Essex Business School

Understanding Management Accounting Changes in a Family-Owned Company: A Greek Case Study

Stergiou Konstantinos
University of Essex

Muhammad Junaid Ashraf
University of Essex

Dr Shahzad Uddin
University of Essex

Address for correspondence

Dr Shahzad Uddin
Essex Business School
University of Essex
Colchester CO4 3SQ, UK
Phone: 01206874150

E-mail: snuddin@essex.ac.uk

May, 2010

Understanding Management Accounting Changes in a Family-Owned Company: A Greek Case Study

ABSTRACT

This study seeks to understand the changes to management accounting controls in a large Greek company in the context of the rapidly changing socio-economic environment. The paper investigates the case of FA (here anonymised), a Greek dairy company, as it has been transformed from a small family-run firm to one of the biggest companies in Greece. Familial and informal management controls have been transformed into a relatively formal and professional form of control over the years. The dynamics and nature of management accounting changes are understood by drawing on critical realism, a theoretical framework pioneered by Roy Bhaskar (1975, 1979). Our analysis revealed that a changed wider structural environment, changed control needs of owners and 'politics of control within capital' between competing management positions (Armstrong, 1989) precipitated the changes in the management control practices of the organization.

Keywords: Management Controls, Family, Greece, Critical Realism

Introduction

This study seeks to understand the changes to management controls in a family-owned business in Greece. The paper conducts as in-depth investigation into the case of FA (here anonymised), a Greek dairy company, as it has been transformed from a small family-run firm to one of the biggest companies in Greece. Little or nothing is known about management accounting in Greek companies. The little research that exists on management accounting in Greece is based on surveys (Ballas and Venieris, 1996). There is an almost total lack of intensive case studies. So far, case study evidence is drawn largely from Anglo-Saxon and Scandinavian countries, where the economic and political environment is somewhat different from the rest of Europe and especially from East European countries, such as Greece. Thus, there is a strong need for an in-depth understanding of changes to management controls in Greek companies. This paper seeks to fill this gap.

Many studies have been devoted to understanding changes to management controls by drawing theoretical insights from various theoretical perspectives (e.g., Burns and Scapens, 2000) in different settings. Certain geographical and country-specific cultural factors have been examined in respect of their influence on the path dependency of management accounting change (Granlund and Lukka, 1998; Burns and Vavio, 2001, p. 391-92**;** Busco et al., 2007). This paper is in line with the Busco et al.'s (2007) call for further reflections on management accounting change including the role of agents and structure in the interplay between change and stability. This paper attempts to contribute to the evolution of our understanding of management accounting change, as well as prompting thoughts and insightful discussion for the future. The paper provides an empirical insight into dimensions that have previously been under-researched in the accounting literature.

Previous Research and Theoretical Framework

Previous studies in Greece have been based solely on surveys and descriptive research (Ballas and Venieris, 1996; Venieris and Cohen, 2004). A survey conducted by Ballas and Venieris (1996) showed that most of the surveyed companies have traditional management accounting systems to aid pricing, production planning, performance measurement and profitability assessment. The other published work, conducted by Venieris and Cohen (2004), studied management control practices in Greek state-owned universities. Both of the studies merely described some of the management accounting practices rather than focusing on the changes to management controls and linking them with the Greek political and economic context.

Management accounting change has been a focus for many studies located in Northern European and Anglo-American countries (Burns and Vavio, 2001; Bhimani, 1996; Shields, 1997; Modell, 2001; Latinen, 2001; Granlund, 2001). Modell (2001)'s work on management accounting change in Norwegian public health care showed how managers (agents) proactively designed and implemented new systems for performance measurement in the context of recent reforms. Laitinen (2001) argued for the need to give proper attention to economic forces in understanding management accounting change.

Relatively few studies on management accounting changes have been concerned with East European and Asian countries, which are similar to the Greek context. Haldma and Lääts' (2002) work on management accounting practices and their transformations in Estonia, argued that the increasing competition, the legal accounting environment and the shortage of qualified accountants had a significant influence on management accounting changes. Szychta (2002) reported that severe external pressures and competition, mainly driven by privatisation and public sector reforms, caused Polish local enterprises gradually to change their management accounting control practices. Waweru et al. (2004) found that governmental reform/deregulation policy and global competition largely facilitated the management accounting change process in South African companies. In a similar vein, the work of Uddin and Hopper (2001) and Amat et al. (1994) argued that a series of internal and external factors

interact with each other and give rise to new control regimes, including accounting (Uddin and Hopper, 2001). Drawing on interpretive anthropology (Geertz, 1972, 1983), Ansari and Bell (1991) conducted a longitudinal study in a family-owned company, focusing on management accounting control practices and their changes over a long period. They observed a number of transformations within the organisations, induced not only by external pressures, such as competition, but also by power struggles within the family.

The above literature review seems to indicate some research employs a more 'structural' approach, i.e., suggesting that changes within management accounting and control systems are linked with wider forces operative in society rather than individual interactions (Loft, 1986; Hopper and Macintosh, 1991). For example, while explaining changes within cost accounting systems in the UK around the time of the First World War, Loft (1986) claimed that cost accounting techniques emerged as a compromise between the state requirements of a command economy for war and the capitalist elite class demands of continuing 'business as usual'. On the other hand, some research on management control change (interpretive research) seems to focus more on individuals, their intents, beliefs and (inter)actions (Dent, 1991; Ansari and Bell 1991; Modell, 2001). Knuuttila et al. (2008), while analyzing Dent's (1991) paper, identified how interpretive research into management accounting, in addition to providing an understanding of actors' beliefs and intents, also incorporates objective (structural) features of society. It is important to note that this is the classic individual (agency) versus society (structure) debate in sociology[1]. While this has been an ongoing debate in sociology for more than a century now, there are sociologists who, in relatively recent times, have suggested that better social explanations will involve some kind of an integration of these two approaches. The most notable sociologists and their theories are Giddens' (1984) structuration theory and Bhaskar's (1975, 1979, 1997) critical realism[2]. Ahrens (2008) contends that management accounting research epitomises the overcoming of the subjective-objective (structure-agency) divide. Ahrens quoted examples of how different theoretical perspectives used by management accounting researchers have 'overcome' the

subjective-objective divide in management accounting research. Ahren's (2008) quoted examples include actor network theory, governmentality studies using the work of Foucault, and situated functionality studies. A number of studies on management accounting change relied on Gidden's structuration theory to overcome the structure-agency debate (Granlund, 2001; Uddin and Tsamenyi, 2005; Macintosh and Scapens, **??**). For example, Granlund's (2001) paper, drawing on structuration theory, argues that the human factors, along with the structural forces, were essential to explain management accounting changes.

While Giddens' (1984) conceptualization of structure and agency has been widely used in management and in accounting research, it is Bhaskar's conceptualization of structure and agency, which is not often used by accounting researchers, that we would like to appropriate for this paper[3] (Llewellyn, 2007; Modell, 2009). The paper argues that critical realism is one theoretical framework that overcomes the subjective-objective divide by describing how structure and agency are linked with each other. Critical Realism (CR) is a social science philosophy that claims that robust explanations of social phenomena and events are possible only by combining the two approaches, i.e., social structures and individual agents and their actions. This philosophical approach has been becoming increasingly popular in organization and management research (Tsang & Kwan, 1999; Mutch, 2002; Leca and Naccache, 2006; Llewellyn, 2007). According to CR, events and phenomena do not happen on their own; there are underlying powers/properties in objects that generate phenomena and events. In society, these objects with the power to cause events are social structures. A social structure is a system of internally and necessarily related objects (or positions). Two objects are internally and necessarily related if the two (or one of the two) cannot exist without the other. Examples of internally and necessarily related social objects can be husband/wife, landlord/tenant, black/white etc. When two social objects combine to form a structure, these structures have emergent properties, i.e., the property of structures cannot be reduced to those of individual objects/positions. A typical example from nature is hydrogen and oxygen combining together to form water, which has emergent properties. In social science, bureaucracy (a structure

arising out of internal and necessary relations between positions) has the emergent power to work efficiently, an emergent property that cannot be reduced to the individuals comprising the structure. Similarly, the properties and powers belonging to a landlord or a tenant cannot be reduced to the individuals who are in this structure. Those individuals who are the incumbents of structures have their own powers and properties, such as reflection, designing projects (including projects to change the structures that they are inhabiting), articulation and organization for the pursuit of projects. So, there is a clear distinction between the power of structures (internally related positions) and the powers of agents (individuals who are occupying these positions). Structure influences agents through giving them powers, constraints and vested interests. Thus, agents occupying structural positions have a vested interest in either preserving the structural condition (if they are in a position of relative advantage) or to try and change it (if they are in a position of relative disadvantage). Every structural position has certain powers or constraints that the occupants enjoy or face. These constraints and powers of structure are real and not a figment of the incumbents' imagination. Critical realism thus believes in a reality independent of agents' intents and beliefs. Agents' intents and beliefs can be important causes for their actions and thus there is an important place for hermeneutics in CR. However, agents form these beliefs and intents while occupying certain structural positions and thus the study of social phenomena requires the study of the two separately. Since these structural conditions predate any generation of agents that come to occupy these structural positions, the study of social phenomena should start from 1) the identification of structures, their powers and properties and 2) the powers of agents and their interaction with each other while they are within given structural positions (these interactions may result in changing structures). This analytical separation of structure and agency for their effect on each other is called analytical dualism and is a hallmark of critical realism. Social events (such as change in management control practices) are caused by structural powers, but mediated through human agency. So, the focus of scientific investigation should be on the identification of those structures, their causal powers and how these powers, mediated through agency, lead to certain events. Our research objective here is

to explore and explain the process of change in management accounting and control practices in FA. Given our research philosophy, theoretically and methodologically, the questions we need to address are as follows: what are the structures at work and how do these structures influence the incumbents of positions within this structure to act in certain manner? How do agents within these structural arrangement act?

RESEARCH METHODS

The research collected data by applying various methods, including interviews, observations, the analysis of relevant documents, and the examination of newspaper reports. From a critical realist methodological point of view, the research needed to identify and understand the powers, susceptibilities and interests of positions before the interaction sequence of the present generation of actors was captured. FA, as an organisation, needed to be located in the structural context in which it was operating. In this case, the data collection efforts were targeted at understanding the structural conditions that were being faced by the top managers and owner-managers of FA. These structural conditions should not be radically different from those faced by other private section companies in Greece. Nevertheless, the family history of the owner-managers was carefully noted to understand the specific context of FA. Documents such as annual reports, accounting regulations, and EEC regulations were collected and analysed. Newspaper reports also constituted a major part of the research to provide an overall understanding of the structural conditions under which FA was operating. All of this helped to develop a better understanding of the organisation, its operations, its systems, its procedures and the rationale for the changes.

In order to understand the strategies of actors, the leading author directly observed the managerial activities for a four-week period in two phases. Time, access and resources precluded a longer and more continuous period of observation. Personal and company anonymity was a condition of research access. Although complete participant observation was

not carried out, one of the authors was present in the organization almost every day for a four-week period in two phases. This type of observation[4] provides many of the insights that the complete observer would gain (Easterby-Smith et al., 2002: 112; Yin, 2003: 93). The leading author's previous employment in the organization also proved to be very helpful, especially during the observation stage. This provided the author with considerable freedom of movement and almost no restrictions in asking questions and collaborating with the staff. The author was able to attend a number of high-level meetings. The subject matter of these meetings included the budget of the company, departmental strategy, and productivity.

In order to understand the rationales that led to the change of management control inside the organization, the interviews and the researcher's general interaction with the rest of the company's staff were very useful. In total, 15 interviews were conducted with managers from various departments, including the accounting, production and marketing departments. Normally, interviews lasted between 50 and 60 minutes. Previous collaboration with most of the chief directors provided the leading author with more flexibility to ask questions. This was achieved by asking some open-ended questions during the face-to-face interviews, which allowed him to probe in greater depth (Robson, 1993: 233). Notes were taken during each interview and the interviewer's reactions and cross-referencing of similar points were noted immediately afterwards. Reports, many unpublished, were collected, in addition to library and newspaper searches to validate and supplement the interview and observational data. However, it is important to note that the managers interviewed refused to provide some sensitive financial data to the author, such as certain costing and pricing details. This was partly because financial data were not available to them, especially past accounting data, and partly because of the secrecy the company sought to maintain.

RESEARCH FINDINGS

Management Controls and Context [Early Periods]

FA is the successor to a business founded in 1920 by the family of Mr. A (here anonymised). The firm was very small in size and was mainly aimed at distributing dairy products in a very specific area of Greece. In 1954, the founder's son (the father) created the first network of mass-produced yoghurt in a Greek town. This was a tremendous innovation at that time in Greece, which helped the company to grow. In 1964, the first yoghurt-producing factory was opened in Athens by the father. This proved to be very successful. In 1974, FA's current factory was built. This new factory technology standardised yoghurt-making for the first time in Greece and radically changed the Greek market. The company invested substantial resources in building its distribution network and enhancing the image of the FA® trademark[5]. By the late 1970s, FA became one of the market leaders in the Greek food industry.

Nevertheless, FA was still relatively small in size with a simple structure during the pre-EEC period. Its management was completely in the hands of the father and his two sons, who owned 100% of the company. They were actively involved in all aspects of the business. Controls were characterised by managers as direct, familial and informal. The owner-managers were able to directly control the affairs, partly because the business was not particularly large in size and scope. The dominance of the owner-managers was a routine or tradition at FA, as in many other typical Greek family-owned companies (Makridakis et al., 1997; Ballas and Venieris, 1996). The accounting department, in size, was very small, employing few accountants. The department was responsible solely for preparing tax statements and the cash budget leaving the planning aspect to the owner-managers. Consequently, formal and dedicated management and cost accounting systems were not in place. Cost information was collected through accounting systems and the owner-managers' personal contacts, but the research revealed no professional cost accountants or associated systems dedicated to providing cost information to managers outside of the family. Most of the decisions were made by the owners, who relied on information from formal as well as

informal channels. One manager commented: *The owners did not see the use of having a formal system of planning and control, as they were able to cope without it*. Informal meetings with top managers seemed to be sufficient for the owner-managers. There were budgets in the form of physical targets derived from the informal channels and reinforced by the top managers. These budgetary figures were passed down to production managers, who transmitted their messages (and pressures) to the first-line managers. Managers, with a few exceptions, had little idea of whether the organisation was running profitably, which is unsurprising given that no internal financial reports were distributed during that period. This is similar to Uddin and Hopper (2001) and Ansari and Bell (1991)'s work on family-owned companies. They found a typically small accounting department dedicated to meeting institutional regulations rather than facilitating formal budgeting processes within the company.

Changes to Context and Management Controls (the 1st Attempt)

During the early 1980s, as discussed below, FA's management controls, like those of other Greek companies, were influenced by a number of wider structural changes, which included joining the EEC and the introduction of new accounting regulations (Spanos, 2005; Venieris and Cohen, 2004).

Greece's entry into the EEC in 1981 gradually brought forward a number of changes in FA's organisational operations. One of the significant operational changes, as interviews with top managers revealed, was FA's penetration into European markets. Unlike other Greek family-owned companies, FA seemed to be able to compete and cope with multinational and bigger companies. FA began exporting to the European market and was able to secure a market share within a relatively short period of time. It may gave been this that led the company to make further expansions, such as investments in technology and creating new products. Inevitably, the owner-managers began to consult experienced managers and allowed top managers, such

as the CPA (chief plant officer), the CCO (chief commercial officer, and the CFO (chief financial officer), to work independently. There were numerous innovations in many products, which were brought forward mainly by the CPO (as claimed by the CPO and supported by other managers). The number of products and brands rose very quickly after 1990. The creation of the R&D section contributed to the launch of new value-added products. The company also gradually acquired a total of eighteen firms operating in the food industry. According to the CPO, FA has maintained its leadership in all yoghurt categories despite aggressive launches by multinational giants. The CCO commented that FA had improved the image of yoghurt by branding and mass-producing it, thus developing taste consistency and a longer shelf life, in conjunction with targeting younger consumers through its advertising campaigns. FA has invested heavily in marketing and distribution over the past two decades[6].

The interviews seemed to indicate that technological and product innovations in FA were driven not only by wider structural forces, such as competition and the Greek political and economic situation (Makridakis et al., 1997; Arghyrou, 2000; Bourantonis et al., 1998), but also by the important roles played by certain top managers, especially the CPO, as revealed by some of the managers interviewed. The CPO became one of the key players in the firm, influencing the successful operation of the R&D department, introducing successful products that have come to dominate the Greek market, and forming a team of people that work very closely concerning the technological aspects of the company. The continued expansion made the organisational controls, including management controls, very complex and less informal. The owner-managers had to rely more and more on the top-level managers. In turn, these managers had to rely more on formal channels of information and authority.

Changes to management accounting and organisational structure were perceived as being inevitable. The formalisation of existing internal structures and positions was the main priority. In addition, the owner-managers wanted professional managers to take over most of

the company's affairs. In order to realise the targets, the then-CFO (Chief Financial Officer) was given the authority to design the new management accounting control system (MACS). Managers pointed out that the development was also heavily influenced by the accounting requirements imposed upon Greek companies. Whatever the reasons for the changes, they consequently warranted modifications to the organisational structure of the firm and led to the need for a detailed accounting system that would assist top management's decision-making process. Before 1981, there was no formal costing section in the company. FA's accounting department used to gather costing information for the top management. The introduction of the Hellenic General Accounting Plan (HGAP) in 1981 further forced FA to install a detailed accounting information system including costing. HGAP was made compulsory for all Greek firms. The HGAP covers both the format of financial reports and financial record keeping (Ballas and Venieris, 1996: 126). It consists of ten groups of accounts, of which group 9 is concerned with cost accounting. The HGAP emphasizes the computation of full costing and standard costing. FA's accountants used the HGAP, as did other firms in Greece (Ballas and Venieris, 1996). Investigations revealed few other aspects of cost accounting practices in FA. The traditional cost accounting system was enforced by the HGAP. For example, cost allocations are based mainly on machine hours, although this varied by department. The cost of the administration, R&D, distribution and financial functions is, generally speaking, charged directly to the profit and loss account. R&D expenses are split into those that relate to long-term projects, which are capitalized, and the rest, which are transferred to the profit and loss account. The depreciation of capitalized R&D expenses is a determinant of production cost. Finally, some vital functions of the firm, such as production, administration, finance, distribution and research and development, were divided into cost centres[7]. The interview with one accounting manager revealed that these traditional costing techniques were reasonably useful for production planning at that time, but not used extensively within the company as a whole as part of the decision-making process. The HGAP was used mainly for financial requirements and tax liabilities.

An attempt to formalise the control norms and rules alongside the new financial accounting framework did not have much impact on the day-to-day affairs, as many managers opined. According to many managers, during the early periods of its implementation, the new MACS was rather centralised and aimed more at financial data, ignoring non-financial issues. Budgets were prepared mainly based on the personal knowledge and experience of the CFO. There was little co-ordination and communication between the departments. One manager commented: *"There were hardly any meetings. The entire financial operation of the company was under the authority of the CFO. Some meetings took place, but only when the departmental expenditures were too high".* The managers retained their old-fashioned informal systems to gather the information the CFO needed, ignoring other departments. The budgeting system, as a part of the new MACS, did not seem to engender any interdepartmental formal relationship. The budgeting system remained centralised and ad hoc, as many managers complained. The centralization and ad hoc system of budgeting caused some severe conflicts between the then-CFO and other top managers. It particularly strained the relationship between the CFO, the CPO, the CEWO (Chief Engineering & Work Officer), and the Head of R&D. The CEWO complained that the R&D strategy of the organization was starved of a detailed analysis based on financial and costing data. All the other managers were also of the opinion that the interpretation of the financial figures produced by the CFO was particularly difficult. The then-CFO was perceived as the major stumbling block for a formal control system. The owners sought to have close collaboration between managers, but at the same time the owner-managers, especially the father, did not want to force the CFO to do anything he did not like, as many managers informed the researcher. Nevertheless, the CFO's position of power changed in 1989, as the father finally handed over the company to his two sons.

Changes in Context and Management Controls [the 2nd Attempt]

FA continued to invest in product innovations and marketing after the changeover in 1989. FA's market share shot up to 74% in branded yoghurt, 58% in sealed yoghurt, and a 25% share in the packaged cheese market. In 1995 and 1996, FA invested heavily in market research to identify the new trends in the Greek cheese market. In 2002, FA invested US $19 million in order to improve and upgrade its facilities in the areas of production, milk collection, packaging and R&D in the yoghurt, milk and cheese sectors. FA is now the second largest dairy producer in Greece and one of the major firms in Europe. Investment in technology and product innovations was reflected in FA's performance (see Table 1).

Although there were no major turns or shifts in the wider structural context of FA, the centralised/familial structure within FA to some extent was eroded in 1989 soon after the two sons (the two brothers) took over the company. One manager commented: *"The owners realized that they had to expand and delegate more in order to compete with other European firms, as the protectionism of the state was no longer valid".* The two owner-managers saw a new budgetary system with a new CFO as a solution to the challenge. The then-CFO was removed from the post (with dignity, as one manager put it!). He commented: *"The previous CFO (the present Director) is one of the closest friends of the owner-managers. He was given a new post in recognition of his contribution to the company over the last 20 years. This post is more of an honorary than an executive role".* Thus, the new MACS emerged in 1989 as soon as the appointment of a new CFO was made. These are discussed below.

Changes to Organisation Structure

The company is now formally divided into four functional areas: Financial, Technical (R&D), Commercial and Plant departments. Each of these departments is headed by one chief officer with a significant amount of responsibility and power, whereas, previously, all departments had been single-handedly controlled by the owner-managers.

[Insert Figure One]

The company hired experienced professional mid-level managers to fill key positions. Among the four top posts, only the CFO (Chief Financial Officer) was replaced. The other three top managers (the CPO, the CEWO and the CCO) were not replaced and have been working in the company for a long time. The new CFO was given the authority to design a new budgeting and costing system that coincided with the new organisational reforms. The owner-managers seem to limit their interference in the day-to-day affairs of the company's management, but give more attention to the strategic affairs of the company. However, the board of directors consists only of members of the family, because the owners seek to preserve the family character of the business. There is also an arrangement between the two brothers pursuant to which they rotate their positions as Chairman of the Board and Executive Officer of the company in June of each year. One manager commented: *"Their father is not now actively involved with the company affairs. The two brothers share equal power within the company".* Previous literature suggests that sharing the top positions (power sharing) is not unusual in Greek companies, and happens in many family companies where there are two or more owners from the same family (Ansari and Bell, 1991; Uddin and Hopper, 2001) One of the top managers revealed: *"Each of the brothers directly owns 50% of the company's outstanding shares and they have no intention of selling to the public or anybody else, since the company is growing quickly".*

Changes to the Budgeting and Costing System

Empowered by the owner-managers to revamp the management control system, the new CFO began to expand the accounting department. Soon, the number of accountants rose from 15 to 40. The CFO discharged many accountants who had been employed by the old regime, but hired a number of professional accountants who were younger, most of whom had at least a university degree. The new officers were given full control of their sections. The Accounting

Manager commented that some of the old accountants are still working for the company because their expertise is considered of major importance in order to guide the new ones and to help organize the accounting department.

Budgeting was given particular attention. An economic analysis section was created in the accounting department and is responsible for conducting the final budget. All sections within the department, such as costing and tax, seem to provide continuous assistance to the economic analysis section. The chief financial officer and the accounting manager are informed frequently and there are regular meetings during the preparation of the budget. The budgeting process starts in November. The chief officers of every department set up meetings to discuss the goals that the master budget will have to achieve and the contribution of every department to this budget. The first submission is in June of the accounting period to which the budget refers. Two revisions are planned during the year, in May and in September. The final submission is at the end of November. Every department has to prepare its own budget for the coming year and submit it before the deadline expires. Deviations from these departmental budgets are discussed in the two revisions or in separate meetings, which are arranged by the financial officer. This system seems to be a text-book style budgeting system, but is limited by the presence of the owner-managers and the powerful position of the CFO, as will be discussed later. Nevertheless, the changes to the system apparently went smoothly, something many managers attributed to the social skills of the new CFO. One accountant commented that the social skills of the CFO allowed him to interrelate with and to gain the trust of other top managers and the owner-managers (Chenhall and Langfield-Smith, 1998). In any case, the introduction of the new control system was seen as a reasonable solution by many managers given the previous failed attempt. For many, this was the starting point for the numerous changes that have occurred within the organisation over the past decade.

As the company grew and became more complex, the HGAP requirements for cost accounting seemed outdated for product decisions. The accounting department, with the help

of other departmental managers, appeared to design a costing system that would provide them with more information for the inner operation of the company, so as to conduct more realistic budgets. The authors could not establish any substantial degree of understanding of current product costing and pricing in FA. Interviewees simply refused to talk about these costing issues in detail. One accounting manager argued that government directives on costs are not sufficient or relevant for true product costs. Thus, the accounting department has moved a step ahead. For the production of each product, they have estimated (after technical analysis, as the Accounting Manager informed) a certain percentage, which reflects the difficulty in producing a product and includes the labour cost, machine cost etc. This percentage is used in the calculation of the cost for every product. In this way, the accountants create groups consisting of uniform products, and it is thus easier to establish their cost. He informed one of the authors: *"The costing system that we use at FA is not the company's secret. However, its result is"*. He went on: *"The only people that have access to these statements are the cost accountants (there are 3-4 persons), I, the CFO, the CCO, the Director and the owners"*. He also confirmed the authors' suspicions concerning the product pricing strategy used by the firm*: these numbers are crucial to us in order to support our export policy and the pricing of our products. Of course, we also consider other factors, such as the current competition, the consumers' perception about our products, the margins of our profitability and the marketing strategy for any given product. However, our pricing policy is not the only aspect within the company that needs costing data. We use them also in the conduction of the general budget of the company, mostly in order to help other departments to deal with their expenses.*

The accounting department collaborates very closely with the other departments in order to obtain the necessary data concerning product costs and relevant information. The Chief Financial Officer mentioned that the flow of information between departments is quite successful and provides the accountants with accurate data.

Changes to Performance Measurement

However, the new control system has a limited influence on the performance measurement system. One employee commented that not all employees are measured by the budgetary targets. There are other formal and informal ways to measure performance in FA. One manager commented: *"Continuing failures to meet the budget might mean suspension"*. However, promotion and performance measurement are still not transparent, remaining centralised and in many ways informal. Interviews revealed that the procedure by which an employee receives a reward consists of two stages: first, his or her direct superior makes a recommendation to the chief of the department, and secondly, the chief takes the final decision after giving due to consideration to the recommendation and sends it to the CFO. Although the CFO does not have the formal authority to reject promotion proposals from any department, the CFO has considerable influence on the decision in reality, as the interviews indicated. This is often a source of conflict among the chief officers. These tensions are suppressed by the powerful influence of the family members. Despite the fact that many people participate in the formulation of the management control system, decisions are ultimately made by the CFO. It was also revealed that there is always a meeting with the owners to discuss the outcomes of the budget and other financial and performance measurement issues, but the CFO usually makes his own decisions, with the blessing of the family members. One interviewee commented: *"He is considered to be the most powerful person in FA after the owners"*. Therefore, despite the relative decentralization of the decision-making, there is still a patriarchal style of control in FA, albeit of a slightly different form (Whitley, 1999).

Discussions

For a critical realist, an organization is a system of necessarily inter-related positions and thus constitutes a structure (Willmott, 2000). Each position within the organization is endowed with certain powers, resources and interests. Organizations, in turn, are in an internal and

necessary relationship with other organizations and institutions, thus forming another level of structures; these can be referred to as meso and macro structures (Easton, 2001). The economic, legal and political system and various lower level institutions, such as regulatory and governmental agencies operating in a society, are examples of such macro and meso structures. The interests, powers and liabilities associated with positions within an organization are, of course, a function of the larger structures in which the organization operates. The management control practices within a capitalist firm are a function of the powers, interests and liabilities of the various positions within the firm, including owners, managers and labour (Tsoukas, 2001). However, as described above, these management control practices are influenced by the larger structures within which the firm operates (Tsoukas, 2001). For example, FA's control practices were familial, in keeping with many other companies in Greece and elsewhere, from its establishment in the 1920s until 1989. The firm was operated as a typical Greek family-owned firm (Makridakis et al., 1997; Ballas and Venieris, 1996). The owner-managers were able to influence day-to-day business affairs, as the business was not particularly large in size or scope. The owners were not interested in implementing formal control partly because the company's profits were rising and there were no serious threats in the business environment. At that time, the Greek economy was completely isolated from the rest of Europe, as were Greek products.

As shown earlier, the nature of the management controls began to change in the 1980s as FA, like many other Greek companies, faced new structural forces (Spanos, 2005; Venieris and Cohen, 2004). Greece's entry into the European Economic Community in 1981 was the beginning of a period of considerable change, mainly in its economy and national policy. Greece's state became a democracy and started to open up its economy in the late 1970s. This may have led to major changes in FA's socio-economic and socio-political context and contributed to the subsequent investment in R&D and the establishment of export policies. However, it is important to note that the causal powers of new structural forces or tendencies are not automatic; these have to be enacted. Thus, management control practices involve an

element of agency as well. What management control practice is adopted in a particular structural context still remains a choice (limited to varying degrees due to structural pressures) of the agents in question. Nevertheless, the capacities of agents are relatively under-researched in previous studies of management accounting change, with some exceptions, such as Granlund (2001). Powerful agents within organizations tend to be reduced to so-called *cultural dopes*, operated by the accumulation of capital, the functional differentiation within social systems, universal social laws, stimuli or discourses. Previous studies inspired by the structuration theory tend to focus on agency, but human agents are seen as integrated into social or organizational practices. On the other hand, interpretative sociology (e.g., hermeneutics, symbolic interactionism, phenomenology) is indeed 'strong on the subject', but very 'weak on institutions' ('imperialism of the subject'). In contrast, this study, by applying a critical realist methodology, identifies the role of agents within the structural constraints in which the case study operates.

Agents at FA certainly reacted to and reflected the changing context of FA. We would like to argue that the changed structural context in 1981 'pushed' the capitalists of the firm to ask the CFO to change the management control practices within the firm. However, as the empirics of the case suggest, that change could not be made. In order to understand why this change could not take place, we need to look more closely at the structural context within the organization. Incumbents of senior manager positions within capitalist firms are exposed to multifarious uncertainties and insecurities. Various ethnographic studies have documented these uncertainties that managers face. 'The more I saw of the managers at [the company] ..., the more I became aware of the extent of human angst, insecurity, doubt and frailty among them' (Watson, 1994, p. 178).

These insecurities primarily stem from the task of extracting surplus value for the capitalist in the face of the uncertain labour and product market situation being faced by the organization. On top of that are rival competing professionals who promise to do the job better than

him/her. The challenge for the occupant of a senior management position is to ensure that he/she wins the trust of the principal in the face of competition from peers (Armstrong, 1989). This becomes even greater in the family firm scenario. Armstrong (1989) describes the historical evolution of family firms into the age of professional managers: "Persons brought in as experts, after long periods of enculturation as subordinates, established themselves as 'honorary family' " (p. 318).

In the case of FA, the CFO had gained the trust of the capitalist (the father) and did not want any peer to take this away from him. The capitalist had entrusted him with the responsibility of controlling the organization having decided that he could do this job better than anyone else. The old informal management control system was based around the position of the CFO. The continuation of the same management control system over the years was a testament to how indispensable he was to the father and how much trust they placed in him. This situation obviously frustrated other managers, as trust is a relational thing and, as such, a zero sum game (Armstrong, 1989). Any change in the management control practices, especially one where there would be more integration with other departments, meant the increased involvement of other managers in controlling the affairs of the organization thus losing the CFO's position of trust. In the changed economic climate, when the CPO had gained an importance in the firm due to an active role in the new product development, the threat of losing trust loomed even larger. The CFO thus made active efforts to ensure that the management control practices remained the same. The only changes that were made in the accounting system were those that involved compliance with external regulatory pressures. While the structural environment did 'nudge' the capitalists (the family) to ask for change and encouraged the CFO to maintain the status quo vis-à-vis the management control practices, the role of agency cannot be overlooked here. First of all, structural pressures have to be perceived subjectively and the role of agency is important there. Second, strategies adopted by individual occupants of 'positions' to achieve their designed projects are also a manifestation of agency. In the case of FA, for example, while the wider structural

environment underwent changes that necessitated a changed management control system, the capitalist (father) did not push the CFO enough to change the management control practices. We argue this was for two reasons: either he did not feel the structural pressure and associated threats to be that imminent or assigned very little significance to it. Agents could be wrong in their assessment of structural pressures and associated costs and it may cost them their position. For example, competing with rival capitalists is a structural pressure that a capitalist faces in a capitalistic structure. If these pressures are not felt by a capitalist and, resultantly, a capitalist does not compete, and he or she may stop being a capitalist (Porpora, 1992). The assessment by the capitalist here (father) of the structural pressure and the price of going against this could have proved costly, but in this case, as we saw, no damage was done. Part of the reason that the owner (father) assigned very little importance to this structural threat was his active involvement in the day-to-day affairs of the company, including the constant interaction with all functional managers. On the other hand, the then-CFO carefully deployed his strategy of stalling the changes in management control practices. First, he created an impression of change within the organization by making changes in the accounting system. However, these changes were only to comply with the requirements of the HGAP. Any change beyond this was presented by the then CFO as an unnecessary complication.

The role of agency in management control change becomes even clearer in the second episode of change. There was no major structural change within the organization as such. Positions within the firm and their powers and liabilities remained the same. Change in the wider structural environment was also not significant. While the product market became more demanding, the difference was not as significant as was the case in 1981. However, in this instance, new incumbents had moved into previously powerful positions. The two brothers perceived the same structural pressure, which had previously been ignored by their father to the detriment of the firm. To them, for FA to compete in the new economic age, changes in the firm’s management control practices were necessary. There was also a difference in management style that they envisaged for themselves. They wanted to divorce themselves

from the day-to-day running of the organization and hence needed a strong formal control mechanism to influence the management of FA. So, a new person was brought in to bring about changes in the management control practices. In the case of the new CFO, the role expectations from the owners were altogether different from those of the previous CFO. The new CFO was brought in to implement change. Indeed, 'change' was the mandate of his position. He had to gain the trust of the capitalists by giving them what they wanted - a control mechanism through which they could manage the professionals running their family firm. Thus, he implemented radical changes in two aspects of the management control practices. First, the CFO, in consultation with other functional managers, created a budgeting system where there were clearly assigned targets for the year ahead for all functional heads. This became a very handy control tool for owners to manage the functional heads. There were three to four meetings scheduled during the year in which the performance of functional heads against targets was reviewed. The system thus enabled the owners to control the management more efficiently (less time involvement). In order to support the preparation of the budget and to help take other business decisions, refinements were made in the costing system as well. It is important to note that while the CFO and other functional heads worked together in creating this new budgeting system, it was primarily those functional heads whose performance needed to be managed by owners that were involved. The CFO thus gained the trust of the owners by giving them a management control mechanism that was efficient and effective. Armstrong (1989) contends that securing the trust of capitalists through claiming to provide tighter controls has been the main battle between different professional groups. Accountants achieve this aim by providing accounting controls, whereas IT professionals do so by promising that their system tools will enable the capitalists to look at every nook and cranny of the organization with minimal input. In this case, the new CFO was also able to secure the trust of the owners by changing the system of management control. According to the CFO, *"The process of the change was a result of his actions, but without the support of his group and the other chief officers, the implementation of this change would not have been successful. I would also add that without the support of the family members, it would have*

been impossible". Gaining the trust of the capitalist for the manager means gaining perks, privileges and power. This clearly seems to be the case with FA whereby the new CFO has been given more powers by the owners in managing the affairs of the company including the performance assessment of employees belonging to different functional areas. The other managers had to conform to this situation and comply with the wishes of the CFO; otherwise, they would have had to deal with the owners themselves.

Conclusion

This paper set out to explain the management accounting practices and their transformation in a family-owned company in Greece. Drawing on previous studies on management accounting change and critical realism, the paper argues that management accounting changes at FA need to be understood not only from the perspective of the structural constraints agents face, but also from a perspective that takes the actions of agencies into consideration.

This case study illustrates the role of agency (including non-owner managers) in shaping management accounting practices and transformation. This case also demonstrates the role of enabling/restrictive structures in shaping the new control practices and transforming informal control into a somewhat formal control regime (the performance measurement in FA remained informal). For instance, the paper provides evidence on structural factors, such as how joining the EEC, the new accounting requirements and the competition have played an influential role in transforming the accounting control system in FA over the past three decades. However, as the paper argues, structural changes do not do the acting on their own; the case also demonstrates that the actions of actors – in this case, the previous CFO and then the current CFO - were highly influential in what happened at FA. This is reflected in the installation of the new accounting control systems in terms of flow information channels etc. and even keeping the informal performance measurement by the current CFO at the same time. Similarly, the previous CFO installed the legal structures of the accounting system as

the law demanded, but kept the informal control system. In the same way, the case also highlights the role of the father and the two brothers in shaping the management control regime during the different periods. Although the paper does not focus on conflict within the family, it certainly highlights marked differences between the pre-1989 and the post-1989 regime. On the surface, although the shift of power (i.e., the replacement of the previous CFO, the father's retirement and the take-over of the company by the two brothers) seemed smooth, the consequences of the shift went much deeper in terms of the scope and control of the organisation.

Employing a critical realist philosophy, we have tried to explain the changes in the management control practices of a Greek family-owned firm. We have shown in our analysis how various positions, their interests and powers push them (tendencies) to act in either changing or resisting management control practices. We have also shown that the interests and power of these positions are influenced by changes in the wider structural environment in which the organization operates. In the changed wider structural context, we have tried to explain the changes in management control practices by demonstrating the changed control needs of owners and the ''struggle for control within capital'' (1989, p. 311, *original emphasis)* between different managerial positions. However, more research linking internal, external and agency factors and drawing on a wider range of national settings is needed (Busco et al., 2007). Based on our observations, we believe that longitudinal case study research on accounting change, especially in an Eastern European context, could provide further insights into management accounting change. Finally, we would like to argue that critical realist explanations of structure and agency and their interactions are very useful, but this is not to deny the fact that other theoretical perspectives might well shed further light on the management accounting changes at FA (e.g., Burns and Scapens, 2000; see also Argyris and Kaplan, 1994; Foster and Ward, 1994).

Figure One: Organisation Structure

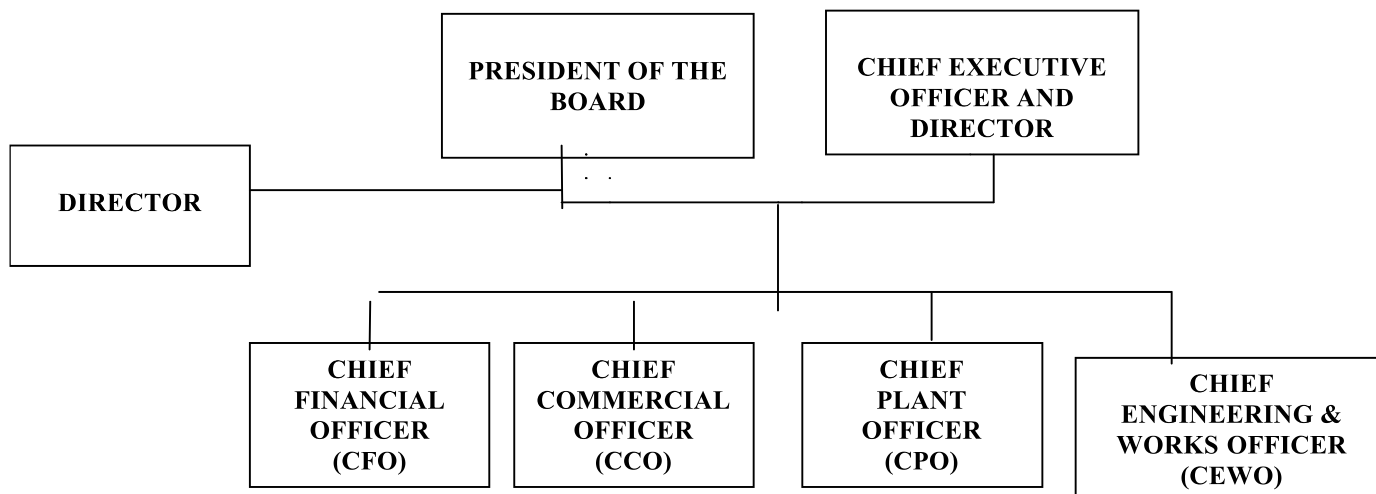

Table One[1]: Performance Data

YEARS		1988	1990	1993	1995	1997	1998	1999	2000	2001	2002
(*Amounts in millions EUR*)											
Sales		32.5	52.8	148.8	203.1	231.1	259.4	257.9	280.1	303.8	331.3
Gross Profit		7.3	13.5	36.9	57.2	74.7	93.2	89.8	95.5	108.5	124.0
IFO		3.5	5.4	13.6	19.4	25.7	28.2	22.3	18.2	21.3	28.8
CPE		7.1	15.1	38.3	45.3	66.7	76.4	75.0	79.2	82.5	91.4
Exp.Data	DS	-	-	-	-	-	-	-	248.7	268.1	292
	WE & USA	-	-	-	-	-	-	-	31.3	35.5	39.2
I in S		-	1.1	4.5	6.0	18.9				3.6	2.4
NCOA		-	-	-	-	-	22.7	11.6	15.9	14.9	35.5
NCF		-	-	-	-	-	33.6	22.4	21.9	29.6	56.0
NCIA		-	-	-	-	-	12.8	9.4	22.6	23.0	4.4

IFO=Income from operations
CPE=Cost of plant and equipment
I in S=Investments in subsidiaries
NCOA=Net Cash from Operating Activities
NCF=Net Cash used in Financing
NCIA=Net Cash used in Investing Activities

Source: company accounts, interviews and other documents.

[1] The authors did not have continued financial data as managers did not have any records of past data.

References

Abernethy, M.A., Brownell, P., 1999. The Role of Budgets in Organizations Facing Strategic Change: An Exploratory Study. *Accounting, Organizations and Society* 24 (3), 189-204.

Amat, J., Carmona, S., Roberts, H., 1994. Context and Change in Management Accounting Systems: A Spanish Case Study. *Management Accounting Research* 5 (2), 107-122.

Ansari, S.L. and Bell, J. 1991. Symbolism, collectivism and rationality in organizational control. *Accounting, Auditing and Accountability Journal*, 4(2), pp.4-27.

Arghyrou, M.G., 2000. EU Participation and the External Trade of Greece: An Appraisal of the Evidence. *Applied Economics* 32 (2), 151-159.

Argyris, C., Kaplan, R. S., 1994. Implementing new knowledge: The case of activity based costing. *Accounting Horizons* 8, 83–105.

Armstrong, P. (1989) 'Management Labour Process and Agency', *Work , Employment and Society* , Vol.3 (3)

Ballas, A., Venieris, G., 1996. A Survey of Management Accounting Practices in Greek Firms' in Bhimani (eds). Management Accounting: European Perspectives, Oxford: Oxford University Press 123-139.

Bhaskar, R. (1975, 1997) 'A Realist theory of science', Verso, London

Bhaskar, R. (1979) 'Possibility of naturalism', Hassocks, Harvester

Bhimani, A. (ed.), 1996. Management Accounting: European Perspectives, Oxford, Oxford University Press.

Burns, J., Scapens, R. W., 2000. Conceptualising management accounting change: An institutional framework. *Management Accounting Research* 11, 3–25.

Burns, J. and Vaivio, J. 2001.Management accounting change. *Management Accounting Research*. 12 (4), pp. 389-402.

Busco, C., Quattrone, P., Riccaboni, A., 2007. Management Accounting Issues in interpreting its nature and change. *Management Accounting Research* 18, 125–149.

Bourantonis, D., Kalyvitis, S., Tsoutsoplides, C., 1998. The European Union and Greece: Political Acceptability and Financial Transfers. *Politics* 18(2), 89-99.

Chenhall, R., Langfield-Smith, K., 1998. Factors Influencing the Role of Management Accounting in the Development of Performance Measures within Organizational Change Programs. *Management Accounting Research* 9 (4), 361-386.

Dent, J. F. (1991). ‘Accounting and organisational cultures: A field study of the emergence of a new organisational reality’, *Accounting, Organizations and Society* 16, 693–703.

Easterby-Smith, M., Thorpe, R., Lowe, A., 2000. Management Research: An Introduction. second edition London, Sage.

Easton, Geoff (2001) ‘Case Research as a Method for Industrial Networks: A Realist Apologia’ in Realist Perspective on Management and Organizations, (edited by) Ackroyd, S and Fletwood, S.; Routledge (London)

Foster, G., Ward, T., 1994. Theory of perpetual management accounting lag in hierarchical organizations. *Accounting, Organizations and Society* 19, 401–411.

Geertz, C. 1972. The politics of meaning' in culture and politics in Indonesia. in Holt, C.(Eds.), 319-335. Ithaca: Cornell University Press. 28

Geertz, C. 1983. Local Knowledge. Basic Books, New York

Giddens, A., 1984. The Constitution of Society. Cambridge, Polity Press.

Granlund, M., Lukka, K., 1998a. It’s a small world of management accounting practices, *Journal of Management Accounting Research*, 10, 153–179.

Granlund, M., Lukka, K., 1998b. Towards increasing business orientation: Finnish management accountants in a changing cultural context, *Management Accounting Research,* 9, pp. 185–211.

Granlund, M., 2001. Towards explaining stability in and around management accounting systems. *Management Accounting Research* 12, 141–166.

Haldma, T. and K. Laats, (2002), ‘contingencies influencing the management accounting practices of Estonian manufacturing companies’, *Management Accounting Research*, Vol.13, pp.379-400

Hopper, T. and P. Armstrong. 1991. Cost accounting, controlling labour and the rise of conglomerates. *Accounting, Organizations and Society* 16(5-6): 405-438.

Hyvonen and Jarvinen, 2006; Hyvonen, T. and Jarvinen, J . (2006), Contract-Based Budgeting in Health Care: A Study of the Institutional Processes of Accounting Change, *European Accounting Review*, Vol. 15, No. 1, 3–36.

Kakkuri-Knuuttila, M.L., Kari Lukka and Jaakko Kuorikoski (2008), Straddling between paradigms: A naturalistic philosophical case study on interpretive research in management accounting, *Accounting, Organizations and Society* Volume 33, Issues 2-3

Laitinen, E.K. (2001) Management accounting change in small technology companies: towards a mathematical model of the technology firm. *Management Accounting Research*, 12 (4), pp.507-541.

Leca , B and Naccache, P (2006) 'A Critical Realist Approach To Institutional Entrepreneurship', *Organization*, 13; 627

Llewellyn, S., (2007), "Case studies and differentiated Realities", *Qualitative Research in Accounting &Management*, Vol. 4 No. 1, pp. 53-68.

Loft, A. (1986) 'Towards a critical understanding of accounting: The case of cost accounting in the U.K. 1914-1925', *Accounting, Organizations and Society* 11(2): 137-169.

Makridakis, S., Caloghirou, Y., Papagiannakis, L., Trivellas, P., 1997. The Dualism of Greek Firms and Management: Present State and Future Implications. *European Management Journal* 15 (4): 381-402.

Modell, S. (2001), "Performance measurement and institutional processes: a study of managerial responses to public sector reform", *Management Accounting Research*, Vol. 12 No. 4, pp. 437-64.

Mutch, A. (2002) 'Actors and Networks or Agents and Structures: Towards a Realist View of Information Systems', *Organization* 9; 477

Porpora, D.V. (1992) 'Four Concepts of Social Structure' in Archer et al. (eds) Critical Realism: Essential Readings, London: Routledge Originally Published in Journal of the Theory of Social Behaviour 19(2) (1989)

Robson, C., 1993. Real World Research: A Resource for Social Scientists and Practitioner-Researchers. Oxford: Blackwell.

Shields, M. D., 1997. Research in management accounting by North Americans in the 1990s, *Journal of Management Accounting Research*, 9, pp. 3–61.

Siti-Nabiha, A. K. and Scapens, R. W., (2005) Stability and change: an institutionalist study of management accounting change, *Accounting, Auditing & Accountability Journal* Vol. 18 No. 1, 2005, pp. 44-73

Spanons, LJ., 2005. Corporate Governance in Greece: development and policy implications. *Corporate Governance* Vol.5, No. 1.pp. 15-30.

Szychta (2002) Szychta, A., 2002, The scope of application of management accounting methods in Polish enterprises. *Management Accounting Research*. 13, pp.401-418.

Tsang, E.K. & Kwan, K.M. (1999) 'Replication and Theory Development in Organizational Science: A Critical Realist Perspective' *Academy Of Management Review*, vol. 24, no. 4, 759-780.

Tsoukas, H. (2001) 'What is Management? An outline of a Metatheory' in Ackroyd Stephen (Editor) Realist Perspective on Management and Organisation Florence, KY, USA:Routledge.

Uddin, S.N., Hopper, T.M., 2001. A Bangladeshi Soap Opera: Privatisation, Accounting, and Regimes of Control in a Less Developed Country. *Accounting, Organizations and Society,* Oxford 26 (7/8), pp. 643-672.

Venieris G, Zorgios Y., Cohen S., 2000. Modeling the interrelationships between activity based costing and flexible manufacturing systems. Paper presented at the 23rd Annual Congress of the European Accounting Association, Munich, Germany March 29-31.

Venieris G., Cohen S., 2004. Accounting Reform in Greek Universities: A slow Moving Process. *Financial Accountability and Management* 20 (2):0267-4424.

Watson, T.J. (1994). *In Search of Management: Culture, Chaos and Control in Managerial Work.* London: Routledge.

Whitley, R., 1999. Firms, Institutions and Management Control: The Comparative Analysis of Coordination and Control Systems. *Accounting, Organizations and Society* 24 (5)-(6): 507-524. 31

Willmott, R. (2000) 'The Place of Culture in Organization Theory: Introducing the Morphogenetic Approach', *Organization*, 7 (1), pp 95-128.

Waweru, N.M., Z. Hoque and E. Uliana. (2004). Management accounting change in South Africa: case studies from retail services. *Accounting, Auditing & Accountability Journal*, 17, pp.675-704.

Yin, R.K., 2003. Case Study Research: Design and Method, third edition. Thousands Oaks CA: Sage.

---

[1] One classical school in sociology, namely, methodological individualists, believes that social collectivity (family, business organization, and society) is nothing but the sum of actions of a number of individual actors. The focus of sociological investigation must be men and their actions, i.e., agents and their actions. On the contrary, the opposite classical school in sociology, namely, collectivists, believes that individuals combine to form collectivities, and these collectivities have properties that are greater than the sum of their parts. Therefore, to investigate these collectivities, we cannot focus on individuals; instead, the focus should be on the properties of these collectivities.

[2] See Sayer (1992, 2000) and Archer (1995) for further explanations of the structure and agency debate and Baskar's philosophy, i.e., critical realism.

[3] The paper does not intend to clarify the difference between Giddens and Bhaskar's conceptualisation of structure or the superiority of Bhaskar's approach over that of Giddens. Readers are recommended to read Archer (1995) and Porpora (1998). For a comparison of the two approaches with a more sympathetic attitude towards Giddens, please read Stones (2005).

[4] This makes it much simpler for an overt observer to establish close relationships with members of staff (Robson, 1993: 197). This stance introduces a rather informal style of information gathering (Robson, 1993), which is less structured; in this instance, it was able to provide the researcher with considerable freedom in gathering and recording information.

[5] Until 1975, FA did not have a large distribution network in Athens and its products were being sold to specific shops, as there were no big supermarkets (such as TESCO) in the area.

[6] Currently, FA has the largest and best-organized distribution network for dairy products in Greece, servicing approximately 25,000 retail outlets on a regular and in many cases on a daily basis, with 400 refrigerated vehicles. Retail outlets include large supermarkets, dairies, bakeries and small stores throughout Greece. In the Athens area, FA's products are delivered daily by a fleet of 200 refrigerated vehicles divided into three networks differentiated by product shelf life: a) yoghurt, b) fresh milk and juice and c) cheese. In the rest of Greece, FA distributes its products through 70 exclusive representatives with over 200 refrigerated vehicles. The owners have devoted substantial resources to the building of the plant. FA has one of the most modern milk and milk by-products production facilities in Europe, allowing the processing of 50,000 litres milk per hour and a yearly yoghurt production capacity of 500 million pots, one of the largest in Europe. FA's refrigerated warehouse has a capacity of 5,000 pallets and is automated with robotics. This Athens facility is certified according to the ISO 9002 standard.

[7] The Accounting Plan includes some rules for the determination of the production cost. These are as follows: 1) Cost elements must be grouped, for bookkeeping purposes, by type, not by purpose. This is done in the financial accounts (group 6). 2) Periodically, cost elements are aggregated into group 9 of accounts by purpose, in order to determine the cost of the basic functions of the firm. These functions, in accordance with the provisions of the HGAP, are production, administration, research and development, distribution and finance. These functions are subdivided into cost centres. 3) The cost of the administration, R&D, distribution and financial functions is, generally speaking, charged directly to the profit and loss account. R&D expenses are split into those that relate to long-term projects, which are capitalized, and the rest, which are transferred to the profit and loss account. The depreciation of capitalized R&D expenses is a determinant of production cost. 4) Finally, costs are differentiated into direct and indirect costs (overheads). Manufacturing overheads are allocated to products on the basis of machine hours.