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Using Financial Analysis Methods in the Hotel Sector for the Purposes of Planning and Monitoring Case Study Al Zaitonia Hotel

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ABSTRACT

The study aimed at indicating the most important factors that control the takings and expenses of the hotel and classifying them according to their ability to influence the profitability of the hotel by using the appropriate analytical financial methods for the hotel activity which contribute in increasing the efficiency of planning and monitoring the hotel activity. The study indicated that the average spending power of the single guest and the numbers of guests are the basic factors that form the hotel's revenues, where the spending power of the single guest was the most powerful factor to influence the profitability of the hotel activity. Accommodation represents the most important factor in forming the spending power for the single guest and consequently influences profitability. The study also showed that the changing and fixed costs elements directly affect profitability and control the activity of the hotel sector and they, therefore, need planning, monitoring and following up by those in charge.

Keywords: Financial Analysis, Hotel, Development Planning, Financial Services Financial Management
JEL Classifications: G00, L83, O20, G200, M400

1. INTRODUCTION

Accounting, in itself, has direct or indirect influence on economic systems as it is concerned with providing information to decision makers (Muneer et al., 2011). It is a measuring tool to business results over a certain period of time and the financial centers at the end of this period to communicate this information. This means that financial analysis is a means of interpreting and identifying the relationship between the contents and the indications of numbers and assessment in addition to revealing the efficiency of different activities. Its greatest importance lies in that it contributes in rationalizing decisions (Bodiako, 2016). Thus, the accounting financial analysis can be defined as being a detailed study to financial statements and their interconnections, managing the questions about the indications of those connections and explaining the reasons that led to the appearance of those connections in their present amounts (Monira, 2016).

Financial analysis is an important issue that emerged in the field of credit and investment and then moved to the different domains of management as means of planning and control. It is a science related to many economical sciences like accounting and statistics considering the information and data provided by those sciences to the analyzer to accomplish the analyzing process (Naji and Uthman, 1996). Financial analysis includes interpreting the published financial statements and understanding them after being prepared according to the rules of accounting theory to evaluate a decision or investment opportunity or to grant a credit or assess the performance of a certain activity. In other words, financial analysis cares for processing the available data in order to get information that can be used in decision making assessing the past and present performance of institutions and predicting the future situation (Bier, 1987).

Being the outputs of the accounting system, the financial statements are considered the inputs of the financial analysis process. While those statements are regarded the final point in the accounting circle, they are considered the starting point in understanding and interpreting the financial situation of the establishment, and consequently, the correctness of the accounting measurement and the adequacy of accounting disclosure and its appropriation are necessary steps to guarantee the possibility of sound financial analysis (Abdelaziz, 2011; Al-Khalayleh, 1988).

Financial analysis is no longer viewed under the development and variety of knowledge fields as studying and analyzing the financial statements. It includes studying the accounting and non - accounting information existed inside and outside the financial statements to interact with the numbers, data, problems, policies, plans and criteria that include all the establishments of whatever activity (commercial, industrial, agricultural, service), no matter what their legal entity was (Deif, 1979).

In other words, financial analysis is a detailed critical analytical study to the financial statements and to a huge amount of useful and appropriate information in addition to analyzing the policies, plans and goals. The purpose of analysis moved from just evaluating performance to become concerned with preparing the suitable atmosphere to take reasonable decisions, as the financial statements analysis is regarded a tool to explain the financial statements and identifying the relationship between their contents providing information that help to assess the value of the establishment (Bodiako, 2016).

In light of the aforementioned, financial analysis in the modern concept extends to include the assistance in planning the aspects of future activity, planning the process of investment, evaluating the planned performance and taking preventative measures to subject the states of uncertainty to be monitored (Jawabreh et al., 2017). The information collected by the financial analyzer becomes more meaningful when they are classified and ordered and shows its relative importance in a way that makes it possible to read and get conclusions out of it. The process of ordering, classifying and finding relations is the core of the financial analysis which is generally concerned with determining the strength and weakness points of the establishment as well as contributing in assessing the unit's ability to continue (Lu'ay et al., 2011).

This research aims at realizing the most important factors controlling the proceeds and expenses of the hotel and their impact on profitability and explaining the role of the appropriate accounting analytical methods in increasing the efficiency of planning and monitoring hotel activity (Omar et al., 2012).

Tourism industry is of the modern industries which was born in the 20th century and started to grow and develop quickly in spite of the early origins of hotels which can be traced back to the Sixth century B.C, where after this industry has become one of the sources of the national income of the country.

In our present age, hotels are growing and developing in different countries of the world where many factors contributed in their development such as the population explosion and the increase of people moving from one place to another by virtue of the development of means of transport, the increase of cultural and social awareness among individuals and peoples as well as the growth of industry, trade and agriculture where hotel industry has become one of the biggest industries that creates job opportunities as one of the necessary needs of modern civilization.

Hotel activity is no longer restricted to providing accommodation to guests or to the tourist's expenditure of foreign currency. It extended to creating various industries like hotel industry which received high care from the Arab countries, including Jordan, which increased their numbers until they competed with the rest of the countries over the world (Mana, 1986). This has become a stimulant to the movement of people and investments from one place to another which crated gigantic institutions in hotel industry which play a significant role in the economic, social and cultural life in the country (Al-Sayed, 1980).

Starting from the significant and distinctive role of hotels in elevating the economy of the country, I chose, as a researcher, to write in this domain.

2. OBJECTIVES OF THE RESEARCH

This research aims at realizing the following purposes:
- Touching on the orientations of hotel performance in the Hashemite Kingdom of Jordan and revealing its importance.
- Identifying the most important factors controlling the proceeds and expenses of the hotel and their impact on profitability.
- Explaining the role of the appropriate accounting analytical methods in increasing the efficiency of planning and monitoring hotel activity.

3. PROBLEM OF THE RESEARCH

The problem of the research is summed up in answering the following questions:
- What are the factors that control the proceeds and expenses of the hotel?
- Can those factors be classified in terms of their ability to affect the profits of the hotel?
- What direction does performance take in hotel sector? And what is its importance?
- What are the appropriate analytical accounting methods for the nature of hotel activity?
- Do the accounting methods contribute in increasing the efficiency of planning and monitoring the hotel activity?

4. NATURE OF THE RESEARCH

This study is one of the cross sectional studies in scientific research as it depends, in collecting its data, on the study sample (one of the working four - star hotels) in field.

The researcher will analyze the data collected from primary and secondary sources following the relevant scientific methodology of accounting analysis. Therefore, this research is considered to be one of the analytical field studies (Al-Etoum,1995).

The study limitations:
- The study sample is restricted to one hotel as an applied situation.
- The scarcity of the previous published studies about financial analysis in the hotel sector.
- The results of the study depend on the validity and reliability of the information presented to the researcher from the hotel management.

The importance of financial analysis:
- The importance of financial analysis can be coined in the following:
  - Financial analysis is the starting point of financial planning.
  - Financial analysis is a means to assess the establishment's performance in general.
  - Financial analysis is used to evaluate the financing, operational and investment policies under which the project is working.
  - A means to determine the ability of the establishment to borrow and settle obligations.
  - A way to predict the possibilities of distress or bankruptcy in adequate time to place the suitable strategies to avoid it.
  - Financial analysis is a means to determine the value of the establishment as well as the investment tables in its shares.
  - Financial analysis is used for the purposes of planning and monitoring.

5. GOALS OF FINANCIAL ANALYSIS

The main purpose of financial analysis is providing the management, lenders, investors and dealers of the establishment with the necessary information which they use in different domains of concern and from which the financial analysis derives its importance. It is an effective means to know the nature of the links and relationships between the different elements of the project (Bangs, 1992). The purpose of using financial analysis is raising questions and attracting the attention to the sensitive points which demand studying to place the foundations which are mostly in the form of financial and productive policies (Al-Hasani, 1988). Raising questions help in the determination of the performance level in the past and at present which consequently enables the stakeholders to plan for the future in the light of past achievements and to monitor them in a way that enables the establishment to use the financial analysis in the following purposes (Casteuble, 1997; Al-Bsheibshi, 1987):
- Measuring the ability of the establishment to fulfill its obligations.
- Measuring the profitability of the establishment.
- Measuring the liquidity of the establishment.
- Preparing predictions and expectation.
- Financial planning for the establishment.
- Financial control.
- Assessing the competency of the management in the establishment.
- Showing the success of the establishment.

The raw material the analyzer treats and from which they conclude their remarks is the information selected from the accounting records especially the inventory of the financial position which shows the situation of the establishment in a certain moment. The same as the list of work results that shows the profits and losses during that period. The financial position and work results lists of several accounting periods are regarded accounting tools used for accounting analysis according to a time horizon which is the period of time covered by the analysis and it can take two forms:
- Short - term
  That is the time horizon of the accounting analysis is 1 year or less and this is cared for by short - term debtors and the financial manager of the establishment by concentrating on the liquidity manager and the working capital of the establishment as well as its cash flows, its short - term profits and planning for all the previous terms.
- Long - term
  It is a financial accounting analysis for a period that extends for more than a year and takes different analytical forms. This is cared for by investors, long - term lenders and the management to analyze the structure of the capital, assets, the ability of the establishment to cover its obligations and distributing profits as well as its influence on the shares of the establishment. It is also used to study the possibility of the establishment's change or bankruptcy in the future.

6. LITERATURE REVIEW

There are several sides that perform accounting analysis whether inside or outside the establishment to achieve the purpose sought by the analyzer which falls into one of the following categories.

6.1. The Establishment's Management
The management of the establishment has more accurate and extensive accounting information compared to the external categories because there are unpublished data which it can obtain. The management performs the analysis for multiple purposes like checking the performs and profitability and for controlling, planning and assessing the achievement in different domains in addition to predicting change and bankruptcy to reach at suitable solutions (Higgins, 2000; Fees, 1993).

6.2. Debtors Like Suppliers, Banks and Bondholders
Whose attention is focused on the liquidity and profitability of the establishment and its ability to face its obligations.

6.3. Investors
They are the shareholders and bondholders who care for the establishment's ability to generate profits and the ability of those profits to grow. The attention here is also directed to the policies of profit distribution and their effect on the value of the establishment and the fair value of its shares.

6.4. Consulting Firms
They provide their services by their own initiative or under the request of an important category inside or outside the establishment and they present their services according to the required purpose against certain fees (Welsch, 1990).

The financial analyzer uses various methods in accounting analysis which can be summed up summed up in the following.

6.5. Vertical Analysis

It is about studying the relation between the different items of the financial statement on a specific date (Nobre et al., 2016). One of its forms is the statements of unified totals where each item corresponds to certain number extracted as a percentage and the items of the income list are related to the net Sales and the items of the financial position list to the total assets. This analysis helps in making comparisons between the company's lists in different periods of time and unifies the comparison base even if it were static.

6.6. The Horizontal Financial Analysis

Attends studying the behavior of each item with the passage of time. It is a dynamic motional analysis (Abdelaziz, 2011) which helps in exposing the behavior of the item under study and this contributes is assessing the achievement of the establishment to take the necessary steps to treat the reasons for this behavior or accepting it if the reasons were positive.

6.7. The Relative Position

The rank of the establishment according to certain standards compared to similar establishments (Gill, 1994). Hotels, for example, are ordered according to their working capital or the number of guest in ascending or descending order or according to any other criterion.

6.8. Ratio Analysis

The ratio is a relationship between two variables one of which represents the numerator and the other represents the denominator and are used to add indications to the contents of the financial statements and accounting reports (Abdelaziz, 2011). Ratio analysis is finding a relationship between two variables through the ratio to each other. The two numbers could be from the same list or from two different ones, and used to obtain various indicators about the competency of the establishment to execute its tasks and its ability to realize profits and face its obligations. The ratios must be meaningful that is can be explained to get results. It is a change from the main messages in accounting analysis.

6.9. Sensitivity Analysis

The main concept of this analysis is called profit multiplier which measures the amount of influence on the net profits of the hotel when a change occurs to the ratio of one of the controlling factors. This basic concept is determined with the way the profit multiplier is calculated through the following steps (Welsch, 1989).

6.10. Determining Controlling Factors

This is the first step in the analysis where a number of the controlling factors are determined in the light of the numbers shown in the hotel's financial statements especially the numbers of the cost menus. In general, the most important factors that control the hotel sector can be the following.

6.11. Number of Guests

The average spending power of the single guest.

- The set of changing cost elements like the resources, wages and other services.
- The set of fixed cost elements like resources, wages and other services.

It is noticed that the two factors 1 and 2 according to the previous order are related to the hotel's revenues while the third and fourth factors are related to the hotel costs. When conducting this type of analysis, it is important to make sure that the number of controlling factors is fit to perform the analysis without exaggeration because the tendency to exaggeration and determining a large number of those factors will complicate the process of analysis (May et al., 1995).

Following up the influence of each factor:

Having determined the appropriate number of controlling factors, the next step is to follow up the effect of each factor separately on the net profits of the hotel. This following up can be achieved numeral by calculating the profit multiplier of each factor.

To make the analysis easy, we assume the occurrence of a change in a certain percentage of one of the controlling factors making the other factors of fixed net profits. To trace that change, we have to consider all the changes that may take place in the value of the particulars of each of the costs and revenues elements as a result to the change of that controlling factor giving the set of costs elements nearly special care when measuring and following up (Omar et al., 2012).

For example, on the level of accommodation service, if we suppose that an increase of 10% in the number of guests takes place, this will entail an increase of 10% in the accommodation sales and 10% in all the particulars of the changing costs elements related to accommodation and 10% increase in the changing part of the costs elements set. At the same time this change in the number of guests will not lead to similar changes in the set of fixed costs elements or the fixed part of the set of the costs elements (Abu-Eker, 2011).

In the light of the previous changes, the new net profits number will differ from the net profits number before that change. At this point of the analysis the profit multiplier can be calculated according to the following equation (Al-Adili, 1986; Al-Khayali, 1996):

$$\text{Profit multiplier} = \frac{\text{Percentage of net profits change}}{\text{Percentage of controlling factor change}}$$

Ordering the controlling factors in a significant form and extracting results:

By repeating the same former steps for each of the controlling factors, the profit multipliers of all the controlling factors can be confined, and the last step in analysis becomes ordering those multipliers in a significant form in order to extract results (Al-Maki, 1990). At this point of the analysis the general form of the controlling factors and the calculated multipliers indications can be tested in a way that avails the extraction of results with specific significance. The analysis results may show that the controlling factors in revenue generation are the set of the important factors the have more effect on the net profits of the hotel than the controlling factors on the costs aspect. If that is the case, this hotel considers that the weigh and effect on the net profits are the factors related to costs. Based on the aforementioned, using and applying that method in the hotel sector provides the management with extremely useful data and information such as:

- What are the controlling factors in the revenues and costs of the hotel?
- What is the influence of each of those factors on the net profits of the hotel?

What are the most important factors and what is their effect on the net profits? What are the least important factors and their effect on the net profits? What is the order of the rest of the controlling factors between those two points to enable the management to draw and recommend their different policies according to specific scientific foundations, as well as increasing the efficiency of the management in monitoring the element of the hotel's costs and revenues?

6.12. Hotel Accounting Ratios

Although the financial analysis method is very old, its uses were restricted to the intangible service production projects and were very limited. There is an attempt in this field to reach at accounting ratios special for hotels (Al-Jazar, 2013). This attempt concentrated on the traditional accounting ratios which were used in projects with tangible materialistic production and lacked an important element of analysis which is providing typical ratios for comparison on the local and international level. Certainly, the lack of this element means restricting the process of comparing the calculated results with their counterparts is on the level of the same unit. Comparison on this level has the potentials to get misleading results about the competency of performance where the previous performance of the same unit may contain prodigality or inadequacy factors. Attention should be centered on two axes:

- First axis
  Trying to establish logical relationships among the particulars to reach at extensive integrated groups of hotel ratios for all the directions of that performance with complete disregard to the traditional accounting ratios.
- Second axis
  Providing typical ratios of the elements of hotel revenues and operating costs on the level of international Jordan for the purposes of comparison to complete the elements of analysis.

It was concluded that the logical relationships which can be established among different particulars can be categorized into four main groups whereby each group measures certain relationships and helps to identify the performance trends in a given activity. Each group contains a number of detailed ratios as follows:

First: Hotel occupancy rate group

This group of rates can be used to measure the relationship between the available accommodation or service capacity and the utilized accommodation or service capacity during a period of time. These rates help to identify the efficiency of the hotel management in using the available capacity. Those groups include the following rates:

$$\text{Room occupancy rate} = \frac{\text{number of occupied rooms}}{\text{number of available rooms}} \times 100\%$$

$$\text{Bed occupancy rate} = \frac{\text{number of occupied rooms}}{\text{number of available rooms}} \times 100\%$$

$$\text{Suite occupancy rate} = \frac{\text{Number of occupied suites}}{\text{Number of available suites}} \times 100\%$$

$$\text{Restaurant occupancy rate} = \frac{\text{Number of persented meals}}{\text{Number of capacity represented in the number of seats}} \times 100\%$$

Second: Guest's expenditure rate group

This group can be used to measure the average expenditure of a single guest on the overall hotel services and on each of those services. These rates help in identifying the efficiency of the hotel management in marketing its production to the guests. They also help in placing and planning pricing policies for those services. This group involves the following rates:

$$\text{The general mean of the spending power of the guest} = \frac{\text{Total revenue of the hotel}}{\text{Number of guests}}$$

$$\text{The average spending of the guest on accommodation} = \frac{\text{Total accomodation revenue}}{\text{Number of guests}}$$

$$\text{The average spending of the guest on food and drink} = \frac{\text{Total food and drink revenue}}{\text{Number of guests}}$$

$$\text{The average spending of the guest on other hotel services} = \frac{\text{Total revenue of other hotel service}}{\text{Number of guests}}$$

$$\text{The average spending of the guest on a meal} = \frac{\text{Total revenue of food and drink}}{\text{Number of meals}}$$

$$\text{The average accommodation period of the guest} = \frac{\text{Total nights spent by the guest}}{\text{Number of guests}}$$

Third: Hotel activities profitability rates group

This group can be used to measure the relationship between the profits and costs of each of the three main activities of the hotel. These rates help in identifying the extent of the hotel efficiency in managing each of those activities and determining the activities that have high and low contribution rates in the profitability of the hotel. This group includes the following rates:

$$\text{Accommodation profitability rate} = \frac{\text{Total accomodation revenue} - \text{Total accommodation costs}}{\text{Total costs of other services}} \times 100\%$$

$$\text{The profitability rate of food and drink} = \frac{\text{Total revenue} - \text{Total costs}}{\text{Total costs of food and drink}} \times 100\%$$

$$\text{The profitability rate of other services} = \frac{\text{Total other services} - \text{Total other costs}}{\text{Total other costs}} \times 100\%$$

Fourth: Hotel costs rates group

The hotel union of New York City in U.S.A prepared a harmonized hotel accounting system. The costs elements were categorized in this system to direct and indirect elements, and by using the categorization stated by the American union, this group of rates can be divided into two groups as follows:

Rates of direct costs of hotel operation:

This group can be used to measure the relationship between the direct operation costs of each of those activities which help in identifying the efficiency of operating each activity. This group includes the following rates:

$$\text{The rate of accommodation casts} = \frac{\text{Total accommodation costs}}{\text{Total accommodaton revenue}} \times 100\%$$

$$\text{The rate of food and drink costs} = \frac{\text{Total food and drink costs}}{\text{Total food and drink revenue}} \times 100\%$$

$$\text{The rate of other hotel services} = \frac{\text{Total other services costs}}{\text{Total other services revenue}} \times 100\%$$

The rate of indirect costs of hotel operation:

This group is used to measure the relationship between the indirect operation costs for each activity and assistance and the total hotel proceeds. This group contains a group of rates which help to identify the efficiency of operating those assisting activities which are:

$$\text{The rate of sales promotion costs \%} = \frac{\text{Total sales promotion costs}}{\text{Total hotel revenue}} \times 100\%$$

$$\text{The rate of energy and lighting costs} = \frac{\text{Total energy and lighting costs}}{\text{Total hotel revenue}} \times 100\%$$

$$\text{The rate of maintenance and repair costs} = \frac{\text{Total maintenance and repair costs}}{\text{Total hotel revenue}} \times 100\%$$

6.13. Comparisons and Identifying Trends

Identifying the trends of performance through comparing the previous rates with their counterparts about former periods for the same hotel is very limited in usefulness, and comparing the previous rates with their counterparts in similar categories gives more accurate and objective image to the performance of the hotel considering that all the compared units work under the same economic circumstances an dominant employment conditions inside the country's borders. The following table explains some pattern rates of the proceeds elements and the direct and indirect costs for the hotel operation in the kingdom which is taken from the hotel managements records from the sites of final accounts analysis. Practically, the existence of differences between the calculated rates of a hotel and their counterparts on the level of the kingdom is considered as objective indicator to the performance trends of that hotel as such differences attract the attention of the hotel management to the needed steps whether correcting or encouraging according to the nature of those deviations, negative or positive.

Finally, while the sensitivity analysis has its limits, the financial analysis also has its limits. The limits of financial analysis concerning the previously suggested hotel rates do not differ from the traditional limits of the accounting rates in general whether in terms of the short - term changes, the difference of comparison conditions or cash measurement chances or the differences in the meanings and concepts of some terms. But, it is still true that previous hotel rates are extremely useful tool to the hotel management in identifying the trends of its performance with a basic condition which is interpreting those rates and using them carefully and cautiously in the light of the agreed limits (Table 1).

6.14. The Study Population

The study population consists of the licensed hotels in the Hashemite Kingdom of Jordan counting 250 hotels which contain 8536 rooms with 16037 beds as explained in the following Table 2.

The study population also consists of the hotels which are expected to be classified and working under special permission till the end of 2016. As explained by Table 3.

Table 1: Revenue elements, range rates

Description	Range of rates	Basis
Revenue elements		
Accommodation service	From 45% to 50%	From total revenue
Food and drink service	From 35% to 40%	From total revenue
Other hotel services	Form 5% to 10%	From total revenue
Direct costs elements		
Accommodation material and ways	From 15% to 25%	From its proceeds
Food and drink service	From 65% to 80%	From its proceeds
Other hotel services	From 40% to 70%	From its proceeds
Indirect costs elements		
General and administrative expenses	From 5% to 10%	From total revenue
Management and sales promotion costs	From 5% to 10%	From total revenue
Fuel, energy and lighting	From 4% to 10%	From total revenue
Maintenance and repair	From 3% to 5%	From total revenue

Source: Hotel management records/Ministry of Tourism

Table 2: Numbers of licensed hotels in Jordan and their capacity power in 2016

Classification	Number of hotels	Number of rooms	Number of beds
Five-star	32	7.980	13,609
Four-star	31	3.961	7.183
Three-star	57	3.748	7.302
Two-star	64	2.327	5.150
One-star	66	1.528	3.260

Table 3: Hotels expected to be classified and Working under special permission

Classification	Number of hotels	Number of rooms	Number of beds
Five-star	1	214	428
Four-star	3	366	731
Three-star	8	575	1150
Two-star	9	335	583
One-star	12	207	684
Total	33	1697	3576

7. STATISTICAL METHODS

The study sample was one of the working and classified hotels in Jordan which has twenty rooms with forty beds.

Zaitouna Hotel is a 3 star hotel which was opened in 1994, located in the heart of Aqaba and just a 5 min walk from the beautiful red sea.

7.1. Collecting Data

Two main sources were adopted to collect the data of the study which are:

- Secondary sources represented in the previous writings and studies relevant to the subject of the study.
- Primary sources like the income lists and balance sheet of the hotel under study as well as the number of rooms and beds and the financial statements through direct contact with the management and from the annual report of the hotel.
- A set of financial analysis methods were used for this study and contained profit sensibility analysis and ratio analysis. Occupancy rates, spending rates, activity profitability rates and hotel operation costs rates were also used.

Applying scientific methods of financial analysis on the hotel sector:
This research is using two financial analysis methods for the purposes of monitoring and planning which are profit sensitivity analysis and ratio financial analysis., It is doubtless that scientific concepts and principles which control those methods are stable concepts and principles which are agreed by accounting scholars. We will start by applying the method of profit sensitivity analysis.

The following is the income list of the hotel under study for the period which expires on 31/12/2015.

Sales proceeds:
1200 guests × JOD 120 = 144000
Variable costs:
Supplies 1200×25 = (30000)
Wages 1200×15 = (18000)
Total variable cost = (48000)
Marginal profit = 96000

Fixed cost:
Administrative expenses = (34500)
General expenses = (25000)
Total fixed cost = (59500)
Net income before tax = 36500

From the aforementioned income list we find six items contributed to shaping net income, which are:
Number of hotel guests.
Average spending power for a single guest.
Cost of changing material.
Cost of changing wages.
Administrative expenses.
General expense.

We will start by calculating the profit multiplier for each of the previous controlling factors when the increase ratio is 10%.

If the number of guests rises 10%:
Number of guests = 1200×10% = 1320 guests
Sales revenue: 1320 × 120 = 158400
Changing costs: 1320 × 40 = (52800)
Fixed costs: = 59500
Net income before tax: = 46100
The change in net income = 46100-36500 = 9600

$$\text{Change ratio} = \frac{9600}{36500} \times 100\% = 26.3\%$$

$$\text{Profit multiplier for the number of guests} = \frac{26.3\%}{10\%} 2.63\,\text{times}$$

If the guest's spending power increased by 10%.
Spending power = 120+120×10% =132 J.D
Sales revenue:
1200×132 = 158400
Changing costs = 48000
Fixed costs = 59500
Net income = 50900

$$\text{Change ratio in net income} = \frac{50900 - 36500}{36500} \times 100\% = 39.45\%$$

$$\text{Profit multiplier} = \frac{48\%}{10\%} = 4.8 = 3.945\,\text{times}$$

If the changing material increased by 10% for a guest.
Material costs for a guest = 25+25×10% = 27.5
Sales revenue = 1200×120 = 144000
Changing costs
Material 1200×27.5 = (33000)
Wages 1200×15 = (18000) (51000)
Marginal profit = 93000
Fixed costs = (59500)
Net income = 33500

$$\text{Change ratio} = \frac{33500}{36500} \times 100\% = (8.22\%)$$

$$\text{Profit multiplier} = \frac{8.22\%}{10\%} = 0.822\,\text{times}$$

If wages increased by 10% for a guest

Wages for one guest = 15+15+10% = 16.5 J.D

Sales revenue	(144000)
Changing material	(30000)
Changing wages	(19800)
Fixed costs	(59500)
Net income	(34700)

$$\text{Profit change ratio} = \frac{34700 - 36500}{36500} \times 100\% = (4.93\%)$$

$$\text{Profit multiplier} = \frac{4.93\%}{10\%} = 0.493\,\text{times}$$

If the administrative costs increased by 10%

Sales revenue (144000)

Changing costs (48000)

Fixed costs

Administrative expenses (34500+34500×10%) = (37950)

General expenses (25000) (62950)

Net income 33050

$$\text{Change ratio in net income} = \frac{33050 - 36500}{36500} \times 100\% = (9.45\%)$$

$$\text{Profit multiplier} = \frac{9.45\%}{10\%} \times 0.945\,\text{times}$$

If general expenses increased by 10%.

Sales revenue 144000

Changing costs (48000)

Fixed costs:

Administrative expenses (34500)

General expenses (25000+25000×100%) = (27500) (62000)

Net income = 34000

$$\text{Net income ratio} = \frac{34000 - 36500}{36500} \times 100\% = (6.34\%)$$

$$\text{Profitmultiplier} = \frac{6.34\%}{10\%} = 0.634\,\text{times}$$

7.2. The Effect of the Multiplier on Net Profits

To clarify the effect of those multipliers, the controlling factors can.

Be put in descending order according to the degree of importance in terms of their effect on net profits as shown in Table 4.

Table 4: Order of controlling factors according to their effect on profit multiplier

Rank	Controlling factors	Multiplier
First	Spending power of a guest	3.945
Second	Number of guests	2.63
Third	Administrative expenses	0.945
Fourth	Changing material	0.822
Fifth	General expenses	0.634
sixth	Changing wages	0.493

The logical explanation of the 3.945 multiplier concerning the average spending power of a guest is that an increase of 6% in the average spending power for a guest will entail an increase in the net income of the hotel equal to 6%×3.945 = 23.67% (approximately four times the ratio). A decline of 6% in the spending power of a guest will entail a decline in income at 23.67% too. In other words this hotel is described to be sensitive to revenues. Naturally, this does not mean the negligence of the factors related to costs but means that the factors relevant to revenues receive more attention than those related to costs.

Although the sensitivity analysis method is one of the effective analytical tools of the management, this method has its limits which should be considered to achieve the ultimate benefit when used.

The basic point around which the limits of that method revolve is that this type of analysis does not consider the ravaging potentials to the possibility of the supposed changes to take place in the variables of the model. In order to overcome those limits, it is a must to put assessments to the most optimistic potentials and other assessments to the most pessimistic potentials of each possible variable; after that the results of the effect of the changes in the independent variables over the net profits can be predicted in the form of a range between the optimistic and pessimistic points.

7.3. The Practical Application of the Proposed Financial Rates on the Hotel Sector

7.3.1. Occupancy rates

The following Table 5 indicates the number of occupied rooms in the hotel under study and the monthly occupancy rates with regard to that the monthly available rooms at the hotel under study are 600 rooms.

Viewing the previous Table 5, we find that the highest occupancy rate was in the 7th month reaching at 75% of the hotel capacity. The lowest occupancy rate was in the 2nd month at 33% of the hotel capacity. It is also noticeable that the rates of the sixth, seventh and 8th months reached the highest occupancy rates even though those are summer months where in the numbers of tourists and expatriates go up, and that the eleventh, the first and the 2nd months produced the lowest rates where this could be attributed to the cold weather in those months, while the rates of the other months revolve around the general rate of this hotel which comes at 53.6%.

To sum up. These rates are useful to the hotel management to identify the relationship between the available and occupied accommodation capacity of the hotel as explained in the following Figure 1.

7.3.2. Guests spending rates group

The following Table 6 explains the monthly guests spending rates of the hotel under study during 2003 as well as the spending power for the single guest.

7.4. Monthly Guests Spending at the Hotel Under Study

Referring to Table 6, the spending power mean for the single guest during 1998 was JOD 120 as the spending average on

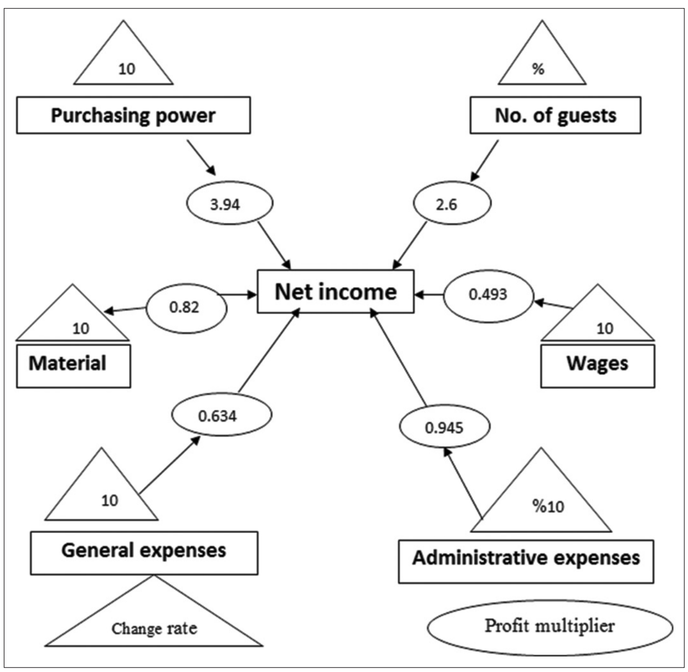
Table 5: Numbers of occupied rooms and occupancy rates

Month	1	2	3	4	5	6	7	8	9	10	11	12
Occupied rooms	250	200	280	300	330	400	450	420	350	300	230	300
Occupancy rates (%)	42	33	47	50	55	67	75	70	58	50	38	58

Table 6: Guests spending rates of the hotel

Month	Number of guests	Total general spending	General spending mean a month for one guest	Single guest spending mean on		
				Accommodation	Food	Hoteling
1	65	4500	69.23	34.5	19.725	15
2	40	3750	93.75	52.5	23.25	18
3	60	5700	95	64.5	22.5	8
4	70	7350	105	67.5	22.5	15
5	80	7500	93.75	52.5	23.25	18
6	130	16050	123.46	75	30.465	18
7	170	22500	132.35	90	33.345	9
8	220	33750	153.41	90	52.5	10.9
9	130	19500	150	90	52.5	7.5
10	90	9000	100	60	16.005	24
11	65	6900	106.15	75	23.655	7.5
12	80	7500	93.75	60	23.25	10.5
Total	1200	144000		61.67%	26.07%	12.26%

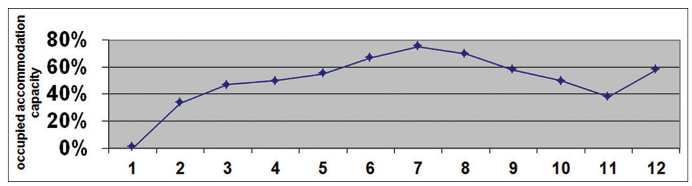
Figure 1: Result of profit sensitivity analysis



accommodation took the highest rate (61.67%) while the spending mean for the single guest on food was (26.07%) and on other hotel services (12.26%).

The former data also reveal another important fact which is the relationship between the general mean of the spending power of the single guest on all services and the time period which is considered as a revival or dormancy period for the hotel. As there is a positive relationship between the spending power mean in summer months which are revival months and a negative relationship between the spending power and the rest of the months which represent a period of recession in the hotel under study as stated in the following diagram (Figure 2).

Figure 2: Occupied accommodation capacity



Using the initial data stated in the previous table, the activities profitability rates were applied on this hotel forming the following Table 7.

From the information stated in Table 7 We find that accommodation represents the first and most important activity to generate revenues as the profitability rate of this activity is 61% in average, followed by the activity of food and drink at 25% then the profitability rate of the other hotel activities occupied the third rank with 13% in average during 2003 attributed to their generated revenues.

This fact means that it explains to the hotel management the activities of the higher profitability rates which should receive the biggest share of the management's efforts in planning and monitoring processes with the necessity of not stipulating the necessary relationship among the hotel activities which have high profitability rates and spending power mean.

7.4.1. Hotel activities profitability rates group

The hotel activities which generated monthly revenue during 2003 to the hotel under study are represented in the following activities:

1. Accommodation.
2. Food and drink.
3. Other hotel activities.

The following Table 8 shows the revenues and costs of each of the aforementioned activities.

7.4.2. Hotel operation costs rates group

The direct costs rates of the monthly operation of the hotel under study during 1998 are the costs of accommodation and food and drink as well as the other hotel activities which represent a basic axis in the process of financial analysis. To clarify that matter we must look at Table 9 Which represents the monthly direct costs rates.

For the comparison to be performed on sound bases, the linear rates must be determined for the operation costs elements in all the hotels of the Hashemite kingdom of Jordan as shown in the following Table 10.

Comparing Tables 7 and 9 with Table 10, we notice that there is deviation from the typical rate of accommodation revenue which ranges between 45% and 50% of the total revenues of the hotel under study. This means that the hotel revenues represent the accommodation aspect of high profitability, the rate of typical revenue of food and drink represent 35-40% of total proceeds. Comparing the revenue of food and especially of this hotel, we find they go out of the rate in all most of year, while they fall within the rate in the end of summer months (8 and 9). This means that this hotel depends on the revival period to increase its annual income in summer.

Table 7: The monthly activities rates group of the hotel understudy in 2003

Month	Accommodation profitability rate (%)	Food and drink profitability rate (%)	Other hotel activities profitability rate (%)
1	49.84	28.49	22
2	56.00	24.80	19
3	67.90	23.69	8
4	64.29	21.43	14
5	56.00	24.80	19
6	60.75	24.68	15
7	68.00	25.20	7
8	58.67	34.22	7
9	60.00	35.00	5
10	60.00	16.00	24
11	70.65	22.28	7
12	64.00	24.80	11
Mean	61	25	13

Going back to the rate of other activities of the hotel and comparing them with the typical rate from 5% to 10%, we find that it obviously goes out of the rate. This indicates the decrees of those costs compared to their revenues proceeds.

It is important to study the group of indirect costs rates and the monthly operation of the hotel under study during 2003 which are the rates of general and administrative costs, maintenance and repair costs and energy and lighting to identify the competency of the hotel management in operating those activities (Figure 3).

Viewing the former table we find that the highest rate of administrative and general expenses were in the 2nd month considering that the rate of administrative and general costs are attributed to the revenues of the month at 100% from the month's revenues while the lowest rate was in the 7th, 8th and 9th months at 16.67% and by going back to the typical costs rate for this type of costs we find them range between 5% and 10% from total revenue - In comparison with the actual rates of this hotel under study we find that in average they reach 41.67% and this means the rise of the rate in this hotel (Table 11).

As for sales promotion rate, the highest rate was 1.56% while the lowest was 1% even though the typical rate ranged between 5% and 10%. That is the costs were less than the typical rate and this makes us inquire about the reason. As for energy and lighting rates which ranged between percent 1.46% and 3%, we notice that the typical rate for this type of expenses ranges between 4% and 10%. This also makes us wonder. Similarly, we find that the highest rate of maintenance and repair costs was 3.3% while the lowest was 1.25% and the typical rate ranged between 3% and 5%.

In general, the general and administrative expenses were higher than the typical rates while the expenses of sales promotion, energy and lighting as well as repair and maintenance were less than typical rates.

8. RESULTS

The study produced the following results:

- Hotel management consists of two main factors which are the spending power mean of the single guest and the number of guests in that hotel.

Table 8: The hotel activities revenues and costs of the hotel under study

Month	Number of guests	Total spending	Accommodation revenues	Accommodation costs	Food revenue	Food costs	Other revenues	Other costs
1	65	4500	2242.5	975	1282.13	483.96	975	390
2	40	3750	2100	600	930	715.38	720	240
3	60	5700	3870	900	1350	450	479.7	359.78
4	70	7350	4725	1050	1575	525	1050	420
5	80	7500	4200	1200	1860	600	1440	480
6	130	16050	9750	1950	3960.45	975.11	2340	630
7	170	22500	15300	2550	5668.65	1274.7	1530	1020
8	220	33750	19800	3300	11550	1650	2399.1	1319.51
9	130	19500	11700	1950	6825	975	975	630
10	90	9000	5400	1350	1440.45	675.21	2160	1440
11	65	6900	4875	975	1537.58	487.52	487.5	390
12	80	7500	4800	1066.66667	1860	885.71	840	480
Total	1200	144000	88762.5	-	39839.25	-	15396.3	-

Figure 3: The general expenditure means a month for a single guest

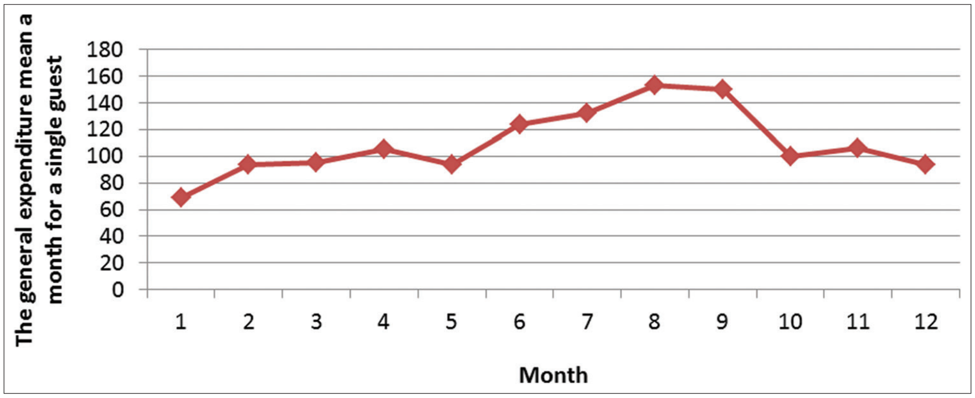


Table 9: The rates of direct operation costs of the hotel under during 2003

Month	Accommodation activity costs rate (%)	Food and drink activity costs rate (%)	Other hotel activities costs rate (%)
1	43.48	37.75	40.00
2	28.57	76.92	33.33
3	23.26	33.33	75.00
4	22.22	33.33	40.00
5	28.57	32.26	33.33
6	20.00	24.62	26.92
7	16.67	22.49	66.67
8	16.67	14.29	55.00
9	16.67	14.29	64.62
10	25.00	46.88	66.67
11	20.00	31.71	80.00
12	22.22	47.62	57.14
Mean	23.61	34.62	53.22

Table 10: Some typical rates for the elements of revenues and costs of hotel operation in the Kingdom

Description	Range of rates	Basis
Revenue elements		
Accommodation service	From 45% to 50%	From total revenue
Food and drink service	From 35% to 40%	From total revenue
Other hotel services	Form 5% to 10%	From total revenue
Direct costs elements		
Accommodation material and ways	From 15% to 25%	From its proceeds
Food and drink service	From 65% to 80%	From its proceeds
Other hotel services	From 40% to 70%	From its proceeds
Indirect costs elements		
General and administrative expenses	From 5% to 10%	From total revenue
Management and sales promotion costs	From 5% to 10%	From total revenue
Fuel, energy and lighting	From 4% to 10%	From total revenue
Maintenance and repair	From 3% to 5%	From total revenue

Source: Hotel management records/Ministry of Tourism

- The changing and fixed costs elements are of the important controlling factors in the hotel activity and need persistent planning and follow up.

Table 11: Administrative costs rate

Month	General and administrative costs rate (%)	Sales promotion costs rate (%)	Energy and lighting costs rate (%)	Maintenance and repair costs rate (%)
1	83	1.25	1.46	1.56
2	100	1	1.46	1.56
3	66	1.35	1.56	1.46
4	51	1.25	1.56	1.56
5	50	1.35	1.9	1.77
6	23.36	1.56	2	1.9
7	16.67	1.56	3	3
8	11.11	1.56	2	3.3
9	19.23	1.35	2	2
10	41.7	1	1.56	1.9
11	54	1	1.46	1.46
12	50	-	-	1.25
Mean	41.67	1.4		2.2

- The spending power mean of the guest is the strongest controlling factor in affecting the net profits of the hotel.
- Using analytical financial methods and tools to increase the efficiency of planning and monitoring over the hotel activity.
- The study proved that the analytical financial methods are able to order and classify the controlling factors and identifying the trends of hotel performance and showing the importance of those factors.
- Accommodation activity is the first and most important activity in terms of profitability. Therefore, it should receive the greatest share of the management's care and attention.
- The financial analysis methods and tools used in the hotel sector give the decision maker the data and information which contribute in building and making the future decision.
- Monitoring costs elements and extracting the deviations with their reasons and taking suitable treatment steps and preparing and following up the treatment plan.

9. RECOMMENDATIONS

The researcher recommends the following:

- Caring for conducting researches and studies related to hotel activity to elevate the level of this industry as the Arabic library lacks such studies.

- Giving more attention to the qualified and trained human qualities which contribute in building an affective tourism sector which positively affects the hotel revenues and increases the national income.
- Increasing the costs of sales activities in marketing plans to attract tourists from inside and outside the country which reflects upon the total proceeds of the hotel and the country.
- The expansion and hotel establishment movement should be accompanied by tourism promotion based on true and accurate information to build touristic heritage for the country.
- Caring for the internal and external, financial and non-financial, information to increase the effectiveness of decision making.
- Finding a distinctive feature for the hotel sector in Jordan to be able to increase the number of guests and the productive power mean of the guest.

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