

THE USE OF COST-VOLUME-PROFIT ANALYSIS IN TURKISH HOTEL INDUSTRY

Halil Akmese, Asst. Prof.

Necmettin Erbakan University, Tourism Faculty, Department of Tourism Management, Konya/Turkey

Ahmet Buyuksalvarci, Assoc. Prof.

Necmettin Erbakan University, Tourism Faculty, Department of Tourism Management, Konya/Turkey

Kadriye Akmese, PhD. Candidate

Necmettin Erbakan University, Social Sciences Institute, Department of Tourism Management

ABSTRACT

Increases in mass production since the beginning of twentieth century led to the development of new evaluation tools and techniques for the sake of a better appraisal regarding to business activities. Cost volume profit analysis is one of the major managerial accounting techniques which is used for predictive purposes and reveals indicative results for a detailed planning within the context of management process. It is apparent from the literature and industry applications that majority of the managerial accounting techniques are based on production or commercial operations. On the other hand service industry businesses differ in their operations and managerial evaluation due to the distinctive features such as services provided being time-bound. Differentiated features of service industry necessitate some modifications on the managerial accounting techniques which are basically developed for production or commercial operations. In some cases certain managerial accounting techniques might become useless or rarely used. Major aim of this study is to determine the employment level and main purposes of use regarding to the cost volume profit analysis in hotel industry. Chain hotels operating in Turkey constitute the sample of this research. Research data gathered by means of a survey questionnaire which is based on the previous research of Dragan Georgiev is analyzed and findings are demonstrated by means of basic statistical techniques.

Keywords: managerial accounting, CVP analysis, accommodation industry, break-even point

Jel Codes: M40, M41, M42

INTRODUCTION

In tourism sector, as in many other industries, rapid developments experienced as a result of globalization. In order to keep pace with the increasing competition conditions in the context of these developments, businesses are obliged to make effective strategic management decisions. Management and cost accounting provides information that will be a guide to the accommodation industry about making these decisions. Management accounting applications benefit from the data generated by the financial accounting and cost accounting to increase efficiency and profitability of the business. By using this data, consisting of costing, decision-support, budgeting and performance evaluation in their sub-systems assists the strategic and routine decisions (Arsu and the others, 2015: 18).

Cost- volume- profit analysis referred as one of the most effective tools of cost accounting and management accounting. Through this analysis, businesses can make decisions about stocks related to the future periods, production and pricing, effectively. By this way, they are able to gain the advantage of competition over competitors by forming an effective cost control.

It is directly related to the size and the classification of the business that the existence of a separated management accounting unit or the use of application tools within the scope of management accounting and cost accounting in accommodation industry (Sarı and Çam, 2014 : 249). While it is possible to see management accounting and cost accounting applications in large scale, 4 or 5 stars hotel businesses, it might be impossible to see these applications in small accommodation industry businesses.

In this study, a research has been conducted in Dedeman and Hilton, chain hotels of 4 or 5 stars, operating in Turkey, about application of cost- volume- profit analysis, which is one of the most effective tools of cost and management accounting and implementation and awareness levels of the hotels on this subject are surveyed.

COST- VOLUME- PROFIT ANALYSIS AND ITS IMPORTANCE IN TERMS OF ACCOMMODATION INDUSTRY: LITERATURE REVIEW

Cost- volume-profit analysis is one of the basic application tools of cost accounting and management accounting. Therefore, during the literature review phase of this study it is found that there have been some studies related to the

cost and management accounting applications in accommodation industry.

Rasim (2004) has concluded in his research including 500 business licensed hotels that, all of these businesses have an accounting department and %50 of them use traditional cost accounting systems, some of the other %50 use simple cost calculation, and some of them use activity based costing system.

According to the result of the survey which had been made by Didin and Koroğlu (2008) to the 165 hotels in Marmaris district, approximately the half of the hotels in the region have an accounting department that are operating independently. In addition, while cost items are mostly consisting of the labor costs, room revenues are constitute the main stream of the sales revenue.

Özdoğan (2010) has revealed findings about the configuration of management accounting system and use of system tools of the 13 chain establishments of Anemon Hotels. According to the findings of this research, it might be concluded that different cost accounting methods are used for the analysis of different situations, but the actual costing method is used in general. In addition, it has been identified that modern management accounting techniques, which are mainly activity-based costing and process costing, have not been used in Anemon Hotels. As a result, executives of Anemon Hotels were evaluated as they are aware of the importance of management accounting.

Koroğlu, Biçici and Sezer (2011) have studied on the hotels operating in Marmaris, to describe the relationship between cost controlling and achievable competition superiority. At the end of the study it has been identified that cost controlling methods has changed as long as the number of the stars of the hotels has increased and most of the hotels in 2 or 3 star category have not given attention to cost controlling systems.

Atmaca and Yilmaz (2011), at the end of their survey on the hotels operating in the Marmara region in 5 stars category, have identified that the approaches of surveyed accommodation industry businesses were positive to cost controlling, accounting and cost accounting applications.

Tanç (2012) surveyed 68 hotels operating in Cappadocia region, to identify management accounting implementations in accommodation industry businesses. It has been aimed to get information about the hotels' cost data, cost approach and management accounting tools. At the end of the study, contrary to Rasim (2004)'s research, it was identified that there was not a separate cost accounting system in the hotels throughout the region, full costing method was applied mostly and variable costing method has never been used. As a result, it has been determined that there was not an efficient cost and management accounting system in the hotels operating in this region and they do not have the knowledge about the tools of modern management accounting.

Sarı and Çam (2014) have surveyed 153 licensed accommodation industry businesses operating in Turkey, to research cost and management accounting implementations of the businesses and to measure the level they have benefited from the implementations. As a result of the conducted survey, it was found that the majority of the businesses used the specific order costing system. Different from Didin and Koroğlu (2008)'s findings, the item generating the great deal of cost has emerged as direct raw materials and supplies expenses. In addition, it was determined that the vast majority of businesses surveyed, have used cost data to determine the selling price.

Ergül and Okutmuş (2015), by means of their field research on a 5 star hotel operating in Antalya, aimed to ensure the effectiveness and cost minimization by accurately determining the costs, accrued in the business, with the integration of target costing, value chain analysis and kaizen costing methods, and determined the items that need to be minimized in the accommodation industry business.

As a result of Arsu and others' (2015) research on 65 hotels in the Cappadocia region, it was determined that these businesses strictly rely on detailed budgeting system applications of traditional management accounting. This finding has been based on simple implementations on which short-term planning have been made. These results support the findings of research managed by Tanç (2012).

References of Kırloğlu and Doğan (2016) reveal that a study conducted by Pavlatos and Paggios (2009) in the hotel business in Greece is aimed to determine management accounting tools used in accommodation industry. At the end of the research it has seen that traditional management accounting tools have highly been accepted and it's identified that modern management accounting techniques (such as activity-based costing, activity-based budgeting) also have gained importance.

Kırloğlu and Doğan (2016), in their literature study of the academic development of business management accounting subjects in accommodation industry, between the years 2000 and 2014, have reached 20 graduate theses as found in the center of the national center of theses of Turkey. Insufficiency of this number and the absence of theses in this field are taking part among the results of the study.

When these studies and their findings are analyzed, it might be claimed that in large-scale accommodation industry businesses there are separate accounting departments and it is apparent that management and cost accounting tools are used actively. On the other hand, it can be difficult to see the presence of even a separate accounting department

in the small-scale businesses. In addition, when the studies were considered in terms of years, in recent years besides traditional accounting tools, modern accounting tools have been started to use.

METHODOLOGY

Within the scope of this study cost and management accounting applications and cost-volume-profit analysis as a management accounting tool in 4 and 5 stars category of Dedeman and Hilton chain hotels, operating in Turkey, were surveyed in order to measure the awareness of cost- volume-profit analysis. It has been tried to contact all the Dedeman and Hilton hotels operating in Turkey but only 34 responses have been received by electronic means. Research questionnaire is based on the Geaorgiev's previous study titled "Application of cost- volume-profit analysis in the hotel industry (based on survey data of high- ranking hotels in the North- east region of Bulgaria)", published in 2014. The questionnaire and its components have been rearranged according to the characteristics of the accommodation businesses and their activities in Turkey. In the research, firstly, it's has been tried to determine the management accounting application tools which are frequently used by hotels subjected to survey. The survey findings are summarized in the following findings section.

FINDINGS

Research findings regarding to each category of question groups are summarized separately. Table 1 below depicts the responses related to the cost accounting category of management accounting tools frequently used. It is apparent that most of the managers heavily rely on full cost approach in order to evaluate the organizations' costs and cost structures. On the other hand activity based costing seems to be the least employed approach by managers. Most of the hotels participating in the research are using full costing among the cost accounting tools (82.4%). This result supports Tanç's (2012) findings. Moreover, the use of the traditional method of cost distribution is partially dominant (58%). In this respect research findings reveal similarities with the study of Rasim (2004). However, activity-based costing of the modern methods is also used (50%). The conclusion that can be drawn here is that, unlike most of the findings reviewed within the scope of this study, accommodation establishments started to increase the use of modern management accounting tools and techniques.

Table 1: Application levels of management accounting tools by managers

Management Accounting Tools	Is it applied?		
	Yes (%)	No (%)	It is to be introduced. (%)
Section A: Cost Accounting			
Evaluating simplified cost	70,6	29,4	
Evaluating full cost	82,4	11,8	5,8
Evaluating marginal cost	70,6	29,4	
Evaluating ABC for the distribution of indirect costs	50	37,5	12,5
Use of conventional methods for the distribution of costs	58,8	29,4	11,8

Regarding to the evaluation of achieved results by means of management accounting tools summarized in table 2, it might be clearly stated that all managers participating to the research are using non-financial factors related to guests (feedback from guests), return on sales and benchmarking. Contrarily nearly half of the participating managers responded that they are using balanced scorecard and economic value added in order to evaluate achieved organizational results. While evaluating revenues, it seems that return on sales has a great importance (100%) as a management accounting tool. However, data related to non-financial factors related to customers have great importance as well as return on sales. Here, it can be understood that financial success is evaluated based on the attention paid to non-financial elements.

Table 2: Use of management accounting tools in evaluation of achieved results by managers

	Is it applied?

Management Accounting Tools	Yes (%)	No (%)	It is to be introduced. (%)
Section B: Evaluation of achieved results			
Profitability factors (operating profit and growth in sales)	82,4	17,6	
Non-financial factors relating to the hotel guests	100		
Non-financial factors relating to innovations	94,1	5,9	
Non-financial factors relating to staff	88,2	11,8	
Evaluation of return on investment	75	12,5	12,5
Evaluation of economic profit (residual profit)	68,8	25	6,3
Economic value added	56,3	43,7	
Return on sales	100		
Balanced scorecard	53,3	40	6,7
Benchmarking (performance compared to competitors)	100		

Regarding to the use of management accounting tools for the sake of budgeting as summarized in table 3 it might be stated that evaluating and monitoring the costs and planning the annual operations have great importance (100%). Preparation of business breakeven budgets and activity based budgets are among the important reasons (76.5% each). It is apparent that management accounting tools are always used in order to monitor costs and evaluate managers by hotel managers relating to budgetary considerations. Slightly more than half of the respondents claimed that flexible budgets are used as a management accounting tool. It might be said that flexible budgets are the least referred management accounting tool by hotel managers.

Table 3: Use of management accounting tools in budgeting by managers

Management Accounting Tools	Is it applied?		
	Yes (%)	No (%)	It is to be introduced. (%)
Section C: Budgeting			
Planning annual operations	100		
Monitoring costs	100		
Coordinating activities of different operating centers	76,5	17,6	5,9
Evaluating managers	100		
Preparing break even budgets (zero-based budgets)	76,5	23,5	
Preparing flexible budgets	52,9	41,2	5,9
Activity based budgeting	76,5	23,5	
Developing strategic plans	88,2	5,9	5,9

Regarding to the use of management accounting tools for the sake of gathering data for decision making as summarized in table 4 it might be claimed that all are nearly used on the same frequency but customer profitability analysis seem to be the leading purpose. Customer profitability analyses take the first place in executive decisions (87.5%). While product profitability analysis is ranked as the second (86.7%) and the cost-volume-profit analysis as the third (81.3%) important reasons as shown in table. However, there is not much difference between the rate of data given, actually shows that these three management accounting tools are used effectively and frequently by hotel managers. It might be stated that the use of these three analyses in conjunction might lead to more efficient and effective decisions.

Table 4: Use of management accounting tools in gathering data for decision making purposes by managers

	Is it applied?

Management Accounting Tools	Yes (%)	No (%)	It is to be introduced. (%)
Section D: Data on decision making			
Product profitability analysis	86,7	13,3	
Customer profitability analysis	87,5	12,5	
Cost-volume-profit relation analysis	81,3	12,5	6,2

With respect to strategic analysis section responses summarized in table 5 it might be stated that sector analysis is the most frequent management accounting tool used by hotel managers (100%). Then, SWOT and competitive power analyses are used respectively (93.8% each). Findings revealed that all of the participants are benefiting management accounting tools while making strategic analysis about the sector they are operating. It might be claimed that management accounting tools are especially used in analyzing competitive issues.

Table 5: Use of management accounting tools in strategic analysis by managers

Management Accounting Tools	Is it applied?		
	Yes (%)	No (%)	It is to be introduced. (%)
Section E: Strategic analysis			
Sector analysis	100		
Analysis of competitors' strengths and weaknesses	93,8	6,2	
Analysis of competitiveness	93,8	6,2	
Long term forecasts	81,3	12,5	6,2
Activity based management	73,3	20	6,7

In the second part of the survey, participants were asked to provide information about cost-volume-profit applications. Responses for the planning functionality of CVP analysis are summarized in table 6 below. It is apparent from the responses that cost-volume-profit analysis is used frequently by the businesses subjected to this research. Especially in the planning stages for determining the volume of activities that provide the volume of activity in order to attain the desired profit level seems to be the main reason for hotel managers (93.7%). On the other hand it seems that cost volume profit analysis are less referred in case of specific products or services are being evaluated (73,3%).

Table 6: Applicability and information utility of CVP analysis

Function	A study of the impact of changes in volume upon changes in revenue, costs and organization financial results	Applied?		To be introduced (%)
		Yes (%)	No(%)	
Planning	Defining the volume of activity which leads to a breakeven point, with known product/service price and costs – a critical point in quantity and value	73,3	26,7	
	Defining the volume of activities aiming to reach the desired profit level	93,7	6,7	
	Conducting analysis which aims to identify the sensitivity of operating profit when changes occur in the following factors - volume, pricing, variable costs per unit product and fixed costs	80	20	
	When making decisions about the product mix – what services, in what volume, prices, fixed and variable costs, in view of limitations to capacity.	87,5	12,5	

Regarding to the use of cost volume profit analysis for controlling purposes it might be stated by reference to table 7 that the variance analysis carried out to determine the deviations in revenues, costs and specific activity volumes

seem to be leading aim in using CVP analysis (85.7%). Research into areas of responsibility with evaluation of performance and activities in terms of revenue generated and costs incurred for a specific volume of activities seem to be the secondary purpose for hotel managers (80%).

Table 7: Applicability and information utility of CVP analysis

Function	A study of the impact of changes in volume upon changes in revenue, costs and organization financial results	Applied?		To be introduced (%)
		Yes (%)	No(%)	
Control	Research into areas of responsibility, with evaluation of performance and activities in terms of revenue generated and costs incurred for a specific volume of activities	80	20	
	Analysis of allowed deviations from the point of view of revenue, costs and profit for a specific volume of activities	85,7	14,3	

As it is apparent in table 8 factor analysis of the impact of the volume factor upon revenue and costs of previous periods and use of marginal profit (unit cost minus food cost) as basis for setting menu prices in restaurants and bars seem to be the leading utilization area for using cost volume profit analysis regarding to its managerial decision making function (100% each). Taking into consideration a single offer with special conditions attached seems to be the second most commonly (88,2%) and decisions to start, continue or stop an activity as the third most commonly (87,5%) utilized decision making areas of CVP analysis by hotel managers.

Table 8: Applicability and information utility of CVP analysis in managerial decision making

Function	A study of the impact of changes in volume upon changes in revenue, costs and organization financial results	Applied?		To be introduced. (%)
		Yes (%)	No(%)	
Taking Managerial decisions	Making decisions of the type "Shall I buy it or manufacture it", on the basis of size of variable costs, with two or more alternative decision scenarios	76,5	23,5	
	Taking into consideration a single offer with special conditions attached (availability is regarded in view of variables such as marginal costs) for example, to extend the guest's stay at a preferential rate or a last minute offer	88,2	11,8	
	When decisions to start, continue or stop an activity are taken, taking into account the volume of activities and associated revenue, fixed and variable costs involved	87,5	12,5	
	Analysis of the impact of changes arising in the structure of the product mix (basic and ancillary services) with limited financial resource	81,3	18,2	
	Factor analysis of the impact of the volume factor upon revenue and costs of previous periods, and elements which determine said factor (occupancy * load factor or number of guests * average duration of stay, bed nights)	100		
	Use of marginal profit (unit cost minus food cost) as basis for setting menu prices in restaurants and bars	100		
	Price setting against marginal profit (revenue from service minus variable costs) with availability of hotel beds (fixed costs are ignored)	80	20	

CONCLUSIONS AND RECOMMENDATIONS

If the use of cost volume profit analysis among the accommodation managers is evaluated generally it might be

claimed that most of the managers are benefiting from this management accounting technique with varying purposes. Findings revealed that approximately 86% (arithmetic average) of the managers are using CVP analysis. A small majority seems to be uninterested about the use of CVP analysis for various purposes. It might be recommended that hotel managers can use CVP analysis along with other management accounting tools in order to enhance their decision efficiency. Regarding to the approximate 14% of non-users of CVP analysis it might be stated that they are not using this tool and additionally they are all not intending to use this tool. For the sake of developing this research subject the reasons or obstacles preventing some managers from benefiting CVP analysis might be subjected to further research studies. When it is discussed in general, CVP analysis is mostly used by the businesses surveyed. CVP analysis can be used for different purposes by different businesses. Participants use this analysis in different units, for different purposes. As a result, it is seen that the analysis method is used generally by the businesses, as it has much contribution to the profitability and sustainability of the business. CVP analysis might also contribute to the business to gain competitive advantage in conjunction with other methods of analysis as compared to used alone.

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BIOGRAPHIES OF AUTHORS

Asst. Prof. Dr. HALİL AKMESE

Dr. AKMESE was born in 1980. He started his M.Sc. in Department of Business Administration at Selçuk University after graduating from Tourism and Hotel Management Department of Bilkent University with the degree of Bachelor of Science. He worked as a lecturer between 2003 and 2014 at Social Sciences Vocational School of Selçuk University. He completed business administration Master's degree program at Social Sciences Institute in 2006 and received doctorate diploma in Business administration in 2013 from Social Sciences Institute. He has become an assistant professor in 2014 at Necmettin Erbakan University. He has been working at Tourism Faculty and lecturing accounting, finance, management, financial statements analyses, cost accounting, sustainability and

corporate social responsibility courses.

Assoc. Prof. Dr. AHMET BUYUKSALVARCI

He was born in 1971. Dr. BUYUKSALVARCI started M.Sc. in Department of Business Administration at Selcuk University after graduating from Business Administration Department of Başkent University. After completing M.Sc. program, he worked as a lecturer in Beysehir Vocational School during 2002-2006. He finished Ph.D. program in Business Administration at Selcuk University in 2007. He became Assistant Professor in 2008. He has been working as an Associate Professor of Finance in Tourism Faculty of Necmettin Erbakan University since 2012. Dr. Buyuksalvarci is also a member of some international academic journals worldwide.

KADRIYE AKMESE (Ph.D. Candidate)

She was born in 1989. She has graduated as a Bachelor of Science in Economics from the Economics department of Selcuk University in 2012. She also has Bachelor of Science degrees in business administration, public administration and accommodation management departments of various universities. She received her Master of Art degree from the Business Administration department of Social Sciences Institute of Necmettin Erbakan University in 2015. She has been studying as a philosophy of doctorate candidate at the department of Tourism Management of Social Sciences Institute of Necmettin Erbakan University since 2015. She has study papers in accounting, tourism management and business administration.