

Activity Based Costing: A Research Study of Greek Enterprises

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1. INTRODUCTION

The need for detailed information on a company's operating costs is crucial for all organizations, in order to take proper financial decisions that will allow companies to maintain or even improve their competitive position. For many years businesses operated under the assumption that costing information corresponds more or less (but always to an adequate degree) to the cost prices of produced products and offered services. Unfortunately such an assumption was true only in a small amount of cases.

Traditional costing systems were designed to function many decades before, when companies produced only a small variety of products and when direct labor and material were the primary cost factors. The amount of general expenses was relatively low and their improper allocation would not lead to a significant distortion of information with regard to product costs. The expenses associated with collecting economic data were high and therefore companies did not have the necessary data in order to develop a more efficient costing method. ABC forms a concept that was only recently developed, aiming at eliminating all the disadvantages that characterised traditional costing systems.

In recent years, business reality is characterised by phenomena such as increased competition and higher production and distribution costs, as a result of product diversification and the fact that they serve specialized customer needs better. Companies, in responding to these competition changes, have been seeking ways to strengthen their operations and collect more accurate data for decision making purposes.

Precise knowledge in costing elements of business activities, both at a general and a product-specific level constitutes an important factor in taking strategic business decisions; the costing system used by a company forms an essential information resource for taking such decisions.

Within the context of increasing competition, the activity based costing method was developed with the aim to contribute to a better acknowledgment of expenses relating to the creation of new products (or services), resulting in better and more detailed information on actual product costs for businesses to rely their decisions on. This way, Activity Based Costing helps managers to take more stable and conscious decisions with regards to making their company's products available in the market and to act towards continuously improving their business processes.

The ABC method is a costing method designed in such a way as to provide managers with cost information for strategies and decisions that will potentially affect the company's

dynamics and, consequently, its fixed expenses. Normally, the ABC system complements a company's existing costing system and does not replace it. In reality, companies that implement ABC systems maintain two costing systems at the same time: the traditional one used to prepare external financial statements and the ABC system used for internal decision-taking and administrative activities (Garrison and Noreen, 2004).

2. A REVIEW ON BIBLIOGRAPHY

Traditional costing systems, either those recording overhead expenses based on direct labor or the money value of sales, or direct costing systems that completely disregard overhead expenses for calculating product, services and customer costs were already considered as old. Distinguished researchers in the field of management accounting had already started implementing alternative costing systems based on the transactions that take place in a company.

Traditional costing systems are designed to provide results in a scale of unit costs for the company's products, with the aim to inform third users on its financial statements.

Ginoglou (2001) states certain criteria for the implementation of ABC systems in a productive business. More specifically:

- (a) **Variety of produced products:** The availability of products with different costing structures distorts the results of the traditional method, as such method produces the average cost for all products.
- (b) **Support needs of products:** The distribution of support costs for the various products is proportional to the production activity of these products, which induces the corresponding support costs. The most important factors that reduce or increase support costs are the different levels of complexity and vulnerability of product production machinery, and improvements or changes of production processes.
- (c) **Requirements in common procedures:** A separate criterion should be the level of existence of common activities that support production as well as other business operations relating to production, either directly or indirectly. The higher the use of common operations among products (such as production, planning, technical support, research and development, quality control and management) the more imperative the need to implement ABC.
- (d) **Distribution of time-related costs:** This criterion shows whether a company's costing system is capable of properly and promptly detecting and recording changes in the support requirements of the various products.

According to Goebel et al. (1998), ABC acknowledges that literally all activities that take place in a company support production, marketing and the distribution of its products and services. This kind of approach of organizational activities allows for a substantial assessment of both industrial and support business costs (e.g. marketing, sales, advertising

and management) on individual products, distribution channels, departments and customers.

Landry et al. (1997) believe that an organization usually implements ABC for two main purposes: first of all, to obtain a deep understanding of the structure of its costs in terms of procedures and, secondly, to establish the actual value of its products, usually in the form of reserves.

Akyol et al. (2004) describe ABC as a methodology that estimates the cost and performance of activities, resources and cost objects. According to researchers, it is an economic model that establishes cost pools or activity centers within an organization, and attributes costs to cost drivers based on the extent of use of each activity. One might say that ABC includes the analysis of an organization into activities (Smith, 1992). ABC has attracted a lot of attention in the field of management accounting research, both with regards to the ability of activities not related to volume to explain cost behavior, as well as the perceptible value of ABC systems in organizations (Ittner et al., 1997).

Cooper and Kaplan (1992) have expressed the notion that ABC systems have two important characteristics. First of all, the activities carried out are not required in proportion with the total volume of produced (or sold) product units. Requirements depend on the diversification and complexity of the product mix and the consumer mix. Secondly, ABC systems do not constitute models representing the way in which costs and expenses change in the short term. Such systems estimate the costs of the resources used to perform activities in order to produce various products. During a given period, the production of products and services, marketing, sales and distribution to customers create a demand for organizational activities. The quantity of each service provided for the products is estimated using cost drivers, such as the number of hours needed to set up the machinery, the number of purchase orders processed, the number of receipts that have been received, the number of hours of direct labor and machine hours, the number of parts in maintenance, etc. By adding up the costs for all resources produced to carry out individual product activities, the ABC model estimates the cost of the resources used during that period for all company products.

Goebel et al. (1998) have discovered that ABC requires by marketing executives to re-determine their thoughts with regards to fixed and variable expenses and the margins affecting the decision-making process. All executive staff with decision taking and profit responsibilities should operate in an ABC environment, emphasizing on procedures of product development, industrialization and distribution, as well as on the cost of activities necessary for the integration of the above-mentioned services. This requires focusing on the added value for each stage of the process instead of just providing a simple number for the cost of a product.

Krupnicki and Tyson (1997) report that those involved in an ABC program should invest a lot of time on the actual factors that produce costs in their businesses, by observing operations, interviewing employees and applying quantitative methods, such as regression analysis. A company that does not commit the necessary resources is certain to achieve disappointing results.

Even though it is clear that the primary role of an ABC system is to provide information relating to the cost of the production line, in reality it offers much more to enterprises. The ABC methodology offers valuable help since it allows managers to perform several important activities, such as: a) detect high operating expenses per product unit and find ways to reduce them, b) calculate with precision the company's profitability compared with the one deducted by using traditional accounting methods, c) determine whether a product or service is worth to sell or if it should be replaced with new products and services, and d) decide whether the internal development of products and services is profitable or should be outsourced.

The ABC methodology does not replace the accounting system already used and established in a company. On the contrary, it operates more like a safety control means to validate the economic result found by using traditional accounting methods. It is important to mention that traditional financial accounting does not examine in depth the reasons for the costs but is more interested in the collective financial result. To this extent, the ABC methodology works as a supplement, ensuring the necessary in-depth analysis of accounting facts that will lead managers to making rational decisions. To this end, Palmer and Vied (1998) claim that, despite unanimously agreeing on the benefits gained from ABC measurements, there is dispute on the way in which theory on ABC can turn into action within an organization.

Mitchell (1994) states that the broad use of ABC in many problematic areas of conventional management accounting (such as stock evaluation, cost behavior and variance analysis) does not mean that this method is a cure for all. The implementation of an ABC system should be handled with caution. Users of costing information must bear in mind that the method is not to be regarded as free of arbitrariness, when it comes to assessment nor considered to be precisely indicative of real mechanisms for resource consumption. Moreover, it must not be thought that ABC systems provide solutions to cost control problems that are free of behavioral issues or that exclude alternative approaches. Therefore, ABC applications appear to be more suitable for guidance purposes rather than for providing final decisions in critical business issues.

Mecimore and Bell (1995) state that enterprises are moving from giving emphasis to products towards focusing on processes, and then towards focusing on the Strategic Business Unit (SBU5). In fact, according to the authors, the completion of ABC development must include the interconnection of activities among the various business units, creating an ABC system that provides information on the company as a whole.

Akyol et al. (2004), mention that the total cost of a product within an ABC environment is equal to the cost of raw materials and the sum of individual activity costs that add up value during the production process. In reality, the ABC method models the use of organizational resources based on the activities performed, and links the cost of these activities with their derivatives, such as products, customers and services. Each product requires a number of activities, such as planning, mechanics, purchasing, production and quality control. Each activity consumes resources from various categories. Cost drivers often constitute measures

of performed activities (e.g. the number of units produced, labor hours, equipment operating hours, the number of orders received).

Cagwin and Bouwman (2002) carried out a research which indicated a positive synergy from the use of ABC and other systems at the same time (e.g. Just-In-Time - JIT, Total Quality Management, etc.). When companies use ABC along with other strategic business schemes, the net improvement in financial performance is higher compared to the net improvement that would result from applying only one of the above systems. Furthermore, there is a positive relationship between ABC and a higher Return on Investment (ROI), when ABC is implemented in complex and diversified enterprises, within environments in which costs are relatively high and when only a limited number of inter-company transactions limit the benefits. There are certain indications, that other factors (complex information technologies, lack of overcapacity and competitive environment) also have a positive impact on the performance of ABC systems. Finally there are indications, that the successful implementation of an ABC system forms a factor towards improved financial performance of companies.

Drake et al. (1999) examined the way with which the costing system and the mobilization structure interact within a company. Through their research, they discovered that production costs are lower and profits are higher when ABC is associated with motivation towards group activities, which strengthen cooperation. On the other hand, higher production costs and lower profits occur when the ABC system is associated with motivation towards competition. In this case, employees proceed to innovations from which only they gain, and use their information on cost drivers and activities only to increase their individual productivity. The Net Operating Income represents the Earnings Before Interest and Taxes (EBIT). The Net Operating Income is used, since the base (the denominator) includes the operating assets. Therefore, for reasons of consistency, the Net Operating Income is used as a numerator. On the other hand, Operating Assets include cash, liabilities accounts, stocks, buildings and equipment, and other assets used for production purposes within an organization.

Gordon and Silvester (1999) examined the performance results of companies that were connected with an ABC application. Their originality lies in the evaluation of results in the US capital market following their announcement on implementing an ABC system. Therefore, their measurement of success is based on publicly available data of the capital market on the examined companies. Moreover, the time at which a company has introduced an ABC system is also based on publicly available information. The announcement time of ABC implementation on behalf of the examined companies is usually around the end of the 1980s: a period when the US was characterized by a clear tendency towards ABC. Therefore, in that period, a reaction by the capital market towards ABC implementation was very likely to occur, as at the time the capital market entailed a massive character. In actual terms, at that time significant results should have been observed in the capital market. Yet, analysis has shown that the installation of an ABC system was not associated with any significant reaction in the capital market (either positive or negative). Researchers believe that these results should be considered by companies that intend to install an ABC system, in terms of the costs and benefits that derive from the adoption of such a method.

Gordon and Silvester recognize that the performance assessment of a company with regard to the application of ABC with the use of capital market returns has limitations. On our part, we may indicatively mention the degree to which markets are effective, especially considering the level of information on ABC and the financial data available to investors, as well as the ability of investors to interpret given information in rational terms. It should be pointed out that ABC is not used for the preparation of financial statements for external users. Certain businesses use ABC in their published financial statements, although most of them do not (Garrison and Norren, 2004). Therefore, if the precise data of a specific ABC adopted by a company are not known to investors, it is difficult to expect a relatively proper incorporation of such information to the price of the company's stock market shares (limited company).

Geishecker (1996) stresses that ABC should not be promoted as a financial system, but as part of a broader Activity Based Management (ABM) system. Whereas the ABC determines how much something costs, the ABM determines how a certain activity drives a company. A successful ABM forms an inter-functional choice that combines traditional financial data with non-financial information, to provide strategic assistance in planning, operating and evaluating a company. It is an analytical tool for making decisions, as with its help costing, planning, orders and every other function can be carried out based on the activities.

Turney and Stratton (1992) support that with the two-dimensional ABC system (one dimension for cost assessment and one for processed), large progress is made in cost management. ABC becomes a real cost management system that supports product costing as well as performance improvement. The primary element for creating a two-dimensional ABC model is the use of micro-activities (or detailed tasks) and macro-activities (or task summaries). Micro-activities are labor units in a section in which they are dealt with on a daily basis and are part of the dimension of processes. They constitute the central point of focus for improvements. Detailed information (relating or not relating to costs), including cost drivers and performance measurements, is included in micro-activities. Micro-activities are not used for product costing. The cost of micro-activities is included in macro-activities. Macro-activities are sets of interrelated micro-activities and form part of the cost assessment dimension. Their main purpose is to facilitate the description of high production costs. Yet, they are concise enough to lead to the improvement of individual activities. The cost of macro-activities is included in the products with the use of one activity driver that lowers costs and the complexity of the ABC model, as activity drivers are not associated with micro-activities. Moreover, it maintains the accuracy of the described production costs, as the micro-activities included in a macro-activity are used in the same way by all products.

Gupta and Galloway (2003) point out that the strategic value of an ABC/ABM system lies in the provision of useful knowledge in decision making processes, since it does not just offer financial data but it also examines processes and activities, in order to establish the areas that add value or those that don't. By considering such a system purely as an accounting system, we disregard its real value. The fact of establishing activities within the limits of sections using an ABC/ABM system might force managers to consider their

company processes and to review their organizational models. The ABC/ABM system relates to a complete change of models, emphasizing on the interconnection of all business aspects.

3. STUDY

The questionnaire was distributed by students in the Department of Accounting and Finance of the University of Macedonia in February 2008 to a representative sample of businesses operating in Central and Northern Greece. The questionnaires were returned completed by June 2008, either by the students who forwarded them or by post, fax or email. The 82% of these companies responded to our study, a percentage that, to our view, is regarded as significant.

Of the total number of these companies, 60.68% employ less than ten people, 29.98% from ten to fifty people and 9.34% employ more than 50 people.

Table 1
Company size

Category	Percentage
Small <10 people	60.68%
Medium 10-50 people	29.98%
Large >50 people	9.34%

Moreover, 84.52% of the companies are satisfied with their existing costing system while almost the same percentage (84.28%) is aware of the cost of their company's basic activities and its consisting sections.

Table 2
Rate of satisfaction from the company's existing costing system

Answer	Percentage
Yes	84.52%
No	15.48%

Table 3
Knowledge of the cost of the company's main activities and its consisting sections

Answer	Percentage
Yes	84.28%
No	15.72%

With regard to measuring the per product/ service profitability, 52.58% of the companies that responded keep price records.

Table 4
Establishing the profitability of each client (product/ service)

Answer	Percentage
Yes	52.58%
No	47.42%

Finally, only 17.06% know the activity based costing system, while the majority of respondents neither know it, nor do they have sufficient information.

Table 5
Knowledge of the activity based costing system (ABC)

Answer	Percentage
Yes	17.06%
No	82.94%

X2 Test

First of all, with the X2 test we examine the independence or non-independence of the “company size” variable (small, medium, large) with each one of the other variables separately (satisfaction from existing costing system, establishing costs per section, profitability per client).

Company size and rate of satisfaction from existing costing system

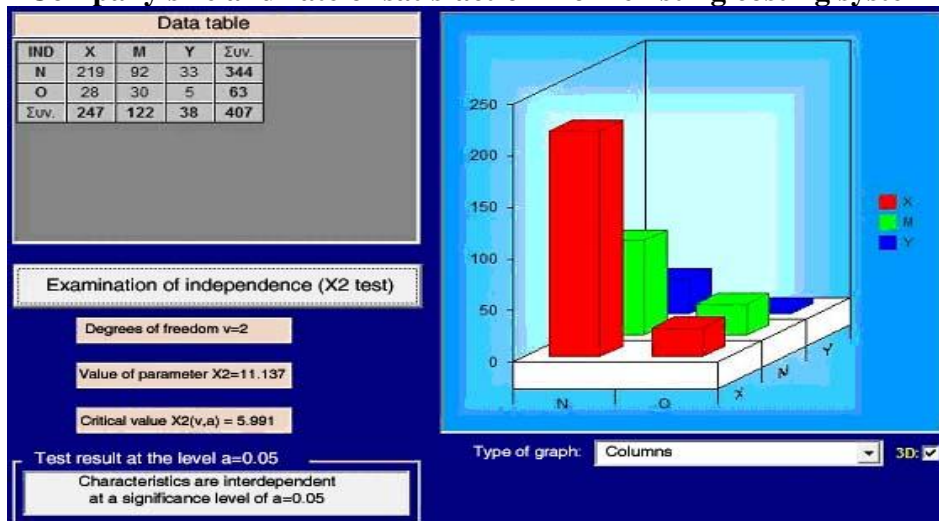


Figure 1¹

¹ In the data table, X represents a small company, M a medium-sized company and Y a large company. N corresponds to a positive answer and O to a negative answer.

It can be seen from Figure 1 that there is diversification in the companies' rate of satisfaction from their existing costing system, depending on whether the company is small, medium or large sized.

Company size and knowledge of the cost of the company's main activities and its consisting sections

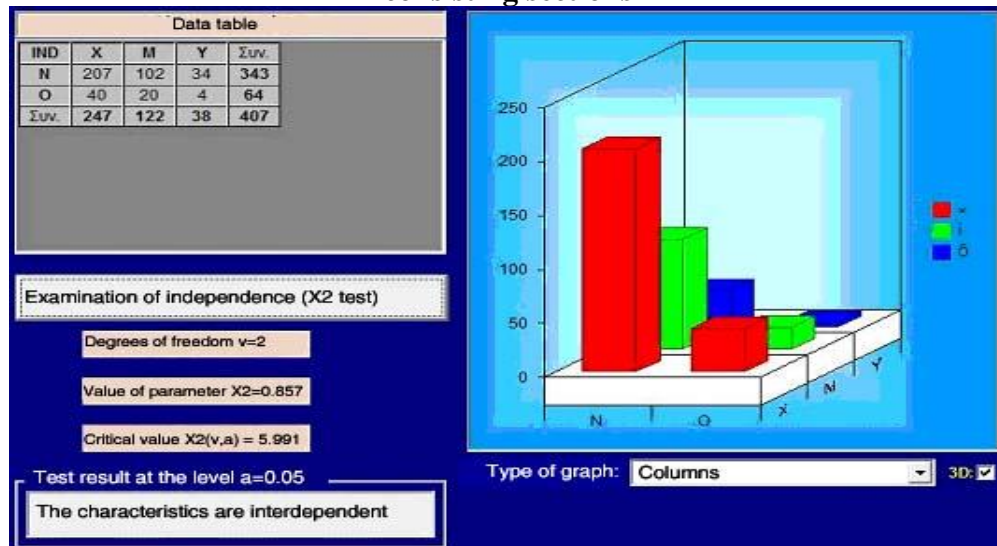


Figure 2

It can be seen from figure 2 that there is no correlation between the size of a company and whether it keeps records of the cost of main activities and its consisting sections.

Company size and keeping (or not) records of the profitability of each client (product/ service)

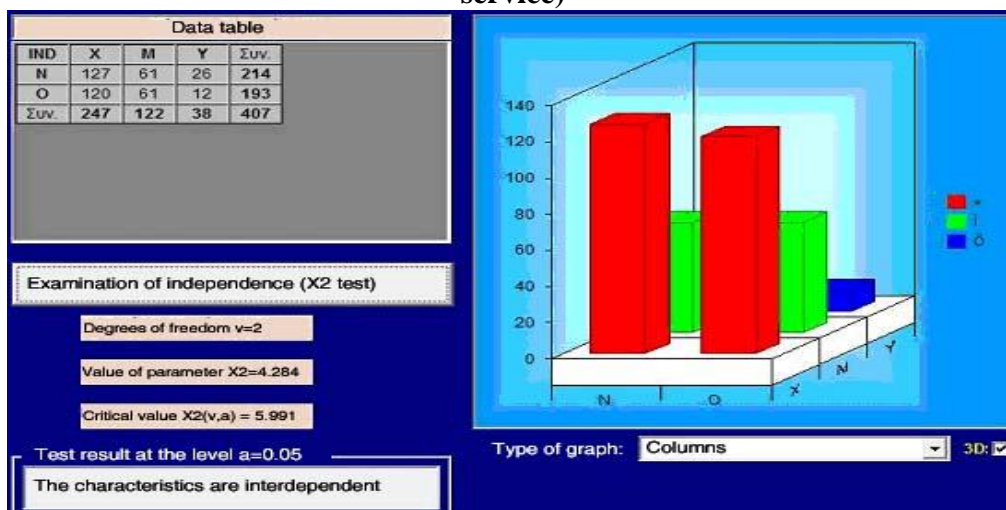


Figure 3

It can be seen from figure 3 that there is no correlation between the company size and keeping records of the profitability of each client (product/ service).

Factor Analysis

Factor analysis is used to examine which of the previous three variables depends more on company size.

DISPLAY OF CHARACTERISTIC ROOTS				
TOTAL INERTIA 0.01333				
AXIS	INERTIA	INTERPRETATION	SUM	CHARACTERISTIC ROOTS HISTOGRAM
1	0,0095235	71,43	71,43	*****
2	0,0038092	28,57	100,00	*****

Figure 4

COORDINATES (FA), DISPLAYS (COR) AND CONTRIBUTIONS (CTR) OF STATISTICAL UNITS						
	#F1	COR	CTR	#F2	COR	CTR
Iv	-70	970	143	-13	29	11
Io	380	970	786	65	29	59
Kv	-7	117	2	18	882	26
Ko	36	117	8	-100	882	137
KEv	-40	166	29	88	833	364
KEo	44	166	32	-99	833	403

COORDINATES (GA), DISPLAYS (COR) AND CONTRIBUTIONS (CTR) OF VARIABLES						
	#G1	COR	CTR	#G2	COR	CTR
X	-60	774	227	-33	225	165
M	148	997	695	7	2	6
Y	-89	188	78	183	811	829

Figure 5²

² In the coordinates, displays and contributions table, Iv and Io correspond to a positive or negative answer (respectively) on the rate of satisfaction from the existing costing system, while Kv and Ko correspond to a positive and negative answer (respectively) on keeping records of the cost per activity, and KEv and KEo correspond to a positive or negative answer (respectively) on keeping records of the profitability per client.

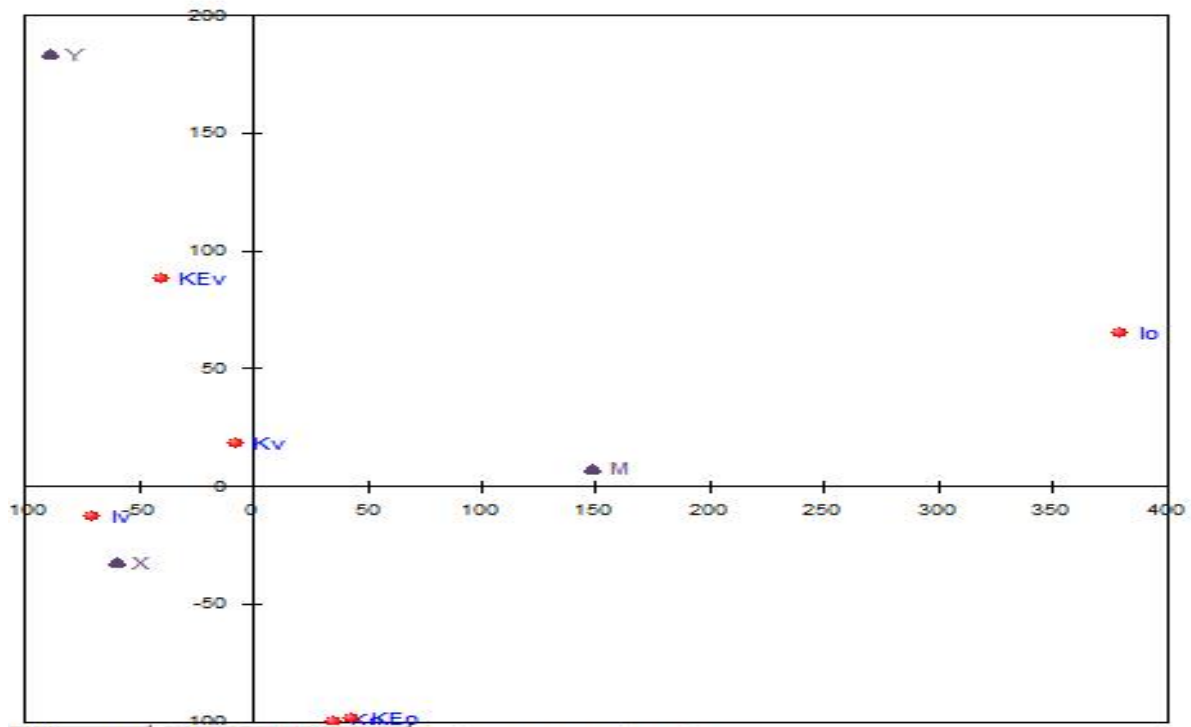


Figure 6: Factor Level

From the results it emerges that even though there is not strong dependence, to the extent that there is more diversification, it is observed that medium-sized companies are not satisfied (the coordinates, displays and contributions tables shows that: Io, CTR=786 and M, CTR=695) from their existing costing system.

CONCLUSIONS

In the present study it has been attempted to make a thorough analysis on the development of the concept of Activity Based Costing (ABC), its differences from traditional costing methods, the process of implementing an ABC system and its critical view. Moreover, the concept and the content of Activity Based Management (ABM) were analyzed, with an attempt to associate it with ABC. Finally, an indicative study was performed with regard to the interconnection of the application of ABC with stock market research.

In general, the implementation of an ABC/ABM system is directly associated with a better understanding of the company itself. The findings of studies regarding the effectiveness of the method vary. Yet, the cost-benefit analysis from the adoption, installation and application of an ABC/ABM system is necessary for the promotion of its implementation plan. As has been intently mentioned, it is necessary to find a golden mean between the benefits from analyzing a company's costs and functions and the cost of processing and quantifying data necessary to perform such analysis. In any case, the ABC/ABM method entails the characteristic of realism and, based on this criterion, it holds a great advantage over traditional costing systems.

The ABC/ABM system is not limited to a simple listed classification of factors that induce costs, based on artificial assessment criteria, but also examines the processes and work flows in order to detect the actual activities that produce these costs. In fact, in the context of such a broader and realistic approach of cost, managers base their strategic decisions on more accurate information, likely to improve the quality of their decisions. Even though ABC/ABM alone is not capable of turning a company into a worldwide competitive player, it can provide an important tool towards taking effective strategic decisions for businesses operating in the global market.

Finally, the application methodology of a case study was analytically presented involving the announcement on the implementation of an ABC system. The application was of an experimental nature and intended to demonstrate the connection between accounting information and stock exchange operations. Furthermore, emphasis was paid on the scientifically correct methodology development, in order to make its adoption possible for all types of research. The use of a single company as our study subject, instead of a sample, allowed for examining the benefits from the diversification of non-systematic effects on stock prices due to irrelevant (to the examined issue) news, achieved with the use of a properly selected sample.

In general, it may be stated that the case study allows us to examine the deterministic relationships between a fact and the changes (either positive or negative) in a stock market share's price. Gordon and Silvester (1999) did not manage to determine a clear positive or negative relationship between the announcement, adoption or application of ABC by a company and the price of its stocks. The information base of the Greek stock exchange market at this point does not allow a complete development of such projects. However, at a research level, international bibliography still has gaps, and we believe that the promotion of such affairs by future researchers would prove to be most useful.

Bibliography

- Akyol, D.E., Tuncel, G, and Bayhan, G.M., (2004): A comparative analysis of activity-based costing and traditional costing, *Transactions on Engineering, Computing and Technology*, 3, pp. 87 - 90.
- Anderson, B.M., (1993): Using activity-based costing for efficiency and quality, *Government Finance Review*, June, pp. 7 - 9.
- Armstrong, P., (2002): The costs of activity-based management, *Accounting, Organizations and Society*, 27, pp. 99 - 120.
- Bennett, P., (1996): ABM and the Procurement Cost Model, *Management Accounting (US)*, 77 (March), pp. 28 - 32.
- Bjornenak, T., (1997): Diffusion and accounting: the case of ABC in Norway, *Management Accounting Research*, 8, pp. 3 - 17.
- Bromwich, M., and Hong, C, (1999): Activity-based costing systems and incremental costs, *Management Accounting Research*, 10, pp. 39 - 60.

- Cagwin, D., and Bouwman, M.J., (2002): The association between activity-based costing and improvement in financial performance, *Management Accounting Research*, 13, pp. 1 - 39.
- Coburn, S., Grove, H., and Fukami, C., (1995): Benchmarking with ABCM, *Management Accounting (UK)*, January, pp. 56 - 60.
- Coburn, S., Grove, H., and Cook, T., (1997): How ABC was used in capital budgeting, *Management Accounting (US)*, 78 (May), pp. 38 - 40.
- Cooper, R., (1990): Cost classifications in unit-based and activity-based manufacturing cost systems, *Journal of Cost Management*, Fall, pp. 4 - 14, Kaplan, R.S., (1994): Management accounting (1984-1994): development of new practice and theory, *Management Accounting Research*, 5, pp. 247 - 260.
- Cooper, R., and Kaplan, R.S., (1992): Activity-Based Systems: Measuring the Costs of Resource Usage, *Accounting Horizons*, 6 (3), pp. 1 - 12.
- Ginoglou, D. (2001): The study of activity based costs as a reaction to the new technological challenges of the 21st century, *Tax Magazine E7*, 8, pp. 2581 - 2590.
- Ginoglou, D. & Karagiorgos, F. (2002): "The study of activity based costs as a reaction to the new technological challenges of the 21st century", 1st Conference of financial accounting scientists at the University of Chios, Proceedings Book.
- Drake, R.A., Haka, S.F., Ravenscroft, S.P., (1999): Cost System and Incentive Structure Effects on Innovation, Efficiency and Profitability in Teams, *The Accounting Review*, 74 (3), pp. 323 - 345.
- Elton, E.J., Gruber, M.J., Brown, S.J., Goetzmann, W.N., (2003): *Modern Portfolio Theory and Investment Analysis*, 6th edition, John Wiley and Sons, Inc, USA.
- Evans, H., and Ashworth, G., (1995): Activity-based management: moving beyond adolescence, *Management Accounting (UK)*, December, pp. 26 - 30.
- Fama, E.F., (1970): Efficient Capital Markets: A Review of Theory and Empirical Work, *The Journal of Finance*, 25 (2), 383-417.
- Garrison, R.H., and Noreen, E.W., (2004): *Managerial Accounting*, Mc-Graw Hill Irwin, International Edition.
- Geishecker, M.L., (1996): New Technologies Support ABC, *Management Accounting (US)*, 77 (March), pp. 42 - 48.
- Ginoglou, D., (2002): Activity-Based Costing: A Survey For The Greek Companies, European Applied Business Research Conference in Rothenburg Germany Proceedings book.
- Ginoglou, D., Tahinakis, P., and Protogeris, N., (2004): Accounting Information System: An activity-based costing analysis for evaluation of environmental activities in Greece, International Conference Academy of Business and Public Administration Disciplines, New Orleans, Louisiana, USA.
- Goebel, D.J., Marshall, G.W., and Locander, W.B., (1998): Activity-Based Costing Accounting for a Market Orientation, *Industrial Marketing Management*, 27, pp. 497 - 510.
- Gordon, L.A., and Silvester, K.J., (1999): Stock market reactions to activity-based costing adoptions, *Journal of Accounting and Public Policy*, 18, pp. 229 - 251.
- Green, W.H., (1997): *Econometric Analysis*, Prentice-Hall Inc., New Jersey.

- Gupta, M., and Galloway, K. (2003): Activity-based costing/management and its implications for operations management, *Technovation*, 23, pp. 131 - 138.
- Innes, J., Mitchell, F., and Sinclair, D., (2000): Activity-based costing in the U.K.'s largest companies: a comparison of 1994 and 1999 survey results, *Management Accounting Research*, 11, pp. 349 - 362.
- Ittner, CD., Larcker, D.F., and Randall, T., (1997): The Activity-Based Cost Hierarchy, Production Policies and Firm Profitability, *Journal of Management Accounting Research*, 9, pp. 143 - 162.
- Johnson, H. T., (1988): Activity-based information: a blueprint for world-class management accounting, *Management Accounting (US)*, (June), pp. 23 - 30
- σε Jones, T.C., and Dugdale, D. (2002): The ABC bandwagon and the juggernaut of modernity, *Accounting, Organizations and Society*, 27, pp. 121 - 163.
- Johnson, H. T., (1991): Activity-based management: past, present and future, *The Engineering Economist*, 36 (3), pp. 219 - 238.
- Jones, T.C., and Dugdale, D. (2002): The ABC bandwagon and the juggernaut of modernity, *Accounting, Organizations and Society*, 27, pp. 121 - 163.
- Kaplan, R.S., (1994): Management accounting (1984-1994): development of new practice and theory, *Management Accounting Research*, 5, pp. 247 - 260.
- Krumwiede, K.R., (1998): ABC: Why it's tried and how it succeeds, *Management Accounting (US)*, 79 (10), pp. 32 - 38.
- Krupnicki, M., and Tyson, T., (1997): Using ABC to Determine the Cost of Servicing Customers, *Management Accounting (US)*, 79 (December), pp. 40 - 42.
- Landry, S.P., Wood, L.M., and Lindquist, T.M., (1997): Can ABC Bring Mixed Results?, *Management Accounting (US)*, 78 (March), pp. 28 - 30.
- MacKinlay, A.C., (1997): Event Studies in Economics and Finance, *Journal of Economic Literature*, 35 (1), pp. 13 - 39.
- Malmi, T., (1997): Towards explaining activity-based costing failure: accounting and control in a decentralized organization, *Management Accounting Research*, 8, pp. 459 - 480.
- Malmi, T., (1999): Activity-based costing diffusion across organizations: an exploratory empirical analysis of Finnish, *Accounting Organizations and Society*, 24, pp. 649 - 672.
- May, M., (1995): Activity-Based Management Accounting, *Management Accounting (UK)*, January, p. 40.
- Mecimore, CD., and Bell, A.T., (1995): Are we ready for fourth-generation ABC?, *Management Accounting (UK)*, January, pp. 22 - 26.
- Mitchell, F., (1994): A commentary on the applications of activity-based costing, *Management Accounting Research*, 5 (3/4), pp. 261 - 277.
- Moschidis O., Floropoulos I., (2007), 'Convergence Project of the Non-Publicity Accountable Entities (NPAE's) Financial Reporting', *Cyprus International Journal of Management*, vol.12, N.1, Autumn.
- Moschidis O., (2003), 'Contribution to comparative survey of multidimensional scales with the methods of multivariate analysis', PhD Dissertation, University of Macedonia

- Moschidis O., Lazaridis I., Livanis E., (2006), 'Comparative Investigation of the Dividend Policy of Cypriot Firms traded in Cyprus Stock Exchange Using a New Methodology of Correspondence Analysis', *Investment Research and Analysis Journal*, Vol. 1, N.1.
- Owen, J., (1993): Buying machine tools: a strategy, *Manufacturing Engineering*, 111 (6), pp. 25 - 30.
- Palmer, R.J., and Vied, M., (1998): Could ABC threaten the survival of your company?, *Management Accounting (US)*, 80 (November), pp. 33 - 36.
- Ross, S.A, Westerfield, R.W., Jaffe, J.F., (1999): *Corporate Finance*, McGraw-Hill International Editions, Singapore.
- Shields, M.D., (1995): An empirical analysis of firms' implementation experiences with activity-based costing, *Journal of Management Accounting Research*, 7 (Fall), pp. 148 - 166.
- Smith, S.A., (1992): Activity-Based Costing: A necessity for the future of manufacturing, *Journal of Accounting Education*, 10, pp. 375 - 382.
- Soin, K., Seal, W., and Cullen, J., (2002): ABC and organizational change: an institutional perspective, *Management Accounting Research*, 13 (June), pp. 249 -271.
- Siomkos, G.I. (1999): *Strategic Marketing – Vol A*, Stamoulis Publications, Athens.
- Syriopoulos, K. (1996): *Analysis and control of univariate financial time series*, Topothito Publications, Athens.
- Turney, P.B.B., (1992): Activity-based management, *Management Accounting (US)*, 73 (January), pp. 20 - 25.
- Christou, G.K., (2002): *An introduction to Econometry*, vol B, Gutenberg publications, Athens.