

The Place of Management Accounting in Turkish Higher Education System

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Abstract

Accounting is an information system and it provides information to the external and internal users. While financial accounting provides information to the external users, management accounting presents the information to the internal users. Among of these internal users, managers are in the first rank as a very intensive user of management accounting. The information that is taken from financial accounting is also important for managers but they are not enough to manage the company for managers. So it can be said that managers need management accounting information during planning, organizing, directing, coordinating and controlling of activities of their companies. During this process, key point is to make connection between line management and management accounting applications with strategic approach. Thus management accounting applications must be used from the beginning of research and development stage to after selling service in an integrated approach. Therefore, business administration students should use all of the information that were learned during their education to give support to the line management with using management accounting techniques under the light of strategic managementidea .Nowadays it is not possible to give enough support to these duties with using traditional management accounting techniques; In this study after explain chronicle developments in management accounting, advanced management accounting applications will be given under the light of strategic base and the place of the management accounting in Turkish accounting education system will be researched. The study will be finished with conclusions and successions.

Key words: Management Accounting, Business Management, History of Management Accounting, Advanced Business Environments.

Jel Classification: M11, M21, M41

I. Introduction

Today's economic decisions differ from those of 10 or 20 years ago. As decisions change, demands for information change. Accountants must adapt their systems according to the change in management practices and technology. In other words developments such as shifting from a manufacturing based to service based economy, increased global competition and advances in technology have been forcing to change the cost and management systems of companies from the traditional to contemporary. To explain this change, the comparison of traditional and contemporary business environments in Exhibit 1 can be used.

The differences presented in Exhibit 1 show us that traditional management accounting techniques cannot be used in contemporary business environment. According to the Exhibit 1, the effects on management according application of new contemporary business environment can be explained under these three main titles as Manufacturing, Marketing, and Management-Organization.

From the viewpoint of manufacturing, with using flexible production systems that are also called as computer integrated technology applications; cost, time, marketing, and quality advantages are provided. Costs are decreased by elimination of non-value added activities; high quality, low costs, and zero defects are provided by total quality applications; new products can be produced to replace the products of which their life cycles have decreased. With using new product developments; short production times, customer satisfaction, and so on are increased. To have product functionality and required labor skills; individuality, team study and high level skills are needed.

From the view point of marketing, customer oriented approach becomes very important under the condition of large number of product variations and short product life cycle. In this approach, target costing is seen as an important concept. Since target costs are calculated at the stage of design, cost control is started before production and when target cost is lower than desired cost, production will be started. At the same time, sales on internet, using new distribution channels and customer services after sale will be important for the success of marketing.

From the viewpoint of management and organization, hierarchical structure is replaced with network based organization structures and teamwork. Employees have more responsibility and control, and coaching is seen rather than common and control. In this kind of advanced environment, management is focused on the long term, financial and nonfinancial measurements are used for the evaluation of the success of management.

In short, cost, efficiency, quality, time, innovation, continuous development and bench marking in the today's companies were affected by the contemporary developments. Thus, cost structures of company and products or services, production costing, inventory management and other activities of traditional management and cost accounting applications should be adapted according to the advanced environment conditions. To overcome with these huge information and complexity, computers and statistical and mathematical applications should be also used during decision making and reporting process.

II. Chronicle Developments in Management Accounting

Evolution of Management Accounting that was identified by the International Federation of Accountants (IFAC) in 1998 shows us the chronicle developments of management accounting as a summary in Exhibit 2.

As seen in exhibit 2, management accounting has transformed from cost determining stage to value creation stage and each stage is related with the other. Every stage contains the preceding stages but this process provides the opportunity for the new stages to adapt themselves according to the changing conditions and new demands.

Stage 1 is called as *Cost Determination and Financial Control* and it includes pre – 1950 period. In this stage, focus is on unit cost calculation for stock valuation and profit measurement purposes. Production technology was simple, identification of direct material and direct labor were not difficult, production process was labor intensive and factory overhead costs were allocated to the products (object) with direct labor basis. At the same time, budgets and financial control of production process activities were seen as

a supplement tools. Some stock evaluation techniques like Last in First Out (LIFO), First in First Out (FIFO) and the other applications such as ratio analysis, budgeting and financial statement analysis were developed in this stage. Since the power of companies in markets; competition, quality and innovation were not very important factors in that time.

Stage 2 is called *Information for Management Planning and Control*. It includes the time period of 1965-1985. In this stage, companies noticed the role the information for decision making process. Therefore the staff position of the accounting to the line managers was important. To do this, some new management accounting techniques such as marginal costing, cost volume profit analysis, transfer pricing, responsibility accounting and standard costing were developed in this stage.

Stage 3 is called as *Reduction of Resource Waste in Business Processes*. It includes the time period of 1985-1995. In this stage, focus was on the cost reduction with effect of the increasing competition, development in computer technology and changing cost structure of production. With using activity based costing companies not only got the right factory overhead cost allocation opportunity but also the activity analysis opportunity. Activity based costing and just in time inventory and production control applications that were developed in this stage provided the opportunity to the main of reduction of resource waste in the business process and elimination of non-value added activities.

Stage 4 is called as *Creation of Value through Effective Resources Use*. It includes the time period after 1995. In this stage, focus is on creation value. To do this, managers must use effective of the resources and these resources are concerned directly with customer value, shareholder value and organizational values including information as integrated under the light of strategic management idea. In this way, Total Quality Management (TQM) Activity Based Management (ABM), Benchmarking and Reengineering methods have been developed and applied in contemporary companies today¹. After discussing chronicle developments in management accounting in the

1) For detail information Robert S. Kaplan, Anthony A. Atkinson, *Advanced Management Accounting*, Third Edition (New jersey: Prentice Hall, Inc., 1998), and Colin Drury, *Management and Cost Accounting*, Fourth Edition, (London: International Thomson Business Press, 1996).

world, it can be shown the relationship between business administration and management accounting.

III. Relationship Between Business Management and Management Accounting

Management accounting that collects relevant financial and nonfinancial information that are needed by managers; determines every problem areas in the company and develops and presents all of the alternatives about the problems. Managers select one of them and apply it with using their experiences and knowledge. This relationship can be explained under four main titles as Determination of Strategies, Allocation of resources, Cost Planning and Control, and Performance Measurement.

1. Determination of Strategies

After strategic targets had been developed, determination of the objectives of a company with the support of analyses of strength and weakness is very important to get the most effective action style for a company. In other words strategy is a method or plan chosen to achieve the objectives with covering the opportunities and advantages that the company has. While external environment analysis that includes competitors, customers, suppliers, economic, political and socio cultural developments show us threats and strengths of the company, analysis of organization structure, marketing, finance, production and human sources of the company give us internal environment factors. Our opportunities that occur according to the results of these analyses should be evaluated under the light of using our powerful aspects and minimizing our weaknesses.

For example while a company that wants to apply low cost strategy, it tries to use as intensive internal and external environmental analyses that are concerned to decrease production costs, for differentiation strategy innovation and quality will be the priority. During the stage of making all of these activities, duties of selecting relevant information among all of the collected data, determine alternative solutions and analysis of all of the

alternatives in detail will be made by management accountants as very close relationship with managers. For example, in the strategy determining stage not only internal business data like costs, productivity but also external data like important customers, competitors, and suppliers will be given to the managers by management accountants.

During the above explained strategy determining process management accountants should were on all of the strategic cost management, strategic cost analysis, life cycle cost management and so on subjects to provide relevant information to the managers. At the same time, in accordance with this purpose it should be remembered that cost accounting system must have been established beforehand. Unless it is not possible to make these kind of analyses and use above given advanced management techniques. Thus, for example activity based costing should be adapted in the company. With using activity based costing data, the other advanced management techniques can get needed data from the system. Under the light of above given explanation, it is open that management accounting is concerned from the beginning of Value Chain to the ending in a company as seen in exhibit 3.

2. Allocation of Source

After determining strategy, the sources of the company should be allocated to the organizational units. In other words, human resources, current assets, tangible and intangible assets of the company are allocated to the activities of company according to the economic rules. During this process, while non-value added activities are eliminated with using just in time inventory and production, at the same time currently needed asset amount can be reduced. According to the cost behavior and cost structure, flexibility and the other relevant data, the level of unused capacity can be kept in the minimum level. Then the cost of the unused capacity can be separated from production cost and right unit production cost can be calculated. According to the prepared effective cash budget cash deficit and surplus can be learned before and total quality application gives us cost reduction and high quality production opportunities. Fixed assets investments are very important because

of their high amount and unmanageable characteristics with using cost structure analysis, computer added design and target costing application in a flexible production situation, and resources can be used efficient. With the use of computer, internet and other communication technologies, needed data about customer and supplier distribution, costing, and innovation purposes for decision making can be collected in short time with low cost. Management accounting will present all of the needed financial and nonfinancial data to the managers for allocation sources to activities.

3. Cost Planning and Control

In this stage, managers will start to implement decisive strategy for the actions taken in the company. In other words, to implement the decisive strategies which are in accordance with the company targets programs, standards, budgets and various control tools should be prepared for the company activities. In other words line managers will make plans and accountants will explain them as numbers under the name of budgets, programs and other special reports. Then when the line managers implement these plans, company sources will be used. According to these consumptions accountants will record, measure and classify them. Later accountants will prepare performance reports by using planned data and actual data concerned with activities of company. These performance reports will be used by line managers to evaluate activities of company. This relationship can be seen in Exhibit 4.

During this stage, it is important to prepare flexible budgets according to the responsibility accounting and inside this system activities should be taken as a cost centers. They are not taken as departments that were used in the traditional systems, with this connection we can analyze of the activities and it is possible to eliminate non-value added activities, manage activities that would promote the workers to continue working on the development of value chain and to create innovative activities for the companies.

4 . Performance Measurement

Measuring performance is an internal part of any management control system. To be effective, not only financial measures but also nonfinancial measures should be taken together at the same time. When we report these, both of the measurements will be in a single report which will be called balance score card as seen in Exhibit 5.

Above given performance measurement system belongs to the advanced management accounting approaches. This reality shows us that performance measurement must be connected with determining strategy and its application. Therefore It can be said that strategic management, human resources management, marketing, production, total quality management, bench marking value and supply chain management, and continuous improvements that are modern management applications are very close concepts with performance measurement subjects as in an integrated approach.

All of these explanations show us the relationship between business management and management accounting. In an accounting department, studying accounting and working as a management accountant will prepare people for the very highest level of management. Since management accounting deals with all facets of an organization, it gives opportunity to get go in broad knowledge about the company. Therefore a number of surveys have showed that more chief executive officers began their careers in an accounting position than in any other area like marketing, production or engineering. Therefore management accounting course is very important in accounting education system and this course should be explained as an integrated approach from starting with determination of strategy to customer services after sales with using advanced management accounting techniques.

But many researchers showed that accounting educators need to revise their courses to prepare accounting students for contemporary conditions. In other words current accounting education serves the needs and desires of faculty members but it does not meet the needs of students for business life. According to the researches of Cable, Healy and Mathew who examined the most well-known seven managerial accounting textbooks in the world, they

found that there was a gap between practitioners and accounting textbooks concerning the knowledge needs of future management staff and senior accountants and accounting textbooks should be revised significantly to increase their usefulness². After discussing the relationships between business administration and management accounting, the place of management accounting in Turkish higher education could be manifested.

IV. Evaluation of Management Accounting Turkish Higher Education

1. Turkey Review of Management Accounting Education

1.1. Purpose of Review

Since management accounting is a science that produces both theoretical and applied information, is affected by economic and technological developments heavily. This affection makes learning process become important at management accounting.

Purpose of this review is to determine whether management accounting is given at undergraduate programme or not, if so, whether compulsory or optional, which subjects are included in course credit and content and whether meet today's needs.

1.2. Scope of Review

Since the highest level accounting education is given at departments of business administration (Turkish or English) in our country; review scope in our research is course programmes and course contents of Turkish or English business administration departments that take place in Economics and Administrative Sciences Faculties of State and Foundation Universities (or Economics, Administrative and Social Sciences or Business Administration Faculties). Education programmes of Vocational High Schools were kept out of scope.

2) Roberta J. Canle, Pattica Healy, Emil Mathew, "Teaching Future Management Accounting", *Management Accounting Quarterly*, Summer, 2009 Vol.10, No. 4 PP.44-50

Data was obtained from and commented through course programmes and course contents of Business Administration Departments via accessing websites of universities. Review was performed not only in all universities basis but also State and Foundation Universities differentiation basis. It is benefited from frequency and percentage distribution results during analysing obtained data.

Status of management accounting lessons at course programmes of Business Administration Departments is reviewed at whether takes place in programme or not, whether compulsory, course credit and content basis.

1.3.Evaluation of Research Results

1.3.1.Evaluation of Data – Result Correlation

There are active 104 State Universities and 65 Foundation Universities (yok.gov.tr) in 2012-2013 academic years in Turkey. 98 State Universities and 52 Foundation Universities were determined that have Faculty of Economics and Administrative Sciences (or Economics, Administrative and Social Sciences or Business Administration Faculties) at internet surveillance.

When these universities were subjected to evaluation in details; course programmes of 67 State Universities and 37 Foundation Universities were reached and investigation was done through 104 universities, concordantly. As a result; 104 of 150 Business Administration Departments, 69% of total, which are in the review scope of State and Foundation Universities, were reached.

Course contents of 60 State and 34 Foundation Universities which have management accounting course as compulsory or optionally were examined in details. Course contents of 23 State Universities and 10 Foundation Universities couldn't have been accessed through internet. Course contents evaluation has been performed over 61 universities in this regard.

1.3.2.Course Programme Evaluation of Business Administration Department

Frequency distribution about if Management Accounting course takes place in Business Administration Department programme is shown in Exhibit 6 as a result of surveillance.

It is seen that 60 out of 67 State Universities have Management Accounting course and just 7 doesn't have when exhibit 6 is examined. It is also seen that 34 out of 37 universities have the course but 3 universities doesn't have at Foundation Universities. In this regard, it is determined that 89.6% of State Universities and 91.9% of Foundation Universities have this course. It is seen that course exists with a ratio of 90.4% in all universities basis.

Frequency distribution about whether Management accounting course is must or elective is shown in Exhibit 7 as a result of surveillance.

It is seen that the course is must at 37 of State Universities and elective at 23 of them when Exhibit 7 is examined. It is also seen that the course is must at 28 of Foundation Universities and elective at 6 of them. It is determined that the course is must at 61.6% of State Universities and 82.4% of Foundation Universities in this regard. It is seen that the course exists with a ratio of 69.1% in all universities basis. Significant issue at this point is compulsion ratio of course at private universities have higher ratio with respect to state universities.

Weekly course hours (credits) frequency distribution of Administrative accounting at Business Administration Department is shown in Exhibit 8.

When exhibit 8 is examined; it is seen that 3 of state universities formed 2 hours, 56 of them formed 3 hours and 1 of them formed 4 hours course on their weekly course programme. On the other hand, it is seen that 2 of Foundation Universities formed 2 hours, 32 of them formed 3 hours course on their weekly course programme. Concordantly, it is determined that 93.3% of State Universities and 94.1% of Foundation Universities formed this course as 3 hours in weekly course programme. It is seen that course has held as 3 hours weekly by ratio of 93.6% at all universities basis.

1.3.3. Evaluation of Management Accounting Course Contents

Course contents evaluation of management accounting has been performed upon 61 universities in total. All traditional and modern management accounting subjects at domestic and foreign literature were listed and compared with management accounting course contents of universities at evaluation coverage.

After evaluation; subjects that have been discussed in administrative accounting course at state and foundation universities are listed from the most preferred to the least as below:

For state universities;

- Cost-Volume-Profit Analyses (Breakeven Analysis)
- Operating Budgets
- Cost Analysis Admissible at Management Decisions, Alternative Option Decisions, Standard Cost Method
- Full Cost, Normal Cost and Variable Cost Methods
- Pricing Decisions
- Cost Estimation Functions, Profitability Analyses, Variance Analyses
- Cost Behaviours
- Profit Function Application Fields, Flexible Budgets, Cost and Administrative System based on Service, Target Costing
- Responsibility Accounting, Capital Budgeting Decisions, Strategic Investment Decisions, Performance Valuations, Transfer Costing, On Time Approach, Cost Management, Strategic Cost Management
- Managerial Control, Inflation Accounting, Total Quality Management, Quality Costs, Constraints Theory, Process Accounting

For foundation universities;

- Cost-Volume-Profit Analyses (Breakeven Analysis)
- Operating Budgets
- Cost Analysis Admissible at Management Decisions, Alternative Option Decisions

- Variance Analyses
- Performance Valuations
- Standard Cost Method
- Pricing Decisions
- Cost Behaviours, Transfer Costing
- Flexible Budgets, Managerial Control
- Full Cost, Normal Cost and Variable Cost Methods
- Decentralized Management and Responsibility Centres, Responsibility Accounting, Capital Budgeting Decisions, Profitability Analyses, Cost and Administrative System based on Service
- Strategic Investment Decisions, Stock Management, Balanced Scorecard Technic

As it is seen above given explanation, there is a gap between course contents and contemporary management accounting techniques in Turkish higher education system. Some contemporary techniques are given as partial but not all of them and there is no an integrated connection with strategic management.

V. Conclusion and Successions

As it can be seen at Turkey review; it is determined that this course exists at 89.6% of state universities and 91.9% of foundation universities. Course exists by the ratio of 90.4% in all universities basis. Moreover, it is determined that this course is compulsory at 61.6% of state universities and 82.4% of foundation universities. Course is compulsory by the ratio of 69.1% in all universities basis. Significant issue at this point is compulsion ratio of course at private universities have higher ratio with respect to state universities. Doing management accounting course optional and therefore making student take the course on prefer is the overall tendency at state universities during recent years.

Management accounting has a very important role today during decision-taking process of managements. Understanding management

strategy to create management accounting system that is convenient present conditions and constitute system which creates convenient value with this strategy is required. Students who graduated from administrative departments of faculties and chose being accountant as profession will establish such a system. These students should take management accounting course after taking cost accounting course or together as infrastructure; therefore, management accounting course should be given to students as a compulsory course.

While at the evaluation of management accounting course contents, it is seen that traditional administrative accounting subjects like Cost-Volume-Profit Analyses, Operating Budgets, Cost Analysis Admissible at Management Decisions, Alternative Option Decisions, Standard Cost Method, Variance Analyses and Pricing Decisions are handled disconnectedly from each other at both state and foundation universities' administrative accounting course.

Purpose of management accounting education should be training talented administrative accountants who will challenge difficulties that recent economic factors, technological advances and organizational alterations bring. Management accountants have passed from role of being preparers and commentators to being decision supporting specialist at strategic level now. Traditional management and cost accounting subjects and dealing types don't fulfil today's needs. In this regard, necessity is seen in reorganisation of structure that management accounting course which is especially integrated with administrative strategy and modern administrative technics. Moreover, management accounting course contents and syllabus should be updated according to ever-changing conditions.

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Exhibit 1: Comparison of Traditional and Contemporary Business

	Traditional Business Environment	Contemporary Business Environment
Manufacturing		
Basis of competition	Economies of scale, standardization	Quality, functionality, customer satisfaction
Manufacturing process	High volume, long production runs, significant levels of in-process and finished inventory	Low volume, short production runs, focus on reducing inventory levels and other non-value-added activities and costs
Required labor skills	Machine-paced, low-level skills	Individually and team-paced, high-level skills
Emphasis on quality	Acceptance of a normal or usual amount of waste	Goal of zero defects
Marketing		
Products	Relatively few variations, long product life cycles	Large number of variations, short product life cycles
Markets	Largely domestic	Global
Management Organization		
Type of information recorded and Reported	Almost exclusively financial data	Financial and operating data, the firm's strategic success factors
Management organizational Structure	Hierarchical, command and control	Network-based organization forms, teamwork focus-employee has more responsibility and control, coaching rather than command and control
Management focus	Emphasis on the short term, short-term performance measures and compensation Concern for sustaining the current stock Price, short tenure and high mobility of top managers	Emphasis on the long term, focus on critical success factors, commitment to the long-term success of the firm, including shareholder value

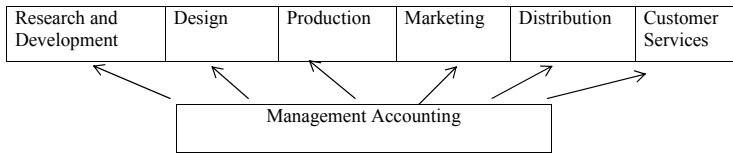
Source: Edward J. Blocher, Kung H. Chen, Gary Cokins, Thomas W. Lin, **Cost Management A Strategic Emphasis**, Third Edition, (New York : McGraw-Hill, 2005), p. 10.

Exhibit 2: Evolution of Management Accounting

Stage 1 (Before 1950)	Stage 2 (1965-1985)	Stage 3 (1985-1995)	Stage 4 (After 1995)
Cost Determination And Financial Control	Information for Management Planning and Control	Reduction of Waste of Resources in Business Processes	Creation of Value Through Effective Resource Use

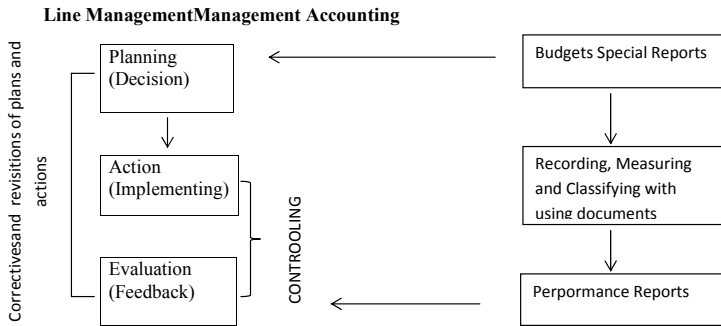
Source: IFAC, **International Management Accounting Practice Statement: Management Accounting Concepts**, (New York, 1998).

Exhibit 3: The Place of Management Accounting in Value Chain



Source: Charles T. Horngren, Srikant M. Datar, George Foster, **Cost Accounting A Managerial Emphasis**, Eleventh Edition, (New Jersey : Pearson Education Inc., 2003), p.10

Exhibit 4: Relationship between Line Management and Management Accounting



Source: Hongren, Datar, Foster, p. 7.

Exhibit 5: Balance Score Card

Performance Measures

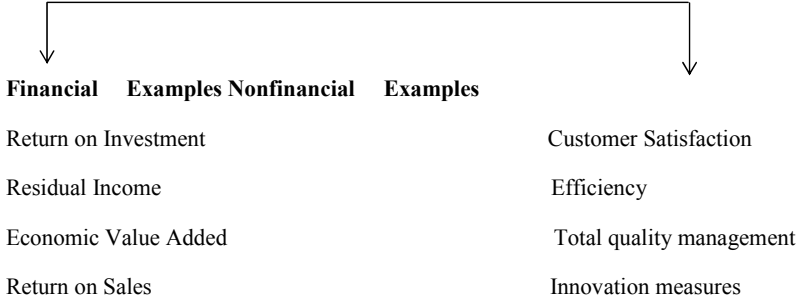


Exhibit 6: Management Accounting Course Frequency Distribution Table

University	Total	Course exists		Course non-exist	
		Frequency	Per cent	Frequency	Per cent
State Universities	67	60	%89,6	7	%10,4
Foundation Universities	37	34	%91,9	3	%8,1
All Universities	104	94	%90,4	10	%9,6

Exhibit 7: Must or Elective Management Accounting Course Frequency Distribution

Universities	Total	Compulsory		Optional	
		Frequency	Per cent	Frequency	Per cent
State Universities	60	37	%61,6	23	%38,3
Foundation Universities	34	28	%82,4	6	%17,6
All Universities	94	65	%69,1	29	%30,9

Exhibit 8: Weekly Course Hours Frequency Distribution Table of Management Accounting Course

University	Total	2 hours		3 hours		4 hours	
		Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
State Universities	60	3	%5	56	%93,3	1	%1,6
Foundation Universities	34	2	%5,9	32	%94,1	-	-
All Universities	94	5	%5,3	88	%93,6		