service costing relates to generating information that enables managers to identify opportunities for cost savings and provides them with an improved basis for budget constructions and helps to understand the cost and value of service activities that are essential to control escalating operational costs. Service Cost Management in the words of (Brinker 1996) is a set of techniques and methods for controlling and improving a company's activities and processes, its products and services. In addition, Maskell (2009) describes cost management as part of management accounting used internally to help the company's manager control and improve the business. However this concept of Service cost Management is usually misunderstood as Managers are sometimes in a bid to control cost are encouraged to accomplish short-term goals by reducing expenses with training and investments, or even by increasing the level of inventory. Traditional Managers will rush to downsizing as a means of cost reduction. Cost reduction is an aspect of cost control but has proved not to be effective in the long-run. This sentiment is also expressed by Goldratt and Cox (1989) as they assert that cost control perceived as cost reduction is

only effective in the short term, and its decisions can seriously affect future results.

Kimita, Hara, Shimomura and Arai (2008) carried out a study on cost evaluation method for Service Design based on Activity Costing. Their research objective is to create a module for evaluating customers' satisfaction while maintaining economic cost controls necessary for continued business growth and profitability. Their area of challenges in service cost control is in the designing. Kapiki (2012) carried out exploratory study among Tourism Stakeholders on Quality Management in Tourism and Hospitality. He explains the need for quality services in guest retention, and market competitiveness but expresses concern on the challenges of quality service delivering. Many other studies had been carried out on the areas of service quality management and benchmarking (Chu & Choi, 2000; Yasin and Yavas, 2001; Parasuraman, Zeithaml & Berry, 1994; Ekinci & Riley, 1998). The challenges facing these research outputs are how to measure quality between Hoteliers and Customers, how to measure satisfaction among Customers and what constitutes service quality improvements.

It is therefore necessary to explain clearly the use of 'Service Cost Management' in the current research. Service Cost Management refers to the totality of Internal Controls put in place to ensure that all bills/revenues accruable to the Service provider (Hotel) is dully collected and put into the Service provider's purse in one hand and to ensure that service costs are only incurred on approved cost centers with appropriate measures, attesting that cost incurred is most effective and efficient for the Organisation in the other hand. This research is concerned with the first aspect of Service Cost Management component. American Institute of Certified Public Accountants (2010) defines Internal Control as a process, affected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in Effectiveness and efficiency of operations, Reliability of financial reporting and Compliance with applicable laws and regulations. Internal controls system need not to be static but proactive to economic and environmental changes and challenges. AICPA (2010) further asserts that Internal Control promotes efficiency, reduces risks of asset loss, and helps ensure the reliability of financial statements and compliance with laws and regulations.

#### **HYPOTHESES DEVELOPMENT**

A research by Zounta and Aegean (2009), document the need for Cost-based Management and decision making in hotels. They confirm Mia and Patiarp (2001) view that Cost-based Management will reveal Firm's strengths and weaknesses, allow economies

scale and among others improve pricing strategy. Zounta and Aegean (2009) in their conclusion are of the view that separating hotel operations into multiple parts and identifying costs for each part is a way to analyze information on the performance, profitability and overall financial status of a hotel. To analyze financial status and profitability of different segments, aspects, units and centers of hotels, Management need to know whether the internal controls issues, if any are different for control and decision purposes. This view leads to the current research (HO<sub>1</sub>) hypothesis 1 (construes in null form) which that the internal control gaps in Billings, Collections and Accounting of Hotels' Earnings in Erbil is not significantly different. It is also necessary in maintaining economic cost controls as construe by Kimita et al (2008) to isolate the cost into different constituents. Also in order to implement management control system to cost reduction, tight cost and overhead control and cost minimization, Management need to be informed of Revenue Centers in a Hotel that is critically significant compared with other existing centers. Thus cost containment which is concern with finding ways to reduce costs without sacrificing the quality standards imposed to consistently meet guest expectations (Wang and Wang, 2009) has become a great issue to hoteliers. One of the most overlooked methods of cost control is Revenue control and Management. Revenue Management should be given prior attention in hospitality industry to Cost Control because many a time revenue sources in the industry leave no trails than costs. In this regard, we propose our next two hypotheses so as to sustain the research objectives as follows:

- HO<sub>2</sub>: There is no Internal Control gap in Billings, Collections and Accounting of Hotels' Revenue Centers that is critically significant.
- HO<sub>3</sub>: There is no critical gap in Hotels' Billings, Collections and Accounting among the Revenue Centers in Erbil.

Revenue Management is becoming increasingly area of attention to hospitality management (Ivanov and Zhechev, 2012) but other aspects of managerial focuses such as the need for internal control among others should not be ignored. Supporting this assertion, Vrdoljak and Bukvic (2004) opine that productivity and profitability in hotels are affected by Bad management, Low quality of employees, Price competition etc. Vrtiprah (2001) has earlier asserts that evaluation of a hotel's quality is based on timely submission of reports to and by managers, Audit reports and other non-accounting information needs. It is a core duty of Management to isolate early, any critical internal control gaps within their span of control mainly in hotel business that has less

information trail. This leads us to the formulation of hypothesis four thus;

HO<sub>4</sub>: There is no Internal Control Gap that is critically significant in Hospitality Service Cost Management.

Supporting the need for hypothesis four, Stephen and Scott (1989) are of the view that poor management is highly connected to poor financial conditions, inadequate accounting records, limited access to necessary information and lack of good managerial advice.

## MATERIALS AND METHODS

The survey is conducted among Hotels in Kurdistan Region. In order to circumvent cultural sensitivity in filling English questionnaire construct that may generate a negative report/perception or expose a colleague/boss or employer, a Kurdish translation was crafted alongside each English version, thus primary source using questionnaire is the method of data collection. The population of Hotels in Erbil is 190 (one hundred and ninety) according to Saiki (2012) but Kurdistantour.net (assessed on 3/7/2014) gave a more official number of hotels in Erbil of 259 and this is adopted as the population of study. Considering the small number of the population, the 259 is also taken as the sample size. In order to ascertain acceptable minimum responses required for this small sample size, Yamane's 1967 equation is used;

$$n = \frac{N}{1 + Ne^2} \quad \text{eqn.....1.}$$

Where;

n = required responses

N = Sample Size

e<sup>2</sup> = error limit

This study is conducted at 95% confidence level, with 5% allowed error limit, hence substituting these variables in equation 1 will appear thus;

$$n = \frac{259}{1 + 259(0.05)^2} \quad \text{.....eqn .....2.}$$

The minimum numbers of responses to be obtained have to be from 146 hotels. It was decided, however that obtaining 292 responses, two from each hotel is a valid sample. The responses were abysmal confrontation and refusal to fill the questionnaire by any of their staff from Top Managers during pilot administration of the questionnaire from two Hotels. This response led to change of filling of questionnaire to questionnaire interview. The use of questionnaire interview is a process of reading out the questions in form of interview and filling the answers by the Researchers (Respondents only give oral answers). A total of one hundred and ninety-eight questionnaire interviews were successfully completed. The frequencies of responses were classified using identical concepts on their outlined revenue centers as a factor necessary to determine their level of criticality. The technique of data analysis is ANOVA, Multinomial Regression and Parameter Estimates. The statistical software used in the test analyses is SPSS at 95% level of confidence.

## RESULTS, ANALYSIS AND DISCUSSIONS

In this section, the results obtained from the field respondents are shown. The obtained data are analyzed, applying the relevant test statistical techniques. Each of the analyzed outcomes is discussed in the context of this research and within existing relevant research outcomes. The analyses of returned questionnaires are as shown in table 1.

Table 1: Result of noticeable Internal Control Gaps across the Revenue Centers

| Areas of noticeable Gaps                                                           | Revenue Centers and Frequency of Observable Gaps |                 |                        |                         |                          |                    | Total |
|------------------------------------------------------------------------------------|--------------------------------------------------|-----------------|------------------------|-------------------------|--------------------------|--------------------|-------|
|                                                                                    | Rooms/<br>Lodging                                | Food/<br>Eating | Beverages/<br>Drinking | Internet &<br>Telephone | Laundry<br>&<br>Swimming | Banquet<br>& Halls |       |
| Differential pricing of same class of Revenue Centers                              | 98                                               | 14              | 20                     | 10                      | 36                       | 69                 | 247   |
| Lack of Up to date Accounting System and Records                                   | 61                                               | 35              | 42                     | 42                      | 30                       | 38                 | 248   |
| Inability to produce Financial Statements & Management reports.                    | 90                                               | 60              | 75                     | 36                      | 70                       | 68                 | 399   |
| Lack of adequate Internal Controls over Cash Collections, Recording and Accounting | 122                                              | 106             | 22                     | 16                      | 10                       | 96                 | 372   |
| Lack of adequate Credit Policy and Internal Controls of credits.                   | 87                                               | 10              | 32                     | 15                      | 68                       | 79                 | 291   |
| Inadequate Inventory Records                                                       | 86                                               | 72              | 95                     | 10                      | 56                       | 32                 | 351   |
| Inadequate data capture documents                                                  | 70                                               | 46              | 56                     | 85                      | 93                       | 74                 | 424   |
| Lack of pricing flexibility during seasonal periods                                | 71                                               | 88              | 90                     | 76                      | 80                       | 87                 | 492   |
| Inadequate available manpower                                                      | 40                                               | 36              | 20                     | 10                      | 30                       | 37                 | 173   |
| Lack of Internal controls on billing                                               | 90                                               | 65              | 23                     | 15                      | 56                       | 62                 | 311   |
| Grand Total                                                                        | 815                                              | 532             | 475                    | 315                     | 529                      | 642                | 3308  |

Source: Analysis of questionnaire responses

Table 1, shows frequency of responses obtained from one hundred and ninety-eight respondents that completed and returned their questionnaire. There were no restrictions as to their responses, thus the total frequencies on each classified noticeable gap across the revenue centers are more or less compared with the total number of respondents.

### TEST OF HYPOTHESIS AND DISCUSSIONS

Under this sub-section, each of the stated hypotheses will be tested, analyzed and discussed.

#### TEST OF HYPOTHESIS 1

In order to test hypothesis one ( $H_{O1}$ ) which states that the internal control gaps in billings, collections and accounting of Hotels' earnings in Erbil is not significantly different, using table 1 data and executing the analysis with SPSS ANOVA, the result is as in Table 2.

Table 2: ANOVA Analysis of Internal Control Gaps in Billings, Collections and Accounting of Erbil Hotels

|                                |                | Sum of Squares | df | Mean Square | F     | Sig. |
|--------------------------------|----------------|----------------|----|-------------|-------|------|
| Areas of Internal Control Gaps | Between Groups | 582.667        | 58 | 10.046      | .965  | .563 |
|                                | Within Groups  | 187.333        | 18 | 10.407      |       |      |
|                                | Total          | 770.000        | 76 |             |       |      |
| Revenue Centers                | Between Groups | 267.200        | 58 | 4.607       | 2.032 | .049 |
|                                | Within Groups  | 40.800         | 18 | 2.267       |       |      |
|                                | Total          | 308.000        | 76 |             |       |      |

Source: SPSS ANOVA generated Outcome.

The result of hypothesis 1 test shows that the frequencies of assertions from respondents in respect of areas of internal control gaps in billings, collections and accounting of Hotels' earnings in Erbil is not significantly different, as test static of  $p = 0.563$ . With the outcome of the test, hypothesis 1 which states that Internal Control Gaps in Billings, Collections and Accounting of Hotels' earnings in Erbil is not significantly different is hereby accepted.

#### TEST OF HYPOTHESIS 2

Hypothesis 2 ( $H_{O2}$ ) states that there is no Internal Control gap in Billings, Collections and Accounting

of Hotels' Revenue Centers that is critically significant. The result reveals as seen in table 2, that although there exist differences among the Revenue Centers in terms of Internal Control gaps but these differences are not significant enough. In order to explain this scenario specifically, there is the need to carry out a parameter analysis of each of the Revenue Centers in relation to Frequency of Assertions obtained from the survey. The result is as seen in Table 3. The result depicts inverse relationship between the levels of lack of in-depth existence of Internal Control gaps to the levels of significance. The inverse relationship and interpretations is deduced from negative values of  $t$  as seen in Table 3.

Table 3: Parameter Estimates of Assertions of Internal Control Gaps in the Revenue Centers

| Dependent Variable               | Parameter      | B              | Std. Error | t      | Sig. | 95% Confidence Interval |             |
|----------------------------------|----------------|----------------|------------|--------|------|-------------------------|-------------|
|                                  |                |                |            |        |      | Lower Bound             | Upper Bound |
| Frequency of Assertions/Reponses | Intercept      | 601.455        | 111.803    | 5.380  | .000 | 378.470                 | 824.439     |
|                                  | [Revenue=1.00] | -453.273       | 158.114    | -2.867 | .005 | -768.621                | -137.925    |
|                                  | [Revenue=2.00] | -504.727       | 158.114    | -3.192 | .002 | -820.075                | -189.379    |
|                                  | [Revenue=3.00] | -515.091       | 158.114    | -3.258 | .002 | -830.439                | -199.743    |
|                                  | [Revenue=4.00] | -544.182       | 158.114    | -3.442 | .001 | -859.530                | -228.834    |
|                                  | [Revenue=5.00] | -505.273       | 158.114    | -3.196 | .002 | -820.621                | -189.925    |
|                                  | [Revenue=6.00] | -484.727       | 158.114    | -3.066 | .003 | -800.075                | -169.379    |
|                                  | [Revenue=7.00] | 0 <sup>a</sup> | .          | .      | .    | .                       | .           |

Source: SPSS result of parameter estimates from survey.

The result of Table 3 shows that although each of the Revenue Centers proves to be highly significant but their differences are very slight. The orders of their level of significance are; Most highly significant is Revenue Center 1 (Rooms/Lodging), followed by More highly significant is the Revenue Center 6

(Banquet & Halls). Of high significant is Revenue Centers 2, 3, and 5 (Food/Eating, Beverages/Drinking and Laundry/Swimming), while slightly significant is Revenue Center 4 (Internet & Telephone).

#### TEST OF HYPOTHESIS 3

Hypothesis 3 ( $H_{O3}$ ) states that there is no critical gap in Hotels' Billings, Collections and Accounting among the Revenue Centers in Erbil. To test this

hypothesis, a multinomial Regression Parameter test is employed. The main focus of the test is to isolate each of the identified Internal Control Gaps using a holdout (reference) category aimed at determining the

level of significance of each Internal Control Gap against each Revenue Center. The outcome is shown in Table 4.

Table 4: Parameter Estimates of Areas of Internal Controls Gaps against the Revenue Centers

| Areas of Internal Control Gaps                                            |                | B              | Std. Error | Wald  | df | Sig. | Exp (B) | 95% Confidence Interval for Exp(B) |             |
|---------------------------------------------------------------------------|----------------|----------------|------------|-------|----|------|---------|------------------------------------|-------------|
|                                                                           |                |                |            |       |    |      |         | Lower Bound                        | Upper Bound |
| Lack of Up-to-date Accounting System                                      | Intercept      | -.192          | 7.195      | .001  | 1  | .979 |         |                                    |             |
|                                                                           | Assertions     | .001           | .027       | .001  | 1  | .978 | 1.001   | .949                               | 1.056       |
|                                                                           | [Revenue=1.00] | .139           | 5.491      | .001  | 1  | .980 | 1.149   | 2.437E-5                           | 54230.437   |
|                                                                           | [Revenue=2.00] | .168           | 6.471      | .001  | 1  | .979 | 1.183   | 3.668E-6                           | 381239.495  |
|                                                                           | [Revenue=3.00] | .171           | 6.600      | .001  | 1  | .979 | 1.187   | 2.862E-6                           | 492326.391  |
|                                                                           | [Revenue=4.00] | .181           | 6.921      | .001  | 1  | .979 | 1.198   | 1.538E-6                           | 932922.068  |
|                                                                           | [Revenue=5.00] | .165           | 6.367      | .001  | 1  | .979 | 1.179   | 4.485E-6                           | 309922.233  |
|                                                                           | [Revenue=6.00] | .154           | 6.005      | .001  | 1  | .980 | 1.167   | 9.024E-6                           | 150879.248  |
|                                                                           | [Revenue=7.00] | 0 <sup>b</sup> | .          | .     | 0  | .    | .       | .                                  | .           |
| Inability to produce Financial Statements & Management Reports            | Intercept      | -23.952        | 9.227      | 6.738 | 1  | .009 |         |                                    |             |
|                                                                           | Assertions     | .075           | .029       | 6.848 | 1  | .009 | 1.078   | 1.019                              | 1.140       |
|                                                                           | [Revenue=1.00] | 17.871         | 7.165      | 6.221 | 1  | .013 | 5.769E7 | 45.933                             | 7.245E13    |
|                                                                           | [Revenue=2.00] | 20.193         | 8.006      | 6.361 | 1  | .012 | 5.883E8 | 90.079                             | 3.843E15    |
|                                                                           | [Revenue=3.00] | 20.842         | 8.228      | 6.416 | 1  | .011 | 1.126E9 | 111.564                            | 1.135E16    |
|                                                                           | [Revenue=4.00] | 22.113         | 8.672      | 6.501 | 1  | .011 | 4.014E9 | 166.551                            | 9.672E16    |
|                                                                           | [Revenue=5.00] | 20.083         | 7.968      | 6.353 | 1  | .012 | 5.273E8 | 86.997                             | 3.195E15    |
|                                                                           | [Revenue=6.00] | 19.166         | 7.634      | 6.303 | 1  | .012 | 2.108E8 | 66.957                             | 6.634E14    |
|                                                                           | [Revenue=7.00] | 0 <sup>b</sup> | .          | .     | 0  | .    | .       | .                                  | .           |
| Lack of Internal controls over Cash collections, recording and accounting | Intercept      | -19.489        | 8.657      | 5.068 | 1  | .024 |         |                                    |             |
|                                                                           | Assertions     | .063           | .028       | 5.164 | 1  | .023 | 1.065   | 1.009                              | 1.125       |
|                                                                           | [Revenue=1.00] | 14.452         | 6.703      | 4.649 | 1  | .031 | 1.889E6 | 3.724                              | 9.582E11    |
|                                                                           | [Revenue=2.00] | 16.505         | 7.563      | 4.763 | 1  | .029 | 1.473E7 | 5.380                              | 4.031E13    |
|                                                                           | [Revenue=3.00] | 17.073         | 7.790      | 4.803 | 1  | .028 | 2.598E7 | 6.076                              | 1.111E14    |
|                                                                           | [Revenue=4.00] | 18.098         | 8.201      | 4.870 | 1  | .027 | 7.240E7 | 7.565                              | 6.930E14    |
|                                                                           | [Revenue=5.00] | 16.372         | 7.508      | 4.755 | 1  | .029 | 1.289E7 | 5.241                              | 3.172E13    |
|                                                                           | [Revenue=6.00] | 15.566         | 7.168      | 4.715 | 1  | .030 | 5.756E6 | 4.555                              | 7.274E12    |
|                                                                           | [Revenue=7.00] | 0 <sup>b</sup> | .          | .     | 0  | .    | .       | .                                  | .           |
| Lack of adequate Credit policy and Internal Controls on credits           | Intercept      | -7.542         | 7.334      | 1.058 | 1  | .304 |         |                                    |             |
|                                                                           | Assertions     | .027           | .026       | 1.091 | 1  | .296 | 1.028   | .976                               | 1.082       |
|                                                                           | [Revenue=1.00] | 5.488          | 5.617      | .955  | 1  | .329 | 241.844 | .004                               | 1.461E7     |
|                                                                           | [Revenue=2.00] | 6.486          | 6.521      | .989  | 1  | .320 | 655.813 | .002                               | 2.329E8     |
|                                                                           | [Revenue=3.00] | 6.696          | 6.705      | .997  | 1  | .318 | 808.782 | .002                               | 4.124E8     |
|                                                                           | [Revenue=4.00] | 7.067          | 7.040      | 1.008 | 1  | .315 | 1.172E3 | .001                               | 1.151E9     |
|                                                                           | [Revenue=5.00] | 6.392          | 6.436      | .986  | 1  | .321 | 597.272 | .002                               | 1.797E8     |
|                                                                           | [Revenue=6.00] | 6.014          | 6.094      | .974  | 1  | .324 | 409.149 | .003                               | 6.298E7     |
|                                                                           | [Revenue=7.00] | 0 <sup>b</sup> | .          | .     | 0  | .    | .       | .                                  | .           |
| Inaccurate Inventory records                                              | Intercept      | -16.248        | 8.230      | 3.897 | 1  | .048 |         |                                    |             |
|                                                                           | Assertions     | .054           | .027       | 3.975 | 1  | .046 | 1.056   | 1.001                              | 1.114       |
|                                                                           | [Revenue=1.00] | 11.986         | 6.354      | 3.558 | 1  | .059 | 1.604E5 | .626                               | 4.113E10    |
|                                                                           | [Revenue=2.00] | 13.808         | 7.226      | 3.651 | 1  | .056 | 9.924E5 | .701                               | 1.404E12    |
|                                                                           | [Revenue=3.00] | 14.296         | 7.449      | 3.683 | 1  | .055 | 1.617E6 | .738                               | 3.545E12    |
|                                                                           | [Revenue=4.00] | 15.138         | 7.835      | 3.733 | 1  | .053 | 3.752E6 | .804                               | 1.752E13    |
|                                                                           | [Revenue=5.00] | 13.672         | 7.162      | 3.644 | 1  | .056 | 8.659E5 | .694                               | 1.080E12    |

|                                                     |                |                |        |        |   |      |          |             |          |
|-----------------------------------------------------|----------------|----------------|--------|--------|---|------|----------|-------------|----------|
|                                                     | [Revenue=6.00] | 12.960         | 6.820  | 3.611  | 1 | .057 | 4.252E5  | .666        | 2.715E11 |
|                                                     | [Revenue=7.00] | 0 <sup>b</sup> | .      | .      | 0 | .    | .        | .           | .        |
| Inadequate data capture documents                   | Intercept      | -28.301        | 9.791  | 8.355  | 1 | .004 |          |             |          |
|                                                     | Assertions     | .086           | .029   | 8.469  | 1 | .004 | 1.090    | 1.028       | 1.154    |
|                                                     | [Revenue=1.00] | 21.221         | 7.617  | 7.763  | 1 | .005 | 1.645E9  | 540.568     | 5.006E15 |
|                                                     | [Revenue=2.00] | 23.760         | 8.439  | 7.927  | 1 | .005 | 2.084E10 | 1367.086    | 3.178E17 |
|                                                     | [Revenue=3.00] | 24.462         | 8.646  | 8.004  | 1 | .005 | 4.205E10 | 1836.495    | 9.629E17 |
|                                                     | [Revenue=4.00] | 25.953         | 9.116  | 8.104  | 1 | .004 | 1.867E11 | 3245.317    | 1.074E19 |
|                                                     | [Revenue=5.00] | 23.694         | 8.420  | 7.918  | 1 | .005 | 1.951E10 | 1326.901    | 2.868E17 |
|                                                     | [Revenue=6.00] | 22.689         | 8.093  | 7.859  | 1 | .005 | 7.139E9  | 921.646     | 5.531E16 |
|                                                     | [Revenue=7.00] | 0 <sup>b</sup> | .      | .      | 0 | .    | .        | .           | .        |
| Lack of pricing flexibility during Seasonal periods | Intercept      | -43.195        | 12.695 | 11.577 | 1 | .001 |          |             |          |
|                                                     | Assertions     | .119           | .034   | 12.398 | 1 | .000 | 1.127    | 1.054       | 1.204    |
|                                                     | [Revenue=1.00] | 32.821         | 9.931  | 10.922 | 1 | .001 | 1.795E14 | 631660.155  | 5.100E22 |
|                                                     | [Revenue=2.00] | 35.894         | 10.692 | 11.271 | 1 | .001 | 3.880E15 | 3074700.807 | 4.895E24 |
|                                                     | [Revenue=3.00] | 36.725         | 10.866 | 11.423 | 1 | .001 | 8.905E15 | 5014894.820 | 1.581E25 |
|                                                     | [Revenue=4.00] | 38.732         | 11.351 | 11.644 | 1 | .001 | 6.626E16 | 1.443E7     | 3.042E26 |
|                                                     | [Revenue=5.00] | 36.102         | 10.792 | 11.191 | 1 | .001 | 4.774E15 | 3111158.141 | 7.325E24 |
|                                                     | [Revenue=6.00] | 34.896         | 10.496 | 11.053 | 1 | .001 | 1.429E15 | 1662481.885 | 1.229E24 |
|                                                     | [Revenue=7.00] | 0 <sup>b</sup> | .      | .      | 0 | .    | .        | .           | .        |
| Inadequate available manpower                       | Intercept      | 13.722         | 8.639  | 2.523  | 1 | .112 |          |             |          |
|                                                     | Assertions     | -.063          | .038   | 2.738  | 1 | .098 | .939     | .871        | 1.012    |
|                                                     | [Revenue=1.00] | -9.852         | 6.664  | 2.186  | 1 | .139 | 5.262E-5 | 1.118E-10   | 24.764   |
|                                                     | [Revenue=2.00] | -12.226        | 7.988  | 2.343  | 1 | .126 | 4.902E-6 | 7.783E-13   | 30.872   |
|                                                     | [Revenue=3.00] | -12.149        | 7.885  | 2.374  | 1 | .123 | 5.291E-6 | 1.027E-12   | 27.250   |
|                                                     | [Revenue=4.00] | -12.850        | 8.273  | 2.412  | 1 | .120 | 2.626E-6 | 2.383E-13   | 28.942   |
|                                                     | [Revenue=5.00] | -11.943        | 7.809  | 2.339  | 1 | .126 | 6.502E-6 | 1.464E-12   | 28.873   |
|                                                     | [Revenue=6.00] | -11.005        | 7.295  | 2.276  | 1 | .131 | 1.661E-5 | 1.026E-11   | 26.889   |
|                                                     | [Revenue=7.00] | 0 <sup>b</sup> | .      | .      | 0 | .    | .        | .           | .        |
| Lack of internal controls over billings             | Intercept      | -10.472        | 7.554  | 1.922  | 1 | .166 |          |             |          |
|                                                     | Assertions     | .037           | .026   | 1.972  | 1 | .160 | 1.038    | .985        | 1.093    |
|                                                     | [Revenue=1.00] | 7.651          | 5.800  | 1.740  | 1 | .187 | 2.102E3  | .024        | 1.819E8  |
|                                                     | [Revenue=2.00] | 8.964          | 6.689  | 1.796  | 1 | .180 | 7.815E3  | .016        | 3.859E9  |
|                                                     | [Revenue=3.00] | 9.273          | 6.889  | 1.812  | 1 | .178 | 1.065E4  | .015        | 7.786E9  |
|                                                     | [Revenue=4.00] | 9.797          | 7.236  | 1.833  | 1 | .176 | 1.799E4  | .012        | 2.597E10 |
|                                                     | [Revenue=5.00] | 8.848          | 6.611  | 1.791  | 1 | .181 | 6.959E3  | .016        | 2.949E9  |
|                                                     | [Revenue=6.00] | 8.344          | 6.270  | 1.771  | 1 | .183 | 4.204E3  | .019        | 9.141E8  |
|                                                     | [Revenue=7.00] | 0 <sup>b</sup> | .      | .      | 0 | .    | .        | .           | .        |

Sources: SPSS software generated results.

The outcomes of Table 4, shows that Lack of Up-to-date Accounting System assertions by respondents is critical but its level of criticality across the six Revenue Centers is insignificant. Same will also be said of Lack of adequate Credit Policy and Internal Controls on Credits; Inaccurate Inventory Records; Inadequate Available Manpower and Lack of Internal Controls over Billings. However the outcome of the analyses show that the following Internal Control Gaps are critically significant across the Revenue Centers; Inability to produce Financial Statement & Management Reports; Lack of Internal Controls over Cash Collections, Recording and Accounting;

Inadequate Data Capture Documents; and Lack of Pricing Flexibility during Seasonal periods.

#### TEST OF HYPOTHESIS 4

Hypothesis 4 (HO<sub>4</sub>) states that there is no Internal Control Gap that is critically significant in Hospitality Service Cost Management. The emphasis here is to analyze the individual Internal Control Gap's level of significance in comparisons of other Internal Control Gaps for the purposes of damage controls, containment and other strategic decisions. To do this, a parameter analysis using Gaps as threshold is executed using SPSS software. The result is shown in table 5.

Table 5 : Internal Control Gaps Parameter Estimates

|           |                | Estimate       | Std. Error | Wald  | df | Sig.  | 95% Confidence Interval |             |
|-----------|----------------|----------------|------------|-------|----|-------|-------------------------|-------------|
|           |                |                |            |       |    |       | Lower Bound             | Upper Bound |
| Threshold | [Gaps = 1.00]  | -2.303         | .862       | 7.134 | 1  | .008  | -3.992                  | -.613       |
|           | [Gaps = 2.00]  | -1.504         | .687       | 4.788 | 1  | .029  | -2.851                  | -.157       |
|           | [Gaps = 3.00]  | -.981          | .604       | 2.637 | 1  | .104  | -2.165                  | .203        |
|           | [Gaps = 4.00]  | -.560          | .559       | 1.002 | 1  | .317  | -1.655                  | .536        |
|           | [Gaps = 5.00]  | -.182          | .539       | .115  | 1  | .735  | -1.238                  | .874        |
|           | [Gaps = 6.00]  | .182           | .539       | .115  | 1  | .735  | -.874                   | 1.238       |
|           | [Gaps = 7.00]  | .560           | .559       | 1.002 | 1  | .317  | -.536                   | 1.655       |
|           | [Gaps = 8.00]  | .981           | .604       | 2.637 | 1  | .104  | -.203                   | 2.165       |
|           | [Gaps = 9.00]  | 1.504          | .687       | 4.788 | 1  | .029  | .157                    | 2.851       |
|           | [Gaps = 10.00] | 2.303          | .862       | 7.134 | 1  | .008  | .613                    | 3.992       |
| Scale     | [Revenue=1.00] | 2.716E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=2.00] | 4.062E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=3.00] | 4.070E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=4.00] | 3.600E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=5.00] | 4.636E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=6.00] | 3.046E-31      | .393       | .000  | 1  | 1.000 | -.770                   | .770        |
|           | [Revenue=7.00] | 0 <sup>a</sup> | .          | .     | 0  | .     | .                       | .           |

Source: SPSS generated result.

Analyses of the result of Table 5 elicit that Internal Control Gap 1 (Differential pricing of same class of Revenue Centers) survey responses compared with Internal Control Gaps is very significant with  $P = 0.008$ . Also critically significant is this aspect are; Internal Control Gaps 2 (Lack of Up to Date Accounting System & Records), 9 (Inadequate Available Manpower) and 10 (Lack of Internal Controls on Billing).

## FINDINGS, CONCLUSION AND RECOMMENDATIONS

Critical areas of internal control gaps in Hospitality service cost management are conceptualized and categorized into manageable and identifiable components by Hospitality Workers that have no direct control over these gaps. However there exist communication gaps for bottom-up reporting these gaps. It is also found that the existence of Internal Control Gaps among the Revenue Centers is not significantly different. These call for a common approach in control of lapses among the entire revenue centers. It shows that internal control gaps affecting one revenue center may likely erode another center in near future. The research found that the critical level of significance across the Revenue Centers is high with regard to the following Internal Control Gaps; Inability to produce Financial Statements and Management Reports; Lack of Internal Controls over Cash Collections, Recording and Accounting; Inadequate Data Capture Documents; and Lack of Pricing Flexibility during Seasonal periods. Among the Internal Control Gaps discerned to be affecting Hospitality Industry's

Service Cost Management, it is found that Lack of Up to Date Accounting System & Records, Inadequate Available Manpower and Lack of Internal Controls on Billings are critically significant.

## CONCLUSION

There exist critical significant Internal Control Gaps in Service Cost Management of Hotels' Accounting and among Revenue Centers' earnings in Erbil which is a model hospitality hub in the Middle East region.

## RECOMMENDATIONS

It is recommended that a further research be conducted as to the reasons behind non-reporting of noticeable internal control gaps by Middle level and other hospitality workers to Top Management. Modern Data capture and Accounting procedure should be instituted and encouraged in the Hospitality Service Industry. The establishment of Internal Audit Units in Hospitality Industry is also strongly recommended, notwithstanding the fact that most of these hospitality businesses are structured under family lines.

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