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**MANAGEMENT ACCOUNTING PRACTISES
OF TOURISM ORGANIZATIONS:
THE CASE OF THE GREEK SHOW CAVES**

Abstract

The Show Caves are major tourist attractions in Greece, attracting over half a million visitors per year. They are unique in that they are archaeological sites and must be preserved as national monuments but at the same time they function as modern business enterprises. This paper explores the role of management accounting in the Show Caves. The paper is motivated by the lack of management accounting research in the tourism sector in general. The analysis is based on a case study of four of the eight Show Caves that are currently in operation in Greece. Data were collected from semi-structured interviews, informal discussions and document analysis. Drawing on ideas from New Institutional Sociology (NIS) we argue that the operations and decision making, including the role of management accounting information in the Caves are shaped by the need for the Caves to legitimize themselves as national monuments and at the same time innovate to remain competitive in a changing tourism environment. The ownership of the majority of the Caves by the Municipal Councils also made the operations and decision making of these Caves subject to local politics.

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1. Introduction

This paper presents empirical evidence on how the Greek Show Caves are managed. In particular, we explore the role of management accounting information in the decision making process of the Caves. During the last decades, the Greek government has transformed its tourism industry into a source of income of primary significance. As part of this effort the Show Caves were developed as major tourist attractions over three decades ago. The Caves currently attract over half a million visitors per year and contribute substantially to the national economy in terms of revenue and employment as well as to rural development as they are all located in rural areas. The Show Caves are thus very significant in the drive to develop the tourism sector in Greece. Despite this development, very little empirical research has been conducted on the management issues of the Show Caves. In fact, the few published studies on the Show Caves are in the area of archaeology.

This lack of research on the managerial issues in general and accounting in specific in the Show Caves is not surprising given that the tourism sector in general has received minimal attention from management and accounting researchers. In fact, the few published accounting studies in the area have focused on large scale hotel chains (see for instance, Varadarajan & Cunningham, 1995; Collier & Gregory, 1995; Preble et al., 2000; Mia & Patiar, 2001 and Guilding et al. 2001). Smaller tourism organizations such as the Caves have been completely ignored by accounting researchers. This paper is an attempt to contribute to our understanding of how these unique organizations are managed. The Show Caves are unique in that they are archaeological sites and must be preserved as national monuments but at the same time they function as modern business enterprises. The analysis in the paper is informed by ideas from New Institutional Sociology (NIS). Drawing on NIS in particular enable us to understand how the Caves cope with pressures to preserve themselves as archaeological sites and at the same modernize to remain competitive.

The remainder of the paper is organized as follows. In the next section we present a brief overview of the literature and our theory development. The research methods are discussed after this. The empirical results are then presented drawing on ideas from NIS. The final part provides some concluding comments.

2. Literature and Theory Development

Very little management accounting research has been conducted in tourism and hospitality organizations (Brown, 1995; Noone and Griffin, 1997; Harris and Brown, 1998) despite the sector being identified as the world's largest industry in terms of size and employment capabilities (Ingram, 1995; Keiser, 1998; Connell & Lowe, 1997; Howay *et al.*, 1999; Preble *et al.*, 2000). The few published studies on the sector have examined diverse management accounting issues including traditional management accounting systems and strategic management accounting systems. In a recent study Pavlatos and Paggios (2007) find that over 76% of the hotels they studied in Greece use traditional cost accounting systems against only 23.5% for activity-based costing systems (ABC). The authors also reveal that more than 41% of the sample hotels apply process costing and job order costing, and overheads are mostly allocated using budgeted overheads.

Noone and Griffin (1997) suggest the adoption of customer profitability analysis (CPA) with activity-based costing in the tourism and hospitality sector. Guilding *et al.* (2001) also explore issues around customer accounting in the hospitality industry and suggest that net-present-value and replacement costs are the most appropriate models to value customers as assets. The study of Cugini *et al.* (2007) also emphasizes the need to focus on measures of customer profitability. Collier and Gregory (1995) highlight the role of management accounting in the provision of information in the development of strategic plans as well as for monitoring the market and competitors' price structure and costs. Management accounting can assist a tourism and hospitality organization in making decisions relating to sales promotion, pricing, and profitability (Mia and Patiar, 2001). There are some who however argue that the importance of management accounting in pricing decisions in the hospitality industry is limited due to the fact that the majority of companies operating in the industry take prices from the leaders (see for instance, Pellinen, 2003). As price decisions are largely made on enterprise networks basis rather than at the individual enterprise level, there is thus minimal effect of cost accounting information in the tourism and hospitality firms.

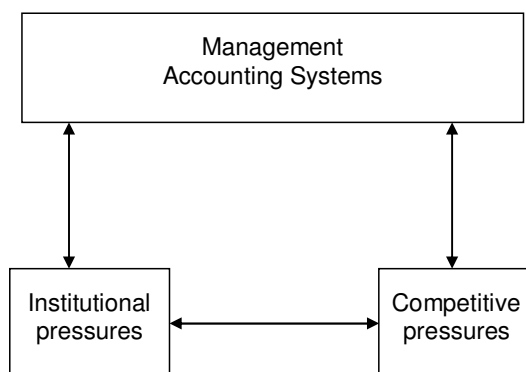
Other studies have focused on performance measurement and practices in the hospitality industry. Phillips (1999) argues that performance measures in the sector are predominantly quantitative, short term, internal and efficiency focused rather than have a strategic and external outlook. A much more recent

study by Cruz (2007) in a Portuguese hotel however finds evidence of the use of the much more strategic performance measurement approach – the balanced scorecard in addition to the traditional budgetary control system. From this strategic perspective, Karatzoglou and Spilanis (2008) develop the idea of the «destination environmental scorecard» which draws on the concept of activity-based management. The authors argue that such a concept can help in performance measurement and comparison, and therefore help to conduct operations in a responsible way to benefit both business and regional sustainability.

As we can see from the above review, there is some evidence of the use of management accounting information in the tourism and hospitality sector. However as mentioned earlier the available empirical evidence is from large scale hotel chains. The managerial issues of these large hotel chains are likely to be different from those of smaller tourism organizations such as the Show Caves we studied hence our research makes a contribution to fill the gap in the literature. Given that it is widely acknowledged that organizations are shaped by the wider institutional environment (DiMaggio and Powell, 1983; Brignall and Modell 2000; Coller, 2001; Tsamenyi et al., 2006) our paper draws on ideas from NIS to understand management accounting issues in the Caves.

Figure 1

Theoretical framework



Institutional theory researchers believe that the design and operations of management accounting systems are shaped by the institutional environment of the organization (Brignall and Modell 2000; Coller, 2001; Tsamenyi et al., 2006). Institutional theory is particularly important because it provides explanations for the pressures confronting organizations (DiMaggio and Powell, 1983). According to institutional theory, there are three mechanisms of institutional pressures or

isomorphism, namely coercive, mimetic and normative isomorphism. Coercive isomorphism occurs when government or other authorities or organizations that the organization depends on mandate that certain practices be adopted. Mimetic isomorphism describes pressures exerted on organizations as a result of uncertainty whereby organizations attempt to model themselves on other organizations in their field which they perceive to be legitimate or successful. Normative isomorphism refers to pressures when individuals model their behaviour in terms of norms prescribed by society or professional networks they are involved with. In all, these forces will shape the way management accounting systems are used to support organizational decisions.

Institutional forces are likely to operate in conjunction with market forces when the organization operates in a competitive environment (Powell, 1991; Oliver 1992; Greenwood and Hinings, 1996; Tsamenyi, et al., 2006). Oliver (1992, p.21) observes that, «...economic considerations should be incorporated into institutional explanations of organizational activities in order to specify more precisely the particular situations or conditions within which institutionalized activities are most likely to persist or endure». Similarly, D'Aunno *et al.* (2000) argue that both institutional and competitive forces drive the process of institutionalization in organizations. Our framework above is based on the argument that institutional and market forces both exert pressures on organizations (Scott, 1991 and Powell 1991). Consequently, to survive organizations must find ways of coping with both sets of pressures. Later in the paper we draw on this framework to explain the role of management accounting systems in the Caves we studied.

3. Research Methods

While there are many Caves in Greece, only a few have been exploited and only eight are opened all year round. The study focuses on four of these Caves hypothetically referred to as Alpha, Beta, Gamma and Delta. The primary source of data for the analysis is semi-structured interviews with managers from the studied Show Caves. The case study approach which has the advantage of uncovering the actual processes of decision making and the role of management accounting information had been adopted in other management accounting studies in Greece (see for instance, Ballas and Venieris, 1996). Limiting the case study to only four Caves was necessary to provide an in-depth analysis of the underlying management accounting practices. The experience of one of the researchers as a manager of one of the Show Caves helped in the data gathering process.

In all 37 managers from the four Caves were interviewed, with each of the interviews lasting two hours on average. The interviewees include mayor, senior, middle and junior managers in all four Caves studied. The interview questions concerned accounting information, such as budget, cost management and procedures followed in decision making. Some flexibility in the asking of questions sometimes led to the interview being extended, sometimes lasting over two hours.

Table 1

Profile of interviewees

Participants	Alpha No.	Beta No.	Gamma No.	Delta	Total No.
Mayors	1	1	1	1	4
Senior Managers	1	1	1	1	4
Middle Managers	4	4	4	3	15
Junior Managers	7	4	5	2	18
Total	12	9	10	6	37

The research process started with the researcher making contact with the people he sought to interview by telephone, before meeting them in person. The personal interview followed the telephone contact, with the researcher setting the questions in context. The interview procedure was that interviewees would be given the questions beforehand in order to prepare themselves so they would be able to highlight some evidence. As a result of successive interviews, some of the questions were changed or new ones introduced – the more time elapsed in the research process, the more the environment became familiar, and so even more questions related to hidden aspects of the given company came to light. In addition, the study relies on evidence from documents. These documents are drawn from the Greek Municipal Code, memoranda and articles incorporating the companies, and internal annual reports and board and management reports.

4. Decision Making and Management Accounting Practices of the Caves

4.1. Ownership and Decision Making of the Caves

The Ministry of Culture ultimately has responsibility for all the Show Caves in Greece, but as part of its decentralization policy has given local councils (municipalities and prefectures) the responsibility for running the show caves in their areas, and in the case of Gamma to the Anthropological Association of Greece. The Ministry has retained the right to inspect all Show Cave companies.

Alpha is owned jointly by the local municipal and prefectural councils, respectively holding 80% and 20% of its shares. Alpha is effectively run by a board of directors comprising a member of the municipal council as chairman and the following as ordinary members: the chairman of the local trade union, one civil servant, one civil engineer, one civil servant formerly employed by the municipal council, and one representative of the local farmers.

Table 2

Background of the Show Caves Studied

Organization	Ownership	Staff* No.	Annual Turnover (Euro)
Alpha	Municipality (80%) Prefecture (20%)	35	400,000
Beta	Municipality	30	350,000
Gamma	Anthropological Association	30	150,000
Delta	Municipality	35	400,000

*Staff are both full-time and permanent; however, most of the show caves also employ additional casual staff during the peak season.

Beta was formed by the local municipal council in 2000 and operates in accordance with the Municipal and Communal Code. The company is run by a board of directors composed of municipal councilors and representatives of trade unions and professional associations; its chairman is the mayor of the local municipal council. Gamma is managed by the Anthropological Association of Greece, a private organization to which the Greek Ministry of Culture has delegated the responsibility for running the Show Caves in this locality. The chairman of the board of directors of Gamma is also chairman of the Anthropological Association, and all the members of the board of directors are also members of the Anthropological Association. Gamma was established in 1959, and now has a net worth of €140,000 and an annual turnover of €350,000. The company employs more than twenty casual or temporary employees and thirty permanent ones, the majority working as tour guides. Delta is the oldest of the Greek Show Caves and is owned by the local municipal council, which bears ultimate responsibility for the Caves' activities. The chairman of its board of directors and one member of the board are municipal councilors, the same as in Alpha and Beta, while the other board members represent various professional associations and trade unions. The company employs more than 40 people, the majority of who work as tour guides.

The Caves generate nearly 80% of their income from entrance fees. Entrance fees are set by the management of each Cave. However the Caves constantly monitor the prices of each other so entrance fees are usually identical across the Caves. This is consistent with the arguments of Pellinen (2003) that the hospitality sector is characterized by price taking hence limited role for cost information in pricing decisions. In addition to the entrance fees however, the Caves also generate income from selling souvenirs (videos, DVDs, Cd-Rom, videos, T-Shirts etc) and the operations of coffee shops and restaurants. Pricing of these products is however done on the basis of cost information suggesting some role for management accounting.

The major cost incurred by the Caves is staff cost which represents about 60% of the total cost. Nearly 50% of the staff cost is for casual or temporary employees. The Caves also make decisions relating to the recruitment of employees. The seasonal nature of the tourism industry means that nearly half of the employees are casual or temporary. The peak season is between March and October where the Caves attract more than the 80% of the total visitors in the year.

Typical capital investment decisions include new buildings such as market places, rest areas, stone roads, coffee shops, souvenir shops, 3-D rooms, etc. To finance infrastructure projects, the caves sometime receive grants from the EU and the Greek central government. For example, in 2006 Alpha financed its 3-D room with 25% finance from the EU and 25% from the central government. The EU finance is part of the EU finance program for small businesses called «Leader». Another EU program called «intereg» also enabled both Alpha and Beta to obtain 100% of the finance for some recent infrastructure development such as the construction of shops at the Caves. Overall, the Caves finance over 60% of their infrastructure development from the EU and the Greek Central Government.

4.2. National Monuments and the Need to Maintain Institutional Legitimacy

The Show Caves have attracted important scientific interest because they relate directly to history, archaeology, mythology, religion, paleontology and geology (Dermitzakis and Georgiadou, 1982). Paleontological, anthropological and archaeological findings such as of human and animal skeletons and skulls, and tools and rock writings, give support to the theory that the first humans in earth used the caves as a place of abode and worship. While many Greek show caves have such life evidence, generally they can be said to have provided material for the study of ancient Greek civilization.

Plato's myth of the cave describes individuals chained deep within the recesses of a cave. Bound so that vision is restricted, they cannot see one another. The only thing visible is the wall of the cave upon which appear shadows cast by models or statues of animals and objects that are passing before a brightly burning fire. Breaking free, one of the individuals escapes from the cave into the light of day. With the aid of the sun, that person sees for the first time the real world and returns to the cave with the message that the only things they have seen heretofore are shadows and appearances and that the real world awaits them if they are willing to struggle free of their bonds.

The shadowy environment of the cave symbolizes for Plato the physical world of appearances. Escape into the sun-filled setting outside the cave symbolizes the transition to the real world, the world of full and perfect beings, the world of forms, which is the proper object of knowledge.

There is not only a direct relationship between the Caves and Greek mythology and folk traditions, but also between the Caves and religion. The Caves were places of worship of gods and demigods; sources of legends and tradition created by folk imagination; places of Christian faith, functioning, for example, as Christian catacombs; and also places for the construction of monasteries and churches (Petrohilos, 1984). Petrohilos argues that the Show Cave can be regarded as a component element of the tourist movement that provides mostly educational, scientific and aesthetic reasons for a visit.

The Show Caves are considered national monuments and as such any new services they introduce must be authorized by the Ministry of Culture. Especially when the new director takes his office in the local department of the ministry of culture he advocates more strictly guidelines in order to introduce to the cave administration. Because of his profession as an archeologist he believes that the show caves must obey more than the other monuments in archeologist laws than in the law of free market. That means that the show caves must pay taxes to the local department of the ministry of culture when the show caves allow to take pictures of video into the cave.

On the other hand the local director of the ministry of culture try to intervene into the research program of the show cave in terms to exclude researcher if they do not have permission of the local department of the ministry of culture. This leads to the increasing bureaucracy in terms of paper works that the show cave must follow and lead to the increasing cost and sometime in the rejection of that research program.

In addition as the Caves have educational purposes, the Ministry of Education also has certain guidelines that they must follow when designing their infrastructure. One manager interviewed at Alpha notes that: «*Because many students visit the Caves, the Ministry of Education guidelines must be complied with when we introduce any new infrastructure, for example, security rooms, etc.*». Thus in making any investment decisions, the Caves must conform to both the Ministries of Culture and Education guidelines in order to be maintain their status as national monuments and educational sites. This argument is consistent with NIS that to survive organizations would need to maintain cultural support and institutional legitimacy (Powell and DiMaggio, 1991; Collier, 2001).

4.3. Ownership and Coercive Pressures

Seven out of the eight active Caves (including three of the Caves we studied) are owned by the local municipal councils. We found evidence that the operations of these Caves are embedded in local municipal politics. The Greek municipal code allows municipal councils to establish business enterprises which should be managed by a board of directors, consisting of five to eleven members who are nominated (along with deputies) by the municipal council. At

least two of these members are elected representatives of the municipality, one member is a representative of the company's employees (provided the company has more than twenty employees), and one member is a representative of the local municipality, e. g., from a local professional association or a trade union. The rest of the board members are residents or members of the municipality who are experienced in or possess knowledge relevant to the objects of the company. A senior manager of Alpha states that:

Our company has seven board members, two of whom are members of the municipal council, one is a representative from the local trade union, one a representative from the Prefectural Council and the rest are local citizens.

The law also requires that compensation be given to the chairman and vice-chairman of the board of directors for their services in the company, which is set by decision of the municipal council after having been proposed by the board of directors of the company. In the same way, compensation could be paid to members of the board of directors for their participation in its meetings. The board of directors of the municipal companies is formally in command of the company and responsible for managing its affairs. The board of directors must communicate all its decisions forthwith to the municipality to which the company belongs, or which participates in the company. A manager of Beta comments that:

Many times the budget follows the procedures of the Municipal Code, which decrees that it has to be separate from the budget of the municipality in order for the company to have appropriate autonomy.

The Municipal Code also stipulates that the management of municipal companies be based on a separate budget of incomes and expenditure, and that this budget should be independent of the management of municipal or other communal affairs. The financial year of municipal companies coincides with the calendar year. According to the decision of the board of directors, which must be approved by the municipal council, the net profit of a municipal company, i. e., profit after depreciation and making provisions for future liabilities, can be used for the improvement or expansion of the premises of the company or offered to the municipality to fund charitable activities.

Furthermore, taking the same decision into consideration, the board of directors of the company, assessing the company's goals, effectiveness and productivity, can keep up to 25% of net profits in a special account for the provision of additional material rewards to employees as a form of motivation. The General Manager of Delta states that:

The stipulations in the Municipal Code have resulted in a profit consciousness among us. Because of this many times our effort has been concentrated on expanding our services in order to increase our profits and consequently to increase our bonuses from the company. This means that we have to put pressure on our subordinates to work harder in terms of effectiveness and efficiencies.

The bases for paying such rewards, as well as the process to be followed, are laid down in article 283, paragraph 2, of the staff regulations in the Municipal Code. These additional rewards do not form regular earnings in the meaning of the relevant labor legislation and only half of such rewards constitute taxable income. In line with a decision by the municipal council to fund charitable activities, as mentioned above, these may be performed by the company itself, on behalf of the municipality.

Several instances were provided in the municipal owned Caves which showed that very often municipal politics dominate decision making in these Caves. This marginalizes the role of accounting information in the Caves. In Alpha For example, the mayor's influence in the Cave led to the diversion of profits to support various projects in the municipality, leading one manager to note that: «*We had wanted to invest this profit mainly in the company to boost our operation, but we were forced to invest it in other areas of the municipality*». Capital investment budgets are usually exceeded by the end of the financial year as external influences frequently determine capital investment decisions, at times rendering capital budgets irrelevant. Alpha's budget is frequently influenced by directors, who are inclined to initiate more expenditure. The general manager of Beta states that:

We monitor the monthly reports every month. That is obligatory because we have to make decisions about performance and cost control. We change our decisions frequently to take account of the municipal council's desires. This influences the final outcome of the budget at the end of the year.

In Alpha, usually the mayor of the municipal council participates in board meetings specifically called to finalize the budget, by invitation, and makes recommendations for municipal works. Those members of the board of directors who are also members of local professional organizations will also attempt to influence the final formulation of the budget by putting forward proposals, and most of the time they succeed because the chairman of the board tries to maintain harmony between board members. As part of Alpha's budgeting process the budget proposal is sent to the municipal and prefectural councils for their approval, and the final budget, as approved by the municipal and prefectural councils, is sent back to the company, together with a special resolution by the two councils. Alpha has an investment consultant who is in charge of its investment programs and also responsible for the European Projects undertaken by Alpha Company. One of the responsibilities of the consultant is to make recommendations to the general manager but these recommendations are very often influenced by municipal agenda. Alpha is not independent in its decision-making processes since its shareholders, i. e., the municipal and prefectural councils, directly influence its decisions via their representatives on the board of directors and indirectly via their power to change the board of directors. Municipal elections very often create uncertainty for Alpha as changes in the municipal and prefectural councils usually result in changes to the composition of the board of directors. And since there is a legislative requirement that the board of directors be reappointed by the municipality every November, the influence of the municipi-

pality is self-evident. As one senior manager observes: «Any change in members on the board of directors of the organization that follows a change in the municipality's administration leads to a change of influence in decision making at all levels».

In Beta managers note how the budgeting process is politicized as a result of the influence of the municipal council. Beta's budget officer sums this up as: «Sometimes I face a dilemma when I am preparing the budget as the budget ultimately has to be approved by the municipal council. We have to incorporate municipal objectives into the budget».

In addition, the decision-making process in Beta is also potentially influenced by other external parties, such as one of the community groups active in the small town in which Beta is located. The importance of influence wielded by external parties be they municipal council, trade unions, professional associations or community groups, cannot be overestimated. The law enshrines the decision-making power of the board of directors, rather than that of the general manager, who is limited to making recommendations concerning the budget to the board and ultimately to executing its decisions, yet as one interviewee notes: «Most of the board members do not have any formal education in economics, and neither does the mayor. This makes their task of assessing the economic parameters of the budget quite difficult». The board of directors conveys its budget proposals to the general manager, who monitors the monthly implementation of the budget and recommends the final form of next year's budget in November of each year to the board of directors for its ultimate approval. Investment decisions are also made by the board in November, and these are included in relevant programs in the next annual budget. However, under the Municipal and Communal Code, these programs can be reconsidered at any time of the budget year. Every month the general manager considers proposals to vary the budget. Furthermore, the general manager regularly puts proposals to the board of directors concerning pricing of new services, investment programmes, hiring of staff and cost reduction programs.

Beta's budget decisions are also significantly influenced by the municipal council. In theory, Beta's board approves budgets based on the recommendations of the general manager but in practice such a decision is made by considering the extent to which the budget meets the municipal council's agendas. In fact, the board frequently makes changes, moving items of expenditure and income around as it sees fit. The influence of the municipal council in Beta's budget is very visible because most members of the board are at the same time municipal councilors. Thus though board members are expected to represent the interest of the organization the fact that the majority of them are councilors creates conflicts as they attempt to balance the interests of both the Cave and the municipality at the same time. One manager interviewed notes that: «Sometimes there are issues regarding the implementation of some project of significance to the local community, or matters concerning the hiring of staff that create conflict between board members». Beta's case is also compounded by the fact that the chairman of the board of directors is also the mayor of the local mu-

nicipal council. One manager sums these external pressures on Beta's budgets as: «*These external influences very often lead to budget proposals not reflecting the economic objective of the organization*».

Even though Gamma is not owned by the municipal council its decisions are still influenced by some of these external pressures. Similar to the other Caves, Gamma needs a license from the Ministry of Culture to develop new products or services. As the company is owned by the Anthropological Association of Greece and run by it via its nominees on the company's board of directors, all of whom, including its chairman, are members of the Anthropological Association. Gamma's decision-making processes reflect the fact that under the law the Anthropological Association has the final say on all proposals put forward by the board of directors. Moreover, since the chairman of the board is an anthropologist himself and a member of the Anthropological Association, he is likely to act in the interests of the Anthropological Association, as are the other board members.

The activities of Gamma are therefore not completely divorced from that of the Anthropological Association. This influences budget decisions as budgets are sometimes diverted from the Cave to meet the needs of the association. There is also pressure from local citizens, who usually make their pressure felt over the engagement of staff. It was however pointed to us during the study that because Gamma is effectively run by the Anthropological Association, this often creates friction with the local municipal council. For example, Gamma withdrew its sponsorship of some organizations in the municipality to eliminate any influence by the municipal council over the Cave. The conflict with the municipal council was summed up by a manager as:

The obvious influence of the municipality's administration on the final formulation of the budget has a negative effect on the achievement of the company's goals since there has been a transfer of financial resources to help the municipality achieve its goals rather than those of Gamma Company.

Delta's case is similar to the other municipal Caves described above. Apart from the municipal council influencing decision making in the Cave, any decision to introduce new product or service is also subject to the Cave gaining the appropriate licensee from the Ministry of Culture. Delta's board consists of two municipal councillors, one of whom acts as its chairman, two representatives of local trade unions and three representatives of professional associations. The chairman of the board of directors is also a member of the local municipal council, and thus can be expected to represent the municipality on the board. Some interviewees observe that majority of the directors do not hold any economic, managerial or accountancy degrees, so they fail to adequately assess the economic impacts of their decisions. According to Delta's general manager: «*The influence exerted by the municipal council is crucial during voting on budgets. This sometimes makes the final approved budget out of line with the original budget developed by both the chief accountant and the general manager*».

The ministry of culture also influences the budgets of the Caves as it has a budget level that all Caves must adhere to. The influence over budgets by the Ministry of Culture has often been interpreted as negative as each Cave has different needs and sets different goals. For Delta as it is a municipal company there is some influence exerted by the municipal council and especially by its mayor over its budgets and decision making. The municipal council is also able to exert influence over budget development throughout the process via the chairman of the board of directors and another member of the board, both of whom are municipal councilors. According to

Changes in municipal administration sometimes result in changes in decision making in the municipal owned Caves. In Alpha for example, the budget development and control has benefited greatly from changes implemented after the council election in October 2002. Under the previous municipal administration, during the period 1998–2002, decision making in developing the budget was shared between the general manager, the board of directors and the municipal council. The general manager used to plan the first draft, which was then changed many times by the board of directors, always taking into consideration any recommendations by the municipal council, most of the time accepting them. The changes made to this process by the newly elected council administration led to the budget now essentially being formulated and implemented by the board of Alpha without input from the municipal council.

Thus under the previous system, the process of budget drafts being endlessly revised in turn by general manager, board of directors and councils often resulted in a budget that was inappropriate for the company, with final income and expenditure targets that could not possibly be met by it. Alpha's general manager, who has been employed there since the company was established, commented on the tension that existed then between the needs of the company and those of council. He notes:

When I graduated from university, I would not have expected that I would be working for a company that uses one budget for two purposes: one has to do with the Municipal and Communal Code, and the other with the actual needs of the company.

One of the reasons for giving the general manager total responsibility for the budget process under the new regime, and thus the final word on the budget, albeit in cooperation with the chairman, was that the council was concerned to reduce the influence of the different professional organizations over budget development, something obviously achieved according to the general manager:

After the elections in 2002, and the change in chairman, greater emphasis was given to the actual needs and goals of the company, rather than to those of the municipality. This has positively affected the development of the company year by year and has also led to an important improvement in its financial results. Outside influence, by the mayor and by professional associations, of course exists but not to the degree that it used to before 2002.

The changes in the decision making processes in budget development and implementation have significantly changed the role the budget now plays in Alpha. The changes have also had a positive effect on the way in which the directors of the company think, by involving them in budget development and implementation. As one director said, *«In recent years we have had an active part in the development and implementation of the budget, which has made us feel more responsible for its implementation than before.»* There have also been recent changes in the budgeting decision making process of Delta as a result of changes in the membership of the board of directors following municipal elections. To cite just one outcome of this, the function of the budget and its implementation according to the Municipal and Communal Code is now emphasized to a much greater extent, with the company's main aim now being to make a profit.

4.4. Competitive pressure and the need to be innovative

The competitive nature of the tourism industry means that the Caves are under increasing pressure to introduce new products or services. Some of these decisions are made by the management of the Caves. For instance in Alpha the management recently made the decision to introduce a new service for students called «the environmental training into the cave». This program has been approved by the Greek Ministry of Education and several students have attended this program. The management of the same Cave also recently introduced a 3-D special room where visitors can watch other parts of the cave which they have been unable to visit.

In the past, accounting information played limited role in the decision making of the Caves. A manager interviewed from Delta notes that: *«Until recently we did not have much competition and there was not much pressure on us to make profit so we did not care much about cost. But this is changing now»*. Similar observations have been made from the interviews with the other Caves. All four Caves we studied have been experiencing continuous decline in revenues in recent years. For example, between 2000 and 2005 Alpha's income decreased by approximately 35% and Delta's income decreased by approximately 42% over the same period. To be competitive, the Caves are coming under pressure to reduce operating cost. Alpha for example adopted vigorous cost reduction strategies in early 2005 which have since resulted in a reversal of the profit decline it started experiencing since 2000.

A manager from Alpha sums the new emphasis on accounting information as: *«We now pay attention to monitoring the budget and scrutinizing the company's income and expenditure. We have also started paying attention to cost information when pricing our services»*. Accounting information is also playing significant role in decisions to introduce new services.

For the year 2007 the Alpha Company receives from the Tui-Thomson the «Gold Metal» for their services. This led to the other show cave to imitate in order to get the same price. The manager of Beta company always says that the pressure from the mayor is that to start to follow the same procedure or the same investments of the Alpha Company does in order to get the price from the Tui-Thomson for the 2008.

Another example is the participation of the International Show Caves Association (I.S.C.A) where the Beta Company follows the Alpha Company in order to take part and became a member. In addition the accounting information for decreasing the annual cost and especially the cost of employment lead to the Alpha Company to advocate special programs financing from the National Employment Office. The Beta company in order to decrease their cost followed the steps of the Alpha Company.

In addition the Alpha Company in order to get more visitors from the surrounding area try to innovate applying marketing techniques or to introduce new services. For example he introduced the discount ticket for the visitors who want after the visiting the cave to have lunch or to buy souvenirs having saving up to 30%.

In Beta, accounting information is also being emphasized in response to competition. Accounting information concerning the cost of providing and promoting services is now being considered in the company's decision-making processes. Further, its competitors' prices are used as the basis for setting its own prices in order to be competitive with the other caves in the area. Annual turnover of the company has increased in the last few years by 5%, with a simultaneous reduction in costs compared with the previous administration, thus demonstrating its effective cost control measures.

The management of has also introduced some innovative services and products in recent years in order to cope with the competition in the sector. As a result accounting information is becoming increasingly important in Gamma's decisions. Techniques such as cost-benefit analysis and break-even analysis are now being used by the company. A similar observation has been made in Delta with an increasing emphasis on cost management. For example, detailed cost analysis is now undertaken before any product or service is introduced. In addition, decisions to introduce new products/services are also influenced by whether such products/services are already offered by any of its competitors. Even for existing products/services, there is a continuous analysis of their cost and revenue relationship. Delta also continuously monitors the prices and cost of the other Caves.

5. Concluding comments

This paper sets out to explore the role of management accounting information in decision making in four Greek Show Caves. The Caves are archaeological sites and must be preserved as national monuments. But with increasing pressure, they are forced to modernize and compete. Our objective was to examine how accounting information functions within such an environment. Overall we found that there has been minimal reliance on accounting information in the day-to-day decision making of the Caves. First, as archaeological sites, the Caves were more concerned about maintaining their status as national monuments in order to receive support from the government and other funding agencies such as the European Commission. As a result, for a long time they were not concerned about performance improvements.

Nearly all the Caves in Greece are owned by the local municipal councils. We found that these Caves are all subject to some form of «coercive isomorphism», resulting from both official and unofficial pressure by other organizations, primarily the local municipal council in the case of Alpha, Beta and Delta and the Anthropological Association in the case of Gamma Company, which in turn are dependent on other organizations and members of society in general (and voters of course). These influences are similar to arguments by DiMaggio and Powell (1983) that legitimacy is a question of cultural theory and speaking on behalf of theory requires cultural licenses. Pressures from the municipal councils are usually exerted via the mayor, who may be chairman of a company's board of directors, and / or via municipal councilors in their role as members of a company's board. The municipal council's influence is observable in relation to budget development, the making of investment decision (seeking to influence them in the interest of the municipality), the maintenance of the respective municipal regimes and the public systems (Pfeffer and Salancik, 1978), employment policies and cost management. Other sources of pressure are trade unions, professional associations and members of interested professions, such as geologists and archaeologists.

Even though Gamma is not owned by the local municipal council it is also under «coercive» pressure from the municipal authority concerning employment and investment decision making since its board of directors requires assistance from the municipal authority to acquire areas of land for development by the company. The municipality's participation concerns the company's board of directors, who need the help of the municipality to acquire land for development activities free of charge, what is similar to the findings by Meyer and Scott (1983), Mizuchi and Fein (1999) and Carpenter and Feroz (2001), who showed that the political survival of government officials depends on their ability to negotiate exchange with the environments.

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