THE IMPACT OF STRESS ON
ACCOUNTING OFFICES PERFORMANCE

A dissertation submitted in partial fulfilment of the requirements of
the degree of Master of Science

2008-2009
ABSTRACT

This project will be based on how professional stress influences the performance of the accounting profession staff and managers, concerning the stressors, the way and at the degree that are affected in Greece. Throughout the accounting literature, numerous job stressors have been identified, such as the workload and time pressure which have consistently been associated with the high levels of stress. The hypotheses, stated in this research, are based on the literature review and the reported stressors that have been examined, include the time pressure, the workload, the role ambiguity, the career development, the role of technology and the family responsibilities. In the proposed research, a questionnaire was used in order to collect the necessary information. The sample consists of the accounting profession staff and managers of accounting offices and accounts departments of companies. The results show that there is a negative relationship between time pressure, workload, role of ambiguity, family responsibilities and job performance, while the career development and the technology do not significantly influence the job performance.

Keywords: Jobs stress, accounting offices, accounting profession staff, stressors, job performance, time pressure, workload, role ambiguity, career development, role of technology and family responsibilities.
Acknowledgements

I am thankful and appreciative to many people for helping me during this demanding and tough program, which ends with this dissertation. I should also note that despite this period of my life was being so stressful, it was so memorable.

First and foremost, I would like to thank my supervisor, Dr. Sofoclis Christoforidis, whose assistance was indeed invaluable. No matter how busy he has been, he has always found time to answer my frequent questions and he was always available to give his significant advice and guidelines.

In particular, I would like to thank Kiriako for his patience and support, theoretically and practically. I would especially like to thank Lena, Giorgos and Efi for their valuable help and my fellow students, Katerina and Makis because we have been very close throughout project.

The contribution of my parents (Dimitris and Kiriaki), my sister and my brother (who was my motivational force in order to take the decision on my postgraduate studies) must be recognized. I feel indebted to thank my family for their support especially during time of excessive stress.
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1. INTRODUCTION

1.1 Background of the Research

Job stress is a very challenging section for accountants. Historically, in the profession of accountants the work stress occurs in professional relationships but is common in the interpersonal relationships as well (Smith, 1990).

The measurement of stress levels in accountants can be noticed from 1950. But there is big time gap between the innovative effort and the following efforts that appeared about three decades after. This gap is due to the way this measurement was feasible at that decade, and how expensive it would be too (Smith, 1990).

Less research had been done up to the 1980’s related to the job stress in the accountancy, despite the fact that accountancy was regarded traditionally as a stressful occupation (Coppage & French, 1987). Even some researches had examined the stress accountants undergo during the audits (Campbell et al., 1988); few studies had focused on the deeper causes of stress in accountants (Daniels & Guppy, 1992). Up to that time, less attention had been paid to the impact of stress on accounting performance (Weick, 1983). Afterwards, the manipulation and confrontation of stress was becoming more and more important for the accountants (Everly & Smith, 1992).

At the beginning of the 1990’s, researchers in accountancy have started more intensely to refer to the impact that job stress has on accountant’s job performance (e.g. Bamber and Bylinski, 1988; Choo, 1986, 1987, 1992, 1995; Haskins, Baglioni and Cooper, 1990; Smith and Everly, 1990; Collins and Killough, 1992; Collins, 1993; DeZoort and Lord, 1994).

At last ten years, most of the studies regarding to job stress in accountancy, have examined the direct effect of stress on accountants’ job performance (e.g. Choo, 1995; Bamber and Bylinski, 1988), but a few studies have tried to search for the factors that mediate for a relationship between stress and job performance (Chong et al., 2004).
1.2 Motivation and Aim of the Research

This study investigates the impact of stress to accounting offices performance. As it has been mentioned before, less research has been carried out about stress in accounting offices but is very remarkable that similar studies have dealt with this issue at least fifty years before.

In Greece, the accountancy branch is divided into the accounting offices and the accounting departments in companies. The accounting offices are not embedded in companies. Their aim is to serve small and very small enterprises as well as the rest natural persons for the tax returns and the transactions of various tax and economic issues. The case of the accounting departments in companies is when they are embedded in the structure of the company. Their aim is to carry out all the economic matters that concern the company.

In Greece, the profession of the accountant is characterized by the complex legislation and its frequent alteration. This results in not only the functional economic cost but also to the creation of an insecure and confusing atmosphere in the workplace which causes accordingly a great deal of psychological pressure.

The motivation for the accomplishment of this study was that stress accompanies accountants in their entire career resulting in effects on performance at work environment, and in personal life and family as well. This type of stress is caused from many factors directly or indirectly and sometimes they are not visible from people working out of the accounting “family”.

Job stress is inevitable in working life. Taking into consideration that everybody lives in stressful conditions, the definition of stress level has a vital significance. That is the reason why, in this study stress level has been examined for accountants and the accounting managers (Yildirim, 2000). Therefore, the main research question which will be answered and be the research object of the dissertation is:

*How the accountants' stress influences the performance of accounting offices?*

Stress in the accounting offices sometimes brings about not only negative effects but also positive ones on performance. Therefore the factors that cause
stressful situations play a significant role in the accountants' performance and later in the accounting offices. Therefore, a second research question, which will be of major concern to the dissertation, is:

Which stress factors affect positively and which negatively on the performance of the accounting offices?

Situations such as time pressure and workload at first sight seem to have negative consequences in the accountants' performance. But can they have a positive role regarding their development and their performance?

The accountant's profession involves a number of services which may lead to role ambiguity. How important is this stress factor and how much can it affect the performance?

Are the prospects for career development a factor which can bring about stress situations in the working environment and affect the accountants' performance?

Since the demands increase gradually, the influx of new technologies becomes more and more vital in the accountant's profession. Does this phenomenon have only a positive effect or does the role of technology cause stressful situations in the accounting offices?

Do fast paces at work and family responsibilities clash and do these affect the accountants' psychology negatively?

All the above are questions which will attempt to clarify through our research which will contribute to the gradual/overall research concerning the performance in the accounting offices. The dissertation can be useful as a starting point for the systematic examination of the stress factors which influence the accounting offices' performance, as the accountancy is strongly connected with economics; economics itself is linked with the development, the progress and the advancement of each country. Consequently, the aim of the dissertation can be summarized as follows:

The aim of this research is to search the impact of job stress on the performance of the accounting profession staff and managers, concerning the way and the degree that stressors affect the performance, in Greece.
The three-year working experience of researcher in accountancy was the medium for her to understand, live and be able to express the pre-mentioned relationship. She realized deeply from the literature review the factors which were stated, due to her professional experience and she approached this relationship in this study.

1.3 Overview of the Dissertation

The dissertation is divided into five parts. Each part consists from a number of chapters. Part 1 provides an introduction about study. Chapter 1.1 provides the background of the research that is concisely outlined. At Chapter 1.2 defines the motivation for the effectuation and the aim of this research. The last Chapter 1.3 describes the dissertation.

Previous researches and the literature of the study are described in Part 2. Chapter 2.1 provides an introduction about stress and its relation to general job stress, which is either positive or negative. At Chapter 2.2, the influence of job stress at accounting job performance is explained. Finally, at Chapter 2.3, the related stressors with the accounting profession are reported, approaching some of them at six subsections that have been pointed out in literature review. It is obvious that from the reported stressors, our hypotheses are emerged.

Part 3 examines the research methodology of the study. Firstly, Chapter 3.1 describes concisely this part. Chapter 3.2 determines key concepts of variables as job stressors and examines the development of hypotheses; as well the constructed model of hypotheses is presented. At Chapter 3.3, the research method is outlined with its strengths and limitations. In Chapter 3.4, the analysis of the research instrument development is presented. Finally, in Chapter 3.5, the choice of sample is addressed and the procedure of the research is described.

Part 4 examines the analysis and the results. At Chapter 4.1 describes concisely this part. In Chapter 4.2, the analysis of the research instrument is presented with the help of graphs. In this chapter, the first results of the constructed model are reported. Chapter 4.3 provides the data analysis with the help of the software package of SPSS. Finally, in Chapter 4.4, the results of the study are presented, where the
conclusions and the results are gathered and the outcomes of the research are evaluated. In this Chapter the research questions are answered.

Part 5, is divided at four chapters. The Chapter 5.1 is the general conclusions for the project, summarizing the most significant points of the literature. In Chapter 5.2 includes the findings of the study, where the conclusions and the results are gathered and the outcomes of the research are evaluated. In this Chapter the research questions are answered. The limitations of the research are outlined in Chapter 5.3 and finally, at Chapter 5.4, suggestions for further research are provided.
2. REVIEW OF THE LITERATURE

2.1 Link between Stress and Job Stress

Nowadays the commonly used word “stress” generally and especially the “job stress”, became part of everyday life (Yildirim, 2000). Stress is any situation that causes a psychological imbalance at the individual (Flippo, 1987). People react to stress in different ways. Some of them face stress much better than the others, and in that case they are less influenced from the negative effects (Martino, 2000).

According to Everly and Sobelman (1987) there are various environmental events, known as stimuli which every human being realizes and explains in the manner of his intelligence; those stimuli can be conceived as stressful factors. Those factors have emotional effect on the person and this result in the physical stress symptoms. In this phase the human being starts to respond acquiring two directions – cases. In the first one, the reaction and the defence activation are excessive, and this causes stress, diseases and the person’s dysfunction. In the second case, the human being reacts normally, and in this way the problem is encountered and the person returns in his physical condition. The following figure (2.1) presents a global stress paradigm.

![Global Stress Model](image)

*Figure 2.1: Global Stress Model (Everly and Sobelman, 1987, p.16)*
A possible stress in order to become a real stress, the **uncertainty** should occur and the outcome should be **important** for the person. If those two definitions (uncertainty and important) are absent, then the stress will not occur. Only if those two elements exist then the stress will appear (Muhammad, 2002).

Figure 2.2 shows that for stress, apart from the parameters, job plays a significant role which from its own consists of a distinct factor also known as **Job Stress** (Martino, 2000).

![Diagram of Factors Involved in Stress](image)

**Figure 2.2: Factors Involved in the Perception and Experience of Stress (Martino, 2000)**

According to United States National Institute of Occupational Safety and Health (1999), a general definition is:

“**Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker. Job stress can lead to poor health and even injury.**”

(United States National Institute of Occupational Safety and Health, 1999)
The stress in the working environment is defined when between the individual and the working environment; the demands of the working environment overweigh the individual’s abilities. In this way the individual can emotionally or physically be influenced (Coyle and Lazarus, 1980). A change in the working conditions for instance, the computerization may cause to the employee imbalanced situations such as the facilitation but also routine at work. This change is experienced as negative stress on some people but not on all of them. The way a person thinks and perceives things, his self-confidence and his aims and trust at the working environment are factors that constitute the changes as to how each individual understands the stress (Lazarus et al., 1985). According to Choo (1986), there is an interrelationship between the personality of every person and the concept that she/he holds for the job stress. Classifying the characters in four general groups he divided them in as follows:

- Competitive persons with strong willingness to succeed, being constantly under time pressure, hostility and aggressiveness.
- People who tend to try to control the situations and they consider that they are able to influence the facts through knowledge, imagination and their abilities.
- People that cannot realize the real purpose and the reason they work for.
- People that consider every change as a challenge and motivation rather than a possible threat for feasible negative results.

The results of this study noted that the people who belong in the first group, a positive relationship between job stress and personality exists, while in the other three groups this relationship is negative. Therefore the person’s reaction in the new situation is mainly according to his personality (Kagan and Levi, 1972), and his working environment (Lazarus et al., 1985).

Stress can be indicated as positive i.e. as a challenge or negative i.e. as a threat (Frankenhauser and Johansson, 1986). When the employees feel the threat, the change in the working place is conceived as insecure; they think that there is no possibility to deal with the new situation. On the opposite case, the challenges are settled when the employees feel that they have to try to face changes in working
environment which looks like impossible to be faced (Lazarus, 1966). At the following figure (2.3) is appeared the described relation.

![Stress Model (Tortorella, 2004)]

**Figure 2.3: Stress Model (Tortorella, 2004)**

### 2.1.1 Negative Job Stress

Job stress is a phenomenon that becomes more and more internationalized and it influences the majority of countries around the world, all the professions, all the employees’ categories and the family, therefore the society (Hoel et al., 1999). Stress becomes acceptable more and more as a phenomenon in many working places causing harmful effects in a great amount of people all over the world. Everyone is influenced some time from occupation stress (Cox et al., 2000).

When pressure is extended it costs a lot for the working people, the companies and the society. For the **employee** apart from the negative health effects, stress may cause the decrease of his abilities to deal with working demands; a case like this may lead to a failed professional career, including the missed opportunities (Hoel et al., 1999). As far as the **company** is concerned, the stress has many negative consequences. The common absence from work, due to the staff’s healthy problems, reduces the working production, so the expenses are increased (Hoel et al., 1999). In addition, stress is the main reason for the compensations and the medical expenses of the employees (Decenzo and Robbins, 2002). It has been shown throughout the years that job stress is the main cause for the efficiency’s and productivity’s reduction (Hoel et al., 1999).

The possible consequences of conflict and ambiguity (which will be analyzed further at subsection 2.3.2) are for the **individual** the high anxiety and the low work...
satisfaction, whilst for the organization, the lower quality of performance and the higher turnover (Senatra, 1980).

When there are low levels of working stress it can positively affect the working performance (Choo, 1986). Negative results may appear, if there are high levels of working stress (Cordes and Dougherty, 1993). At this point, someone may be led to job burnout which is a psychological stress syndrome. The exaggerating demands at work exhaust the individual and in progress of time the job burnout is created (Cordes et al., 1997; Lee and Ashforth, 1996; Maslach, 1982). Job burnout is immediately related with high levels of work demands (Cordes and Dougherty, 1993; Cordes et al., 1997; Maslach, 1982; Maslach and Jackson 1981; Shirom, 1989) and the next phase is the fall in working performance (Wright and Bonett, 1997). The burnout can cause high blood pressure, long lasting tiredness and headaches (Kahill, 1988; Maslach and Leiter, 1997). In an advanced stage, self-respect is decreasing and the individual tends to distress and incapability (Jackson and Maslach, 1982; Kahill, 1988). The term burnout is often used from accountants mainly during the busy season when the demands are extremely high. Job burnout can cause only adverse consequences for the employee and the company (Cordes and Dougherty, 1993; Maslach, 1982). The mentioned potential negative consequences of the relation between job stress and burnout are presented in the following figure (2.4).

Figure 2.4: Potential Negative Consequences of a Destructive Job Stress-Burnout Cycle (Schermherhorn, 2007)

The negative results of job stress instantly affect colleagues, performance, health, family and friends (Cordes and Dougherty, 1993; Leiter and Maslach, 1988).
2.1.2 Positive Job Stress

Job stress might not be a necessarily negative phenomenon. An average level of stress can be a significantly motivating factor and it can contribute to the completion of the new adaptation in new demands and situations; this can cause the productivity’s development as well. Therefore, sometimes stress is considered necessary in working places. In case that the work stress is intense, constant and repetitive then it becomes a negative fact; it can lead to contradictory results concerning the employees’ physical condition and to the normal function of the company as well (Mead, 2000; Choo, 1986).

Employees that work under stress are more productive aiming to make their plans come true and be more developed and successful. They consider of stress as a motivation to prove their abilities (Dessler, 2003). Kelley and Seiler (1982) have come out with the result that the ability to work under stress can be a condition for a long-lasting career. Another study has shown that stress is an employment factor (Carcello et al., 1991; Trapp et al., 1989). A competitive situation causes stress. When stress is in a medium level, it leads to creativity and creativity brings stimulation of new ideas (Dessler, 2003).

The meaning of stress doesn’t seem to be synonymous to the meaning of pressure which seems to work positively for employees (Weick, 1983). The factors of stress affect differently each employee according with their resistances (Antonovsky, 1979; Kobasa, 1973, 1982; Kobasa et al., 1982). The possibility of predicting, controlling and cohesion of situation may increase or decrease stress (e.g., Coyne et al., 1981). While stress is definite and the consequences are negative, pressure is more informal as it appears below it does not have negative consequences for the employees when of course it does not exceed its normal limits. On the other occasion we talk about stress (Weick, 1983). According to Weick (1983) the positive effects of pressure are shown below:

- Pressure may be have as result the “disillusionment – shake” of employees so that they can improve their performance, to trace changes in their working environment, to find easily solutions to their problems, to be flexible to potential changes so that they can be re-orientate their targets.
A positive or negative change for instance a promotion or demotion may cause stressful conditions, but many times this pressure has positive effects on a person because of the working attentiveness which may be caused.

The increase of pressure in a stable environment not only it does not have negative effects, but it may be indeed the cause of increasing the productivity.

At the following figure 2.5 are appeared the phases where the pressure is converted to stress.

![Figure 2.5: Nature of Stress (Weick, 1983)](image)

Consequently, although the stress is described from a negative context when it is placed in normal limits, it is considered positive, giving the opportunity to the employee for possible profits (Muhammad, 2002).

### 2.1.3 Summary

Stress is caused in conditions in which a person faces demands or opportunities and the final result is important and unanticipated for him/her. A factor which causes situations like these is the working environment. Obviously, stress is an issue inextricably connected with the work environment. There is “stress” in the working environment when the demands of the working environment overweigh the individual’s abilities. Job stress can be defined as positive i.e. as a challenge or negative i.e. as a threat.

A situation causes stress to someone and makes him/her feel fear, anger and anxiety but to someone else to give a stronger motivation to accomplish his/her targets, to increase the personal work productivity and creativity. The reaction of
every person depends on his/her personality. The common phenomenon is the negative effect of stress on the performance of employees, but there are cases where the stress can bring positive results concerning capabilities and performance of employees. Such cases are those in which the stress exerted modest levels and leads to professional alarm. There are situations which may lead to labor impasse, but there are also stress situations that lead to over-performance.

2.2 Impact of Job Stress on Accounting Job Performance

In the way stress influence differs from person to person in the same way it differs from job to job. Some jobs are by nature more stressful than others (Mubashir and Ghazal, 2003). Job stress and its interactions with other factors have been investigated in professional groups such as accountants (Daniels and Guppy, 1994), professional counsellors (Sowa et al., 1994), teachers (Gerwing, 1994), nurses (Hingley and Cooper, 1986) and supervisors in both public sector and private sector organizations (Mishra and Somani, 1993). Consequently, the profession of the accountant is one of the most vulnerable professions to stress. The stress in working places usually ends in decrease of performance and productivity (Mubashir and Ghazal, 2003).

According to Musashir and Ghazal (2003), job performance can be defined as:

“Job Performance is defined as the outcomes and accomplishments valued by the organization or system that one works in.”

(Mubashir and Ghazal, 2003, National Research Conference)

Figure 2.6: Performance Appraisal (King, 2008)
According to a research about the job stress and the job performance at accountants, there were four possible stories:

- Job stress can increase the job performance.
- Job stress can decrease the job performance.
- Job stress can have no impact on the job performance.
- The relationship between the job stress and the job performance can be inverted-u.

The conclusion from the study was a negative relationship between job stress and job performance at accountants (Tulen and Neidermeyer, 2004; Sullivan and Baghat, 1992). The hypotheses of the current study are based on the conclusion of this research, which will be examined analytically in Part 3.

When the stress is excessive the employee may be threatened because she/he needs to be prepared for the working place’s demands, therefore the jeopardy of his job performance is possible (Davis and Newstorm, 1985), while the mediocre levels of stress can be functional and lead to higher performance. When a lot of work is occurred stress is caused, but since human beings are adoptive, they can manage stress and their performance is not influenced (Mubashir and Ghazal, 2003).

Summarizing, in most professions the stress plays a role in job performance and especially in the accountant's profession the “stress” factor is part of the daily routine. As it is evident, the job stress and the performance are two interrelated elements for the accounting profession. The effect of stress on job performance has a direct influence of the factor causing the problem. The inter-dependence may be direct, but its character - type (positive-negative) depends on the stressors. So for example if a stressor causes a positive stress then the performance is improved, while a negative stressor has opposed results. Some of the most important factors will be examined below.

2.3 Job – Related Stressors at Accounting Profession

Academic accounting literature involving stress in accounting has identified numerous job stressors which have been associated with high levels of stress. Such
stressors are the excessive job demands, time pressures (Collins and Killough, 1992; Haskins et al., 1990; Smith, 1990; Smith et al., 1989; Weick, 1983; Sanders et al., 1995), workload and unwanted overtimes (Campbell et al., 1988; Gaertner and Ruhe, 1981; Piccoli et al., 1988; Senatra, 1988; Sanders et al., 1995). Job stress which originates from the role ambiguity (Sanders et al., 1995) and conflict including the wrong way of defining roles, functions, aspirations and duties (Smith, 1990). Another reason is when the person, during his career development, fails to succeed in the highest anticipated result of his capability (Parikh et al, 2004; Sanders et al., 1995) and concerns about role of technology (Thong and Chee-Sing, 2000) are examples from possible job stressors.

Despite the fact that stress is inevitable in work life, there are some stress factors which somebody has not taken into consideration, such as the age, the gender and the family responsibilities (Mubashir and Ghazal, 2003). Some of these stressors which involve stress in accountings will be analyzed further.

2.3.1 Time Pressure as Stressor

Accountancy is by nature, a very stressful job and is characterised by time pressure. Time pressure is the perception of unreasonable deadlines and time demands (Phapruke & Nupakorn, 2008). The insufficient time has often as a result the increase of unwanted overtimes and the reduction of performance. The consequence is that there are not the desirable results (Cohen, 1978; Kelley and Seiler, 1982; Alderman and Deitrick, 1982; Margheim and Pany, 1986).

Accountants are mainly subjected to time pressure in tax season. The great number of working hours and the demanding deadlines lead the accountants to burnout and dissatisfaction (Gaertner et al., 1987).

In a survey, which was done on 1200 American accountants, showed that the most serious sources of work stress for an accountant is an environment where many working hours are demanded and the need to deal with the frequent demanding deadlines (Collins and Killough, 1989).

Choo (1995) investigated the impact of job stress on accountants’ judgment performance. His ascertainment was that as the time limits increased, the accountants’ performance improved, while as there was restriction in the time limits their performance kept deteriorating. On the other hand, Bamber’s and Bylinski’s (1998)
survey indicated that there were opposite results; they found out as well that time stress does not significantly affect the accountant’s performance.

There are deadlines, and the audits that are always carried out under some time pressure (Edwards and Cooper, 1990), for this reason they cannot become attempts to reduce the sources of time pressure.

2.3.2 Workload as Stressor

The demands at work in accountancy reach the highest level in January - April. This period is often called “busy season” or “tax season” (Cambell et al., 1988; Pearson et al., 1985). This is the time when the majority of audits are made and the occupational services are in peak demand. This period is of major importance because it causes a lot of stress to accountants. However, it is difficult to avoid the stress increase during the “busy season”. Despite this, there is not enough accountancy literature relating with the bad effects on this busy season workload (Sweeney and Summers, 2002).

In a survey which was carried out by Friedman et al. (1958) referring the cholesterol levels on accountants during this busy season (January - April) and during the direct months (May - June), the analysis revealed significant high levels around the fifteenth of April and a fall in the regular levels until June.

Cluskey and Vaux (1997) examined a group of professional accountants during two periods in order to investigate if there is a close connection between a specific period and the stress. The results showed high stress during January, pointing out that seasonal workload affects the job stress for accountants.

Sweeney and Summers (2002), carried out a survey which had to do with the impact of the busy season workload on accountant’s job burnout. The survey was held in two dates. The first one was just before the beginning of the busy season and the second at the end of it; the results showed that before the busy season, the accountants were not affected by the stress although they were working on average forty-nine hours a week. This result shows that accountants can develop a relatively high lowest limit workload, before it reaches the point of stress and causes a significant problem. On the second date, the workload increases about sixty-three hours during this busy season. This result indicates that stress increases at a worrying pace for the
accountants’ health and performance. It is obvious that in this period, the workload is a serious cause for the accountants’ stress.

The negative important consequences which can be created by the workload are such as adversely affecting employees’ attitude, performance and turnover (Cordes and Dougherty, 1993; Maslach and Jackson, 1981; Maslach and Leiter, 1997).

2.3.3 Role Conflict and Role Ambiguity as Stressors

The accountancy literature has examined many times the ambiguity and the role conflict as important factors causing job stress (Senatra, 1980; Slavin, 1980; Reed and Kratchman, 1989; Heian, 1988). Role conflict is:

“... the simultaneous occurrence of two (or more) sets of pressures such that the compliance with one would make difficult or impossible compliance with one would make difficult or impossible compliance with other”

(Wolf and Snoek, 1980, p. 103)

Role ambiguity is the lack of adequate information that is demanded for a person, so that he/she has a complete role (Kahn et al., 1964).

Senatra (1980) carried out a research which focused mainly on the relation between the work stress and the role ambiguity, role conflict, job satisfaction and professional autonomy. The results indicated that the association of the role conflict with the work stress was positive, while the connection of the role ambiguity with the job satisfaction was contradictory. In cases like this, measures for reducing the employees’ job stress are taken.

Strauser et al. (1982), in an effort to correlate the personal and the relevant with the work stress factors, with the job stress, came to the conclusion that the role conflict, role ambiguity are very vital factors which are connected with the job stress.

Bamber et al. (1989), assumed that the employees in a well structured environment have lower levels in role conflict and role ambiguity and the reason they assumed that was that they believed that the organization and the technology would differ in a well structured company from a non-well structured one. Their assumption was confirmed after the results of the survey indicated that the employees in a well structured company understand better their aims, their practices and their
responsibilities of their positions and that results in having lower levels in role conflict and role ambiguity than in a non-well structured company.

When the role ambiguity is increased, the individual is unsure about the possible result of its job. This results in reduction of job performance (Chong et al., 2004). Studies have noticed such decrease of job performance from the role ambiguity, such as Wright (1974) and Keinan (1987).

2.3.4 Career Development as Stressor

In a survey, concerning the business expectations of accountants, the deviation of the questions was measured: “How much should be there” and” How much is there now”. The results showed that the professional expectation has direct impact on the stress of accountants and direct link with the perceptions of the professionalism, independence, responsibility, ability, capacity, the learning and the improvement. The greater the expectation, the heavier is the stress (Brierley, 1999; Lachman & Aranya, 1986).

The opposite effect was a research about the business expectations of accountants where professional expectation has a direct positive influence on the stress and stress has a direct positive impact on job performance (Phapruke, & Nupakorn, 2008).

The people who seek to progress their careers should change the way they work so as to reach their expectations and be led to the anticipated result. The increase in requirements in a result like this, may lead to increased stress levels (Morley et al., 2000).

The experience which is correlated with age and it is a consequence of it, plays a positive role in the encounter of occupation stress (Sager, 1990). Age affects the way that someone realizes the opportunities which are offered to him at work, for a smooth career. In older ages, people are more mature in the course of working life (Fogarty, 1994). Older ages comprise the less stressful people who do not concern about their career development, as their position seems fixed, something that is opposed with the younger accountants who have it as their main concern (Dua, 1994).

The aims and the demands for the career’s progress may differ between the two sexes. Those differences in the requirements have an impact even in the work
performance. Men accountants seem to have greater aspirations for further career and for that reason show higher levels of programming ambitions (Morley et al., 2000).

The number of female accountants is statistically small, although the number of graduate accountants keeps increasing (Zubaidah et al., 2008). Studies which were done in Europe and USA about obstacles in women’s career progress showed that they face many more obstacles than men (Scheuermann et al., 1998). Such obstacles, on which women’s career depends, appear in the following figure 2.7 (Zubaidah et al., 2008).

**Figure 2.7: Schema of Impediments to Career Progression (Zubaidah et al., 2008)**

In 1993, a project in J&J Company gave women the opportunity to work under better conditions, decreasing in this way the negative impact of the stress in their personal and family life. The same time, a survey, which was carried out by the same company, concerning the effect of the programme on the targets and the progress of women’s career, showed that these flexible regulations may lead to a delay in their career, but on the other hand they give them the chance to remain in their position, maintaining a professional career and skill (Zubadah et. al., 2008).

Consequently, the career is a factor that can bring about either negative or positive stress on accountants and it depends mainly on the employee's age and the sex. So those people that exhibit more stressful behavior in their career seem to be younger and especially men.
2.3.5 Role of Technology as Stressor

Although several studies have been made as far as the job stress and the stressful factors which cause it are concerned, still not enough studies about work stress and its relation with information systems have been done accordingly (Thong and Chee-Sing, 2000). There are evidences which show that the levels of stress, to occupations related to information systems, have been increased during the last years (Colborn, 1994; Engler, 1996; Garner, 1997; Vowler, 1995).

Smith and Sainfort (1989), using the work system model (figure 2.8) to define job stressors, showed that the technology is an important stressful factor.

Historically, there was not the phenomenon of rapid and continually changing technology and methodology. As time went by, this kind of changes create the need for new equipment and the adaptation to the new environment, according to the initial ambiguities that exist. The result of course, apart from the others is that the demands keep increasing (Kaluzniacky, 1998). According to Thong and Chee-Sing (2002), in recent years the rapid social and technological development is a source for increasing levels of job stress.

With the passage of time, the stress is increased with addition of new technologies; personal computers and email bring the “office” to home leaving for employees’ insufficient time to rest. As a result, stress and all the consequences of the result are brought to the employee (Thong and Chee-Sing, 2000).

According to a survey which was carried out in 1983 was claimed that productivity was decreased due to the use of computers. The explanation was as follows: there was not the right bond between technology, the organization of work
and the staffs’ skills - abilities (Aberg, 1983). Similar inferences were noticed in a survey in U.S.A about the reduction of productivity after computerization (Loveman, 1988).

In another survey which was also done in the U.S.A on 110 users of computers the result showed that the relationship between the employee and the technology was weak since the 75% had significant problems of implementation automation (Westin, 1987). According to Brenner and Östberg (1995), the usual reasons for the problems were:

- Poor planning of automation and inadequate information on the part of management.
- Excessive education of the employees on how, instead of their proper preparation about the changes at work and their professional relations.
- Inadequate participation of the employees in the decisions.

On the contrary to above studies, another research studied the occupational stress from different viewpoint. According to this a model program for office reorganization and computerization developed. The model emphasized extensive member of staff and user involvements in planning and designing the new-fangled office automation systems. The aim of this research was to assess the performance, the working environment and the existing stress. The results of this survey showed that although the employees’ work was more demanding and higher levels of skills were needed, it was more interesting. The stress and mobilization of the employees were increased by 50%. The results of this survey concluded that one programme on office automation increases the necessary qualifications at work, but it also leads to higher levels of satisfaction at work although there is more workload and stress. This kind of stress seems to give positive results and for this reason is called “positive stress” (Brenner and Östberg, 1995).

In a survey which was carried out, the majority agreed that a change in technology creates stress. From different relevant surveys it is significant that stress does not seem to have negative consequences to all people. There is a group of people who are quite satisfied with the new technologies applied at work. Of course there is another group of people to whom the symptoms of stress will continue to be an obstacle to their performance at work (Kaluzniacky, 1998).
The information systems facilitated the occupation of accounting but simultaneously they have created the appropriate conditions for the creation of stress, which in some cases can give positive results to performance (Thong and Chee-Sing, 2000).

2.3.6 Family Responsibilities as Stressor

Most studies have focused mainly on the impact of the work in family life (Netemeyer et al., 1996), but many studies have begun to examine the inverse relationship which is the impact of family life at work (Feldman & Doerpinghaus, 1992; Greenhaus, 1997).

Marriage changes a person’s priorities and obligations. Moreover, the spent of time at work becomes even more important particularly during the busy season. Marriage gives an additional stability to personal lives (maturity) of people (McNair, 1986).

A serious source of stress is the conflict between “home” and “work”. Several studies have shown that the faster the working pace, the higher the conflict between working and family life. There are various factors which make difficult the harmonic balance between family and working life. The time pressure, the abrupt changes in the working programmes and the irregular hours of employment make it difficult to conciliate with the family obligations and personal life (Collins and Killough, 1989).

Accountancy is a profession which is full of rules and never ending volume of work, many times insensible demands for the infeasible from bureaucracy and from exaggerating workload, therefore no matter how well trained an accountant may be to confront such problems she/he should be able to face directly problems related with the family support (Figler, 1980).

Nath (2000), in order to examine the impact of personal and social relationships in the professional progress of the accountants, interviewed twenty accountants who were holding executive managerial positions. The results of this survey showed that the combination of organizational and family support was the main factor of eliminating stress and in this way they achieved a successful career. Likewise, according to D’Angelo (1994), accountants who succeed in their job balancing the relationship between working and family responsibilities are the ones who have an encouraging family environment.
For accountants the conflict between family life and career is intense in the branch of accountancy and mainly for woman (Stockard, 1990). Family obligations, as well as their effort for their acceptance in a traditionally male profession are factors which influence negatively women’s psychology (Zubaidah et al., 2008).

More than 50% of those who work as accountants are women in the United States. At least 50% of them have children. A lot of them leave the job of accountant, when their employer is unable to offer solutions for the co-existence of their “two lives” (personal - family life and professional life) (Zubaidah et al., 2008).

According to a survey which was conducted by AICPA Special Commision (1989), examined the causes of women’s absence from accountancy, come to the conclusion that the responsibilities towards family – children, cultural perception towards women, stress for marriage and realization of success’s criteria are all very important factors of stress.

Consequently the family responsibilities is a stress factor that influences mostly women' job performance, as this aspect of their life seems hard to “re-conciliate” with the idea of working and being away from home for so many hours.

2.3.7 Summary

To conclude, despite the fact that not many researches have been done related to job stress in accounting system, there have been countless job stress factors. The excessive demands, loads of working hours and the time pressure (frequent and demanding deadlines) that describe the accountant’s profession have been mainly the aim of the accountancy literature.

Highlighting the most notable points according to chapter 2.3, accountants can develop a high lowest limit of workload before it goes to the point that stress can create a basic problem, despite all, the workload and time pressure which affect disapprovingly the accountants’ performance. When the working environment is not well structured creates role ambiguity that influences negatively the employee’s performance.

Career development and the role of technology are two remarkable stress factors as their dependence on age, gender and the ability of realization of each person are direct. It is a fact, that there are some cases in which those two factors have
affected negatively the individual but there are also some cases in which their positive contribution in the person’s development is beyond any doubt.

**Home responsibilities and how family** is structured are highly responsible for the work performance. The division between men and women is crucial, especially for women that seem to be influenced negatively as they are more sensitive concerning family issues.

Stress in general is either a positive or a negative stressor for the advancement and consequently for the performance of each employee, and it is undoubtedly a feature that defines accountants. It is obvious that from the reported stressors, our hypotheses are emerged. These stressors have been examined from global literature and it is proved that they influence the accountants’ performance either negative or positive.
3. RESEARCH METHODOLOGY

3.1 Introduction

The aim of this study is to research the impact of stress to accounting offices performance concerning the way and the degree that stressors affect the performance, in Greece. In order to achieve this aim a methodological strategy should be followed to reach the empirical evidence. This chapter of the study will address the research framework of this dissertation. The methodological strategy will start with the determination of the variables and hypotheses and will be continued with the description of research method.

3.2 Variables and Hypotheses

3.2.1 Variables as Job-Stressors

The study examined the following variables (Table 3.1), which are presented as work-related sources of stress (Sanders et al., 1995).

<table>
<thead>
<tr>
<th>Variables as Job-Stressors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Pressure</td>
<td>Stress is caused by the perception of concrete deadlines and time demands.</td>
</tr>
<tr>
<td>Workload</td>
<td>Stress is caused because a great volume of work must be accomplished in the concrete time.</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>Stress is created because someone does not clearly understand what he is expected to do at work.</td>
</tr>
<tr>
<td>Career Development</td>
<td>Stress is created by the continually attempting for professional development.</td>
</tr>
<tr>
<td>Role of Technology</td>
<td>Stress is created by the phenomenon of rapid and continually changing technology and methodology.</td>
</tr>
<tr>
<td>Family Responsibilities</td>
<td>Stress is caused because Family responsibilities change a person’s priorities and obligations.</td>
</tr>
</tbody>
</table>

Table 3.1: Variables as Job-Stressors
According to the literature review, the sources of stress (the time pressure, the workload, the role ambiguity, the career development, the role of technology and the family responsibilities) have a direct influence to job performance (Phapruke & Nupakorn, 2008; Choo, 1995; Cordes and Dougherty, 1993; Maslach and Jackson, 1981; Maslach and Leiter, 1997; Chong et al., 2004; Wright, 1974; Keinan; 1987; Aberg, 1983; Loveman, 1988; Figler, 1980). So, these variables can be characterized as independent variables which influence directly the dependent variable, which is the job performance.

The following schema depicts the relationships between independent and dependent variables which are used in this study. There are six independent variables which are presented as sources of stress (Edwards and Cooper, 1990; Sweeney and Summers, 2002; Cluskey and Vaux, 1997; Strauser, Kelly and Hise, 1982; Brierley, 1999; Lachman & Aranya, 1986; Phapruke, & Nupakorn, 2008; Morley et al., 2000; Dua, 1994; Scheuermann et al., 1998; Colborn, 1994; Engler, 1996; Garner, 1997; Vowler, 1995; Brenner and Östberg, 1995; Feldman & Doerpinghaus, 1992; Greenhaus, 1997) and they are hypothesized as having direct effects on the dependent variable. This relationship is described and has been formatted as following in the table below:

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th></th>
<th>Sources of Stress</th>
<th></th>
<th>Dependent Variable</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Pressure</td>
<td></td>
<td></td>
<td></td>
<td>Performance at Accounting Offices</td>
<td></td>
</tr>
<tr>
<td>Workload</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role ambiguity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role of technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 3.2: A Model of Stress to Accounting Offices Performance**

### 3.2.2 Hypotheses Development

According to the previous researches with the objective of report, six hypotheses will be examined. According to the previous theories, **workload, time**
pressure and role ambiguity affect negatively the accountants’ performance. Career development, role of technology and family responsibilities are some cases in which those three stressors have affected negatively the accountants’ performance but there are also some cases in which those three stressors have affected positively the accountants’ performance. In this study, the hypotheses are mainly based on the conclusions of studies of Tulen and Neidermeyer, (2004) and Sullivan and Baghat, (1992). According to them, there is a negative relationship between job stress and job performance.

These hypotheses deal with the six sources of stress, how and the way, these factors influence the job performance. The hypotheses are:

H1: There is a negative relationship between time pressure and job performance.
H2: There is a negative relationship between time pressure and job performance.
H3: There is a negative relationship between role ambiguity and job performance.
H4: There is a negative relationship between career development and job performance.
H5: There is a negative relationship between role of technology and job performance.
H6: There is a negative relationship between family responsibilities and job performance.

Our view is that time pressure, workload, role ambiguity, career development, the role of technology and family responsibilities are sources of stress and have a negative relationship with job performance at accounting offices.

### 3.3 Research Method

There are a lot of research methods in order to information to be collected. According to the required information that we want to collect, there are some research methods which are more helpful and effective than the others. Some of them are Observation, Case Studies, Interviews, Focus Groups, Documentation Review, and Questionnaires. The chosen Research Method for this dissertation is the method of the Questionnaires. The type of questions or other important details about questionnaire are presented below.
3.3.1 Strengths of Chosen Method

With the use of questionnaire the data can be gathered from a large sample. There is not a limitation of respondents. The researcher has the possibility to share his questionnaires with as many people as s/he wants to, making by this way his sample more representing and more reliable. The researcher has the “control” over the process of the research (Edwards and Talbot, 1994).

There is a possibility for the questionnaire to be examined extremely carefully by the researcher before she/he sends it to the people. By this way he can focus exactly on what he is looking for through the questions which he will create.

It is easier for the answers to be analysed. There are plenty of statistic analysis packages which can give us the opportunity for a detailed analysis of data.

Finally, the plenty of the similar research questionnaires gives us the chance to have a rough idea for the results of our questions.

3.3.2 Limitations of Chosen Method

In a dissertation through questionnaires, unnamed answers give the opportunity to the respondents to give more frank replies (Edwards and Talbot, 1994). But in this dissertation this method was not chosen, because the researcher wanted to show through the named answers the validity of the sample wherever it was possible though.

Likewise, workload and, many times, the time pressure in accounting offices have as a result many of the questionnaires not to be answered.

Finally, we have not to leave out a percentage of the respondents that may have not paid the satisfactory attention to the questions, having as a result frivolous answers to be given.

3.4 Research Instrument Development

The report was based on journal articles with topics about stress, occupational stress and stress at accounting offices, and became the guiding line for the making of the questionnaire. The questionnaire was consisted by fifty-three questions which
were divided into five parts. Each part consisted from a number of questions which intend to the collection of demanded information. These parts are:

<table>
<thead>
<tr>
<th>Part A - Demographics Variables:</th>
<th>In this part we draw clues about the sex, the age, the degree of position, the family status and the working experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part B - Sources of Stress:</td>
<td>In this part the six variables are examined as stress sources.</td>
</tr>
<tr>
<td>Part C - Job Performance:</td>
<td>In this part the respondents have to evaluate their job performance.</td>
</tr>
<tr>
<td>Part D - Job Satisfaction:</td>
<td>In this part the respondents have to evaluate the degree of their work satisfaction.</td>
</tr>
<tr>
<td>Part E - Job Stress Effects:</td>
<td>In this part the impacts of job stress are examined according to how much they influence the health of the individual.</td>
</tr>
<tr>
<td>Part F - Variables’ Importance:</td>
<td>In this section the respondents have to fill in a table concerning the variables' vitality.</td>
</tr>
</tbody>
</table>

Table 3.3: Parts of Questionnaire

The questionnaire was based and designed by previously validated instruments, where it was possible. Self-designed items were composed as supplements or replacements where necessary. These items were screened for researches by academics knowledgeable in the subject area. The instruments were already tested by the accounting professionals.

The Part A of the questionnaire was about demographic variables such as gender, age, degree of position, family state and working experience. The age was divided in four groups, until thirty, between thirty one – forty, between forty one – fifty and over fifty one years old. The respondents’ working experience was included in four groups; the first was one year, the second between two and five years, the third between five and ten years, and forth above ten years. The family state examined if the respondents were married or not, and if they had children or not. Finally, there was a separation among employers, employees and executives. Many of the questionnaires in which we were based on, used these demographic variables.

The Part B of the questionnaire examined the independent variables as job stressors and was divided in six scales: time pressure scale, workload scale, role ambiguity scale, career development scale and family responsibility scale. The reason
of the choice of all these six stressors was their use in previous studies. Each of stressors was measured, using a 5-point Likert Scale in which 1 indicated “not stress at all” and gradually 5 indicated “very much stress”. According to Zikmund, (2003), Likert Scale is a measure of attitudes designed to allow responders to indicate the range from very positive to very negative toward an attitudinal object. This part dealt with “sources of stress” and was consisted by 33 items. “Time Pressure” and “Workload” were measured by 13 items. The 7 items of them were from Hurrell and McLaney, (1988) who suggested the “NIOSH Generic Stress Job Stress Questionnaire”, the 3 items of them were from French and Caplan, (1972) who invented the “Chronic Work Related Stress Evaluation” instrument and the 3 items of them by Noblet, (2002). “Role Ambiguity” was developed by 6 items. The 4 items of them were from Rizzo et al. (1970), the 1 item of them was Hurrell and McLaney, (1988) and the 1 item of them was from French and Caplan (1972). “Career Development” was measured by 6 items. The 4 items of them were from Hurrell and McLaney, (1988) and 2 Self-designed items. “Role of Technology” was measured by 5 items from Kaluzniacky, (1998) who developed the “Stress Assessment Questionnaire”. “Family Responsibilities” was measured by 3 items from Parasuraman et al., (1992).

At Part C the respondents have to evaluate their job performance and “Job Performance” was assessed by a single-item. It was consisted by the question “Please give your opinion of your job performance. Select an option that presents your response” that has been used by Chong et al., (2004). This question was answered using a 5-point Likert Scale too, and 1 indicated “excellent”, 2 indicated “satisfactory”, 3 indicated “average”, 4 indicated “almost unsatisfactory” and 5 indicated “unsatisfactory”.

At Part D the respondents have to evaluate their job satisfaction and “Job Satisfaction” was measured by 2 items. It was consisted by the questions “How satisfied are you with your job overall?” that has been used by Chong et al., (2004) and “If I had the opportunity to choose my profession again, I would not make the same choice” (Self-designed item). These questions were answered using a 5-point Likert Scale too, and 1 indicated “very much satisfied” and gradually 5 indicated “not satisfied at all”.

30
Part E measures the “Job Stress Effects” and was consisted by five items. They developed by Savery et al., (1993). They are measured on a 5-point Likert scale, and 1 indicated “strongly disagree”, and gradually 5 indicated “strongly agree”.

Part F was a table which was used to characterise how much important source of stress was any of the independent variables. Each variable was called to be characterized as “major source of stress”, “moderate source of stress” and “not source of stress at all”. This table based on French’ and Caplan’ table, (1972).

3.5 Choice of Sample and Procedure of the Research

The first step in the selection of the sample was to examine the population. Since the research concerns the job stress in the accounting section, the population was restricted in accountants.

The research concerns Greece, for this reason, it was included only Greek accountants and was focused mainly on northern Greece.

All the working members as accountants in Greece are too many for the researcher to attempt to survey them. For this reason, a small, but carefully chosen sample can be used to represent these members. The sample reflects the characteristics of many members. As it has been reported, in this research a questionnaire was used in order to collect the necessary information. The main source of the data was employees and employers from accounting offices and accounts departments of companies. It was a representative sample from many Greek cities.

The condition for the completion of the questionnaire was the concerned people to have worked at least one year in a relevant position. The reason for this condition was that the respondent would have a complete picture about the accountant’s profession either as an employer or as an employee. She/he would have experienced at least the unstable calendar workload. The working experience of the concerned was significant for various reasons such as performance, work satisfaction, obligations, deadlines, the characteristics at work and organizational technology.

The levels of stress were formed according to the gender, the age, the family status (Demographic changes) and the rank position (Employer – Employee) (Fogarty, 1994). For the sample which was being examined an effort was made so that many towns in Greece were involved and people of genders, different family status and rank
could participate. As far as gender is concerned, there is a difference in the way male and female accountants are paid and promoted although they both have the same abilities and the work satisfaction and obligations are similar. Besides married women with children have of course more obligations and rank of position (Employer - Employee) creates changes towards duties and responsibilities (Fogarty, 1994).

The questionnaire would be delivered twice at the same sample in order to include the busy season. Unfortunately, this was impossible because of lack of the required time. Therefore an effort was made so that the appropriate questions to be included in the questionnaire, which was carried out that particular period.

The questionnaires were distributed via e-mail, post and through personal interview. A very small part of questionnaires were answered via telephone. In all these ways feasible efforts were made to ensure sincere and careful answers. The available time for the collection of the questionnaires was about six weeks, the analysis of which was done after bibliography was re-examined.

The number of the research sample was about two hundred and eighteen accountants in order to have a safe margin. The questionnaires were e-mailed to one hundred accountants working in Greece. The names were selected at random from the list of association of accountants and twenty-three questionnaires were returned completed. Twenty-five phone interviews gave twelve completed questionnaires. Forty posted questionnaires had as result the collection of seventeen completed questionnaires. From the rest of the questionnaires thirty questionnaires were distributed and after two weeks were collected completed the twenty-two of them. The last twenty-three questionnaires were answered by the personal interview method. The process of personal interviews lasted about two weeks and in this way the researcher is likely to achieve a better relation with the respondent and a narrower supervision of him/her. Thus a likely query in the comprehension of any question could be clarified more easily.

The total was ninety-seven questionnaires for analysis. This low participation can be explained by two likely reasons. The first is that the period that the questionnaires were delivered was very stressful and the second reason was the length of the questionnaire.
4. ANALYSIS AND RESULTS

4.1 Introduction

In regard to the proposed methodology that was followed by the researcher-author, was the examination of the research hypotheses in a more descriptive way, as stated above. The research was proceed to the collection of the data from the proposed sources and then to analysis. The model is based on six hypotheses above, in order to find out how professional stress influences the performance of accounting professional staff and determines the stressors.

The required tool in order to undertake the analysis of the findings and evaluate the research model was the software package of SPSS, a structural equation modelling program, which operates statistical functions. SPSS is a very helpful tool to analyze statistical data and produce the appropriate diagrams. Its purpose is to define whether relationships proposed in theory which is based on prior researches, represent the present data set. This process become with the help of various appropriate indices.

In this part, the analysis from some questions of the questionnaire will follow, which will be based on the graphs and a further analysis based on the software package of SPSS. In the last chapter, the results of the study are presented.

4.2 Graphs According to the Questionnaire

According to the graphs of the questionnaire, in this chapter is discussed a part of the questions. This chapter is divided in six subsections according to the parts of questionnaire.

4.2.1 Part A - Demographics Variables

The first three graphs present some from the basic demographic variables, such as the gender, the age and how many years the respondents work as accountants. We can see that men outnumber women in the examined sample. Even if the profession of an accountant is considered as an office job, we observe that it is men’s
work. According to Greeks stereotypes, this means that it is a difficult and demanding job. In conclusion, we can assume that people who work as accountants face a lot of problems as accountancy is a profession where many working hours are demanded. However, we cannot say that the profession of an accountant is a man’s profession only. The duration of their professional career as accountants is considered extremely important, as we notice the majority of respondents’ duration is above five years. We consider that the results from the questionnaires are reliable since they have been answered by individuals which are mature and work for many years as accountants.

Graph 4.1: Gender

Graph 4.2: Age

Graph 4.3: Period working in professional accounting
4.2.2 Part B - Sources of Stress

4.2.2.1 Time Pressure

In the graphs that follow, it is obvious that the majority has time pressure. In the first graph is presented a very basic question that has to do with the reason of increase of shift of employees in accountant offices. As we can see most of the respondents marked 4 – 6 extra hours. So, we can conclude that at particular periods, the shift of accountants is increased, and these periods are constant (end of each month, each year etc). The accountants have to face off the frequent demanding deadlines, so they have much influence over the hour that they work and this influence is negative for the majority of the respondents (it is presented at the second and third graph). If we want to summarize the results of these graphs we could say that the “closures of month etc.” is factor that increases the hours of work and creates a negative influence to accountants. In conclusion, “time pressure” is a negative stressor.

Graph 4.4: During the periods of closing of months-quarter-year-tax statements etc. how many extra hours do you work?

Graph 4.5: How much influence do you have over the hour that you work?
4.2.2.2 Workload

In the graphs following, it is obvious that a large part of respondents has workload. The majority of the sample agrees that the influence of over the amount of its work is too much and according to the second graph this influence is negative. In the third graph is presented that the accountants have too many occupational services to offer and the time is too little for these. The percentages of the three graphs are very important for the conclusion that the workload is a negative stressor and has a negative influence on the accountants’ performance.
Graph 4.9: I have too much to do and too little time in which to do it

4.2.2.3 Role Ambiguity

As we can see from the following graph 4.10, at accountancy profession, there are cases in which, sometimes, the responsibilities and the obligations that somebody may have, are not clear. Obviously, it has as a result the involvement of other people on someone’s duties (graph 4.11). So, we can conclude that the role of ambiguity is a factor which, of course, is unwanted among accountants and has a negative influence on them.

Graph 4.10: Are your job responsibilities clearly?

Graph 4.11: Does it bother you, when some of your co-workers get into your work?
4.2.2.4 Career Development

Career development is a factor which appears to not influence enough the accountants. Their opinions oscillate according to their characterization with regard to how much ambitious they are (graph 4.12), and the future about their professional recognition and success, seems not to stress them enough (graph 4.13). As we can see a very important percentage at about 45% shows not to be stressed much about its career development, even though in a society like the Greek, chances for professional development are very limited. In conclusion, the career development is a factor which is presented not to have an important role for the creation of stressful situations.

Graph 4.12: Would you characterize yourself ambitious?

Graph 4.13: Does your ambitions caused you stress?

4.2.2.5 Technology

From the graph 4.14, we can conclude that the accountants are getting more and more used at the technology at their job. A very important percentage of accountants have a “very good” relationship with the technology and a more important percentage a “good” relationship with it.
Graph 4.14: Which is your relationship with the technology and especially with pc?

The bigger percentage belongs to the respondents who believe that the technology has been broadly applied in their branch and it is a necessary tool for their job, as we can see at the following graph 4.15. For accountants the ability of direct and timely information is the tool for better professional education and the right decisions.

Graph 4.15: Is technology a necessary tool for the improvement of your job?

Furthermore, from the following graph 4.16, it is obvious that a big part of respondents have the opinion that the use of computers makes more easily theirs job. In conclusion, the economics branch is one of those branches that technology found prolific field for adjustment, but a small part of respondents, mainly the older accountants, has the opposite opinion. As we can see from the following graphs the ages under 40 years old have a better relationship with new technologies, in contrast with ages over 40 years old that seem to be stressed from its use. As it is obvious, the technology as stressor does not only have a negative effect in the job performance but in a lot of cases, and mainly in younger ages, this effect we can say is positive.
Graph 4.16: Do you think that the use of new technologies makes your occupational life easier?

Graph 4.17: The impact of technology at ages under 40 years old

Graph 4.18: The impact of technology at ages over 40 years old

4.2.2.6 Family Responsibilities

The following graph seems not to confirm the issues presented before in the literature review. A massive percentage shows that “family responsibilities” does not influence a lot of the work (graph 4.19), and the reason is that the “family responsibilities” is stressor mainly for the people who are married (49%). Our sample included an important part of single people (51%).
Graph 4.19: Do you believe that your family responsibilities have influenced your work?

Also a second separation for married people is according to their gender. The following graphs illustrate to us that married women are more sensitive at family’s issues than married men.

Graph 4.20: Married women and family responsibilities

Graph 4.21: Married men and family responsibilities

The factor "family responsibilities", which is remarkable here, also contributes in the creation of stress for a part of people and by extension on the performance of the employees and the employers of accounting offices. It should be emphasized that if we exclude the stressor "family responsibilities", the other stressors have been a lot of times pointed out by the international literature. Obviously, the particularity of
Greece on this subject results in this finding because Greek people tend to give priority to family matters, a fact that affects somebody’s life and particularly his work performance. This mental outlook comes from our ancestry and has been preserved despite all these years that have gone by. In conclusion, the “family responsibilities” as stressor influences negative the accountants’ performance, but those accountants who have family responsibilities.

From all over the previous graphs, we conclude that stressors like “time pressure”, “workload” and “role ambiguity” which are presented as negative stressors have negative relationship with job performance. “Career development” and “family responsibilities” we can say are negative stressors and have a negative relationship with job performance but in particular groups which are depended on age and family state correspondingly. “Technology” is a special factor as we can see that in many cases has not a negative influence as a stressor and it has not a negative link with job performance.

4.2.3 Part C - Job Performance

From the following graph, we can see that a very satisfactory percentage indicates not to be satisfied from its overall performance at working environment. This means that there are factors which create stressful situations, having as a result the negative influence at job performance.

Graph 4.22: Please give your opinion of your job performance. Select an option that presents your response.
4.2.4 Part D - Job Satisfaction

It is very important for each person to be satisfied from its job. Although in the accounting section, as it is shown from the following graph, an adequate percentage looks to be satisfied from its work, it is remarkable that an important percentage of respondents does not take the respectfully satisfaction as a reward from his/her work. Satisfaction is the feeling of creation and completion of something successfully and it does not exist within the accountants at a significant percentage. Job performance and satisfaction are two issues which are directly connected and many researchers have studied this relationship.

![Graph 4.23: How satisfied are you with your job overall?](image)

4.2.5 Part E - Job Stress Effects

Finally, we are going to see the respondents’ answers when they were asked to agree or disagree with a situation. As it is obvious from the following graph, a very important percentage of 37% “agree” that they often feel nervous before going to work and a comparably big percentage of 12% is “totally agreed”. From this, we conclude that accountants are facing situations in their job which they would not want to meet, situations which undoubtedly make their professional life difficult and possibly cause stress to them.

![Graph 4.24: I often feel nervous before going to work.](image)
4.2.6 Part F - Variables’ Importance

In the next graphics, we can see what the respondents think of stress. The most important results are that most of the stress comes from time pressure and workload, taking into consideration that the respondents cannot overlook in any case these two stressors.

Graph 4.25: Time pressure

Graph 4.26: Workload

The next stressors (role ambiguity, career development, role of technology, and family responsibilities) can be considered as a source of stress with a big gap from the previous time pressure and workload, which are considered as main sources of stress. The stressor role ambiguity can be considered as a secondary stressor while the bigger percentage of respondents does not consider it so much important.

Graph 4.27: Role ambiguity
The stressor career development can be considered only from a part as stressor, which has combined their job with the creation of career.

**Graph 4.28: Career development**

The stressor technology should not be connected as a basic source of stress, because most of the respondents are familiarized with the technology in their basic studies as well as with the specialised programs of accountancy which they deal with, for many years on.

**Graph 4.29: Role of technology**

Finally, the family responsibilities also can be considered as a source of stress, however, not for the overall respondents. This is explained by the home situation of each one.

**Graph 4.30: Family responsibilities**
4.3 Data Analysis with SPSS Programme

Each research, in which the researcher uses a questionnaire, important place possesses the control of validity and the appropriateness of questionnaire so as the results which will emerge to be considered valid and reliable. In order to be ensured the appropriateness of research instrument this should be checked for: a) Content Validity, b) Construct Validity and c) Reliability.

**Content Validity**: the most basic validity’s type, is the content validity (Zikmund, 1997), namely, the deal between professionals that the used variables really count this which they are supposed to count (Chu and Murrmann, 2006).

The check for the content validity includes:

- Review of the bibliography of researched subject.
- Pilot test in an team of experts (academics and professionals) and
- A sample of people which is not the same as the sample which was used for the pilot test for questionnaire’s check (Kim et al., 2008).

The content validity for the presented questionnaire is given while its variables have been used in many researches all over the world. However, in order to be given the right presentation and the understanding of meanings, discussions with academics and experts of this branch were accomplished.

**Construct Validity**: The Construct validity attempts to define constructs and to determine how well the control represents them (Cooper and Schindler, 1998). There are usually two ways for the evaluation of a variable: Exploratory Factor Analysis (EFA) and the Confirmatory Factor Analysis (CFA). The general aim of EFA is to find out a method for collection of information which is included in a load of variables; to a smaller load of new multiple aspects or factors with as much smaller is possible loss of information (Hair et al., 1995).

In the present study take place six factor analysis, one for each source of stress. For the factors’ exportation Principal Component Method was used and for the rectangle rotation of axes Viramax method was used. To check out the appropriateness of data for factor analysis it was measured the Measure of Sampling Adequacy – M.S.A. of Kaiser – Mayer – Olkin (K.M.O.), which is the most famous measure. Sharma (1996) shown that K.M.O. index should be greater than 0.7.
Likewise the Bartlet’s test of sphericity took place and also checked the loadings of items at factors. The loadings are satisfactory and statistically significant for a sample of almost 100 individuals when it is under 0,55 (Hair et al., 1995). The total variance explained by the factor must be greater than 50% of the total variance (Hair et al., 1995).

The first factor analysis for “time pressure” gave unsatisfactory results because of the very small loadings of 2 items. After the removal of these items, the factor analysis was repeated and the table below show the results.

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often does your job require you to work very fast?</td>
<td>0,811</td>
<td></td>
</tr>
<tr>
<td>How much time do you usually have to do all your work?</td>
<td>0,813</td>
<td>68,66%</td>
</tr>
<tr>
<td>How often does your job leave you with little time to get things done?</td>
<td>0,606</td>
<td></td>
</tr>
<tr>
<td>How much influence do you have over the hour that you work?</td>
<td>0,843</td>
<td></td>
</tr>
<tr>
<td>Is this influence negative?</td>
<td>0,774</td>
<td></td>
</tr>
<tr>
<td>Do you feel in control of your time?</td>
<td>0,586</td>
<td></td>
</tr>
</tbody>
</table>

K.M.O = 0,771  
Bartlett’s test of sphericity = 208.598  
df = 28  
Sig. =0,000

<table>
<thead>
<tr>
<th>Table 4.1: Factor Analysis for Time Pressure</th>
</tr>
</thead>
</table>

The results of factor analysis show a good adaptation of data while all indexes are satisfactory. Then, a factor analysis takes place for the rest of the sources of stress. The results in each case are very satisfactory, as can be seen in Tables 4.2 until 4.6.

More specifically, the K.M.O index ranged from 0,701 to 0,843, all the Bartlett’s tests are significant at 0,05 level, the loadings of the items are greater than 0,55 and the total variance explained has a minimum value of 59,5% for the factor “career development” and a maximum value of 87,3% for the factor “family responsibilities”.

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### Table 4.2: Factor Analysis for workload

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often does your job require you to work very hard?</td>
<td>0.704</td>
<td></td>
</tr>
<tr>
<td>How many tasks or responsibilities do you have?</td>
<td>0.732</td>
<td></td>
</tr>
<tr>
<td>How much influence do you have over the amount of work you do?</td>
<td>0.621</td>
<td>60.241%</td>
</tr>
<tr>
<td>Is this influence negative?</td>
<td>0.693</td>
<td></td>
</tr>
<tr>
<td>I have too much to do and too little time in which to do</td>
<td>0.609</td>
<td></td>
</tr>
</tbody>
</table>

K.M.O = 0.701 / Bartlett’s test of sphericity = 48,044 / df = 10 / Sig. =0.000

### Table 4.3: Factor Analysis for Role Ambiguity

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are your job responsibilities clearly?</td>
<td>0.584</td>
<td></td>
</tr>
<tr>
<td>Do you often deal with other jobs except of yours responsibilities?</td>
<td>0.694</td>
<td>60.284%</td>
</tr>
<tr>
<td>Do you work on unnecessary things?</td>
<td>0.773</td>
<td></td>
</tr>
<tr>
<td>How often do you go to other departments to get your job done?</td>
<td>0.666</td>
<td></td>
</tr>
<tr>
<td>Does it play role to get a job done all alone?</td>
<td>0.639</td>
<td></td>
</tr>
<tr>
<td>Does it bother you, when some of your co-workers get into your work?</td>
<td>0.619</td>
<td></td>
</tr>
</tbody>
</table>

K.M.O = 0.718 / Bartlett’s test of sphericity = 103,356 / df = 15 / Sig. =0.000

### Table 4.4: Factor Analysis for Career Development

<table>
<thead>
<tr>
<th>Items</th>
<th>Loadings</th>
<th>Total Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>How certain are you about your future career picture looks like?</td>
<td>0.590</td>
<td></td>
</tr>
<tr>
<td>How certain are you about your job abilities?</td>
<td>0.845</td>
<td>59.508%</td>
</tr>
<tr>
<td>Do you think that there will be a lot of opportunities for you at the future?</td>
<td>0.785</td>
<td></td>
</tr>
<tr>
<td>Do you think that there will be a lot of opportunities for you at the future?</td>
<td>0.863</td>
<td></td>
</tr>
<tr>
<td>Does your ambitions caused you stress?</td>
<td>0.785</td>
<td></td>
</tr>
<tr>
<td>Does a likely future professional failure stress you?</td>
<td>0.730</td>
<td></td>
</tr>
</tbody>
</table>

K.M.O = 0.798 / Bartlett’s test of sphericity = 273,472 / df = 15 / Sig. =0.000
The evaluation of a model includes the assessment of reliability which measures the internal consistency of factors. The internal consistency can be calculated using Cronbach’s $\alpha$ indicator and the composite reliability of Fornell (Fornell and Larcker, 1981) and based on correlations between variables which constitute the factor. Values of Cronbach’s $\alpha$ indicator under 0.7 are considered satisfactory (Spector, 1992; Nunnaly, 1978). The composite reliability should be greater than 0.7 in order to be considered satisfactory (Fornell and Larcker, 1981).
### Table 4.7: Reliability Analysis

At table 4.7 are appeared the results of Reliability Analysis, which shows that the Cronbach alpha indicator is satisfactory, except in the case of the “Role Ambiguity” where the value (0.695) is marginally acceptable. After the validation of the measurement scales any factor was replaced by the mean score of the items from which is constitute.

In the table below are presented the basic statistics of the factors which constitute the sources of stress and the variable used for measuring the “job performance”. As you can see “workload”, “time pressure” and “role ambiguity” are the factors that provoke more stress to the workers. On the other hand the factors that affect less the workers are “family responsibilities” and “technology”. Note that the higher the mean score of factor is, the more stress it causes. However, the larger the value of Job Performance is, the smaller the performance of the employee. Thus, we see that employees evaluate their performance around “average”.

### Table 4.8: Basic Statistics

Then, in order to become a control of affairs that was formulated, a Regression Analysis was realized. The independent variable in the regression analysis was the "the job performance" and the independent variables were the six sources of stress. The data are appropriate for regression analysis and thus the results are valid if the F-
statistic is significant in 5% level at least. Moreover the index Durbin-Watson of autocorrelation must be nearly to 2 and the collinearity statistic (V.I.F) must have a value of less than 5. In our analysis the value of F-statistic is 20.494 and is significant at 0.001 level. The Durbin-Watson index of autocorrelation is 1.933 near to cut-off value of 2, and finally all the V.I.F statistics are less than 5. Thus, the data are appropriate for regression analysis and there are no autocorrelation and collinearity problem. The results are presented in the tables 4.9 until 4.10.

<table>
<thead>
<tr>
<th>R-Square</th>
<th>0.282</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-Statistic</td>
<td>20.494</td>
</tr>
<tr>
<td>Sig.</td>
<td>0.000</td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>1.933</td>
</tr>
</tbody>
</table>

Table 4.9: Regression Analysis (Model Summary)

<table>
<thead>
<tr>
<th>Independent Variables (Factors)</th>
<th>Tolerance</th>
<th>V.I.F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Pressure</td>
<td>0.671</td>
<td>1.490</td>
</tr>
<tr>
<td>Workload</td>
<td>0.738</td>
<td>1.354</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>0.771</td>
<td>1.297</td>
</tr>
<tr>
<td>Career Development</td>
<td>0.717</td>
<td>1.395</td>
</tr>
<tr>
<td>Technology</td>
<td>0.717</td>
<td>1.395</td>
</tr>
<tr>
<td>Family Responsibilities</td>
<td>0.740</td>
<td>1.352</td>
</tr>
</tbody>
</table>

Table 4.10: Regression Analysis (Collinearity Statistics)

The regression coefficients for all the independent variables have a negative value that means that more stress provokes less performance. The sources of stress which affect more negatively the performance are “time pressure” and “family responsibilities”. On the contrary, the source of stress which provokes less negative effect on job performance is “technology”.

<table>
<thead>
<tr>
<th>Independent Variables (Factors)</th>
<th>Beta</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Pressure</td>
<td>-0.191</td>
<td>-3.263</td>
<td>.001</td>
</tr>
<tr>
<td>Workload</td>
<td>-0.113</td>
<td>-2.031</td>
<td>.043</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>-0.194</td>
<td>-3.557</td>
<td>.000</td>
</tr>
<tr>
<td>Career Development</td>
<td>-0.096</td>
<td>-1.702</td>
<td>.090</td>
</tr>
<tr>
<td>Technology</td>
<td>-0.068</td>
<td>-1.202</td>
<td>.230</td>
</tr>
<tr>
<td>Family Responsibilities</td>
<td>-0.118</td>
<td>-2.112</td>
<td>.035</td>
</tr>
</tbody>
</table>

Table 4.11: Regression Analysis (Coefficients)
The Beta regression coefficients of the independent variables in order to be characterized as reliable and valid must be statistically significant at 0.05 level. In our study all the coefficients except from the coefficients of “career development” and “technology” are significant.

Thus, observing the values of Beta coefficients in Table 4.11 we can see that they are all negative and initially agree with the assumptions which we made before but the two of them are statistically insignificant while their t-values belong in the interval [-1.96, 1.96].

Therefore, four cases (H1, H2, H3, H6) are accepted while the other two (H4, H5) we can say that are not. The following table presents details of the cases and the decisions about accepting or rejecting them.

<table>
<thead>
<tr>
<th>Proposed Hypotheses</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: There is a negative relationship between time pressure and job performance.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2: There is a negative relationship between workload and job performance.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3: There is a negative relationship between role ambiguity and job performance.</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4: There is a negative relationship between career development and job performance.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5: There is a negative relationship between role of technology and job performance.</td>
<td>Rejected</td>
</tr>
<tr>
<td>H6: There is a negative relationship between family responsibilities and job performance.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Table 4.12: Hypotheses of the Study

4.4 Results of the Study

The results of H1 (There is a negative relationship between time pressure and job performance) are compatible with a wide range of preceding findings (Phapruke & Nupakorn, 2008; Choo, 1995). The frequently inadequate time has as consequence the increase of unwanted overtimes and decrease of performance.

The result of H2 (There is a negative relationship between workload and job performance) as expected, is that the relationship between workload and job performance is negative. The accountants have too many occupational services to offer and the time is too little for these. Several researches have emphasized the
negative important consequences of high workloads, such as the impact on job performance (Cordes and Dougherty, 1993; Maslach and Jackson, 1981; Maslach and Leiter, 1997).

The results of H3 (There is a negative relationship between role ambiguity and job performance) agree with most studies (Chong et al., 2004; Wright, 1974; Keinan, 1987), which suggest that role ambiguity is negatively correlated with job performance. When somebody does not have clear responsibilities and obligations, the result is the involvement of other people at his/her duties. When the role ambiguity is increased, the individual is unsure about the possible result of its job.

The results of H4 (There is a negative relationship between career development and job performance) surprisingly, appear that the relationship between career development and job performance is not significant, in contrast with several of previous researches (Brierley, 1999; Lachman & Aranya, 1986). However, if we will consider that it depends mainly on the employee's age and the gender, we can expect to get a stronger relationship. In conclusion, the career is a factor that can bring about either negative or positive stress on accountants.

The results of H5 (There is a negative relationship between role of technology and job performance) do not agree with the several previous studies (Colborn, 1994; Engler, 1996; Garner, 1997; Vowler, 1995; Aberg, 1983; Loveman, 1988), according to them, there is a reduction of productivity with the use of new technologies. The technology has been broadly applied in the accounting branch and it is a necessary tool for this job, so most of accountants are familiarized with the technology and with the specialized programs of accountancy which they handle a lot of years.

The results of H6 (There is a negative relationship between family responsibilities and job performance) are in agreement with previous studies (Feldman & Doerpinghaus, 1992; Greenhaus, 1997; Collins and Killough, 1989). The factor "family responsibilities", contributes in the creation of stress for accountants and by extension on the performance of the employees and the employers of accounting offices.

Therefore, the answer in the main research question of the dissertation (How the accountants’ stress influences the performance of accounting offices?) is that accountants’ stress influences mostly negative the performance of accounting offices, with consequence the reduction of performance. Despite this, there are cases where the accountants’ stress does not influence negative the performance of accounting
offices. This happens because the stress depends directly on factor from which it is caused. So, in the case of technology as stressor, the performance is not influenced negative.

The answer at second research question, which concerned the dissertation (Which stress factors affect positively and which negatively on the performance of the accounting offices?) is that the time pressure, the workload, the role of ambiguity and the family responsibilities affect negatively on the performance of the accounting offices, while the career development and the role of technology do not affect negatively on the performance of the accounting offices.
5. CONCLUSIONS

5.1 General for the Project

It is essential to be taken into serious consideration that every research based on human resources has valid results according to the conditions of the external environment such as the economy of each country, the customs of the society and the political system. There may be differences in some aspects of job stress model in many countries due to the context and culture. Therefore our model may not be applicable in another country.

This project is based on how professional stress influences the performance of the accounting staff and managers, concerning the stressors, the way and the degree that are affected in Greece. In the present research a questionnaire was used in order to collect the necessary information. In a time where economy keeps deteriorating, the economic controls become tenser and tenser; the stress of accountants and of the rest people of a society dealing with economy keeps increasing. The result of this stress is the employees not to respond accordingly to the demands for progress at work.

The personality, age, the gender, the social place, the abilities, the autonomy, the ambitions and the interpersonal contacts are certain factors that influence each person in his/her reactions in his/her working environment. An overview of the key factors that influence wellbeing at work is appeared to Appendix B.

Job stress has been an area of particular concern in the work of accountants. Accountancy is a profession which is defined by rules, never-ending volume of work, many times from insensible demands for the infeasible, from bureaucracy and from exaggerating workload; the consequence is as much as experienced the accountant is for their facing, a great deal of stress is dominating him/her threateningly. As it is obvious, all these facts mentioned before cannot leave the accountant unaffected, but is influenced his/her performance.

Remarking the most important points according to Literature Review, stress is directly connected with the work environment. There is “stress” in the working environment when the demands of the working environment overweigh the individual’s capabilities. Job stress can be separated at positive and negative. The frequent phenomenon is the negative result of job stress on the performance of
employees, on the other hand, when the job stress is positive, the result is the improvement of employees' performance. The label (positive-negative) between job stress and job performance depends on the stressor which causes the influence.

Excessive workload and time pressures, the job stress which originates from the role ambiguity, the concerns about career development and the technology are all examples of potential occupational stressors at accountants. These stressors contribute as criteria for the performance evaluation of every employee. The personal life and the family responsibilities, the lack of partner's and family's support, balancing the relationship “Family responsibility - Working demands” is another criterion for the performance evaluation.

Stressors such as the workload, time pressure and role ambiguity affect negatively to the accountants’ performance. Career development, role of technology and family responsibilities are some cases in which these three stressors have affected negatively at the accountants’ performance but there are some cases in which these three stressors have affected positively at the accountants’ performance.

Job stress either as positive or as negative stressor for the definition of performance is undoubtedly a feature that defines the accountants.

5.2 Findings of the Study

From the analysis, we can see that one of the factors which bring out the existence of stress is that an important percentage agrees that it feels nervous before going to work. So, we can suppose that accountants face situations in their job which they would not want to meet, situations which without doubt make their professional life difficult and possibly cause stress to them.

There is a negative relationship between time pressure, workload, role of ambiguity, family responsibilities and job performance, while the career development and the technology do not significantly influence the job performance.

Career development and the role of technology are two remarkable stressors as their dependence on age and gender is direct. It is fact, that there are some cases in which these two stressors have affected negatively the employee but in this research the results indicate a possible positive contribution in the person’s development.
Concluding our research, we could say that we have a clear image about impact of stress on accounting offices performance in Greece, because the outcomes of our research are well-defined.

5.3 Limitation of the Dissertation

The dissertation focuses on the impact of stress on accounting offices performance. In order this study to be achieved in Greece, is very useful that: many cities, a sample varying in age, both male and female as much as it would be possible on equal depending on their family status, to be examined. There are also a lot of variables (e.g. age and gender) which could be included in this research as sources of stress, given that the stress is caused by a lot of different factors.

As job stress is a developmental process which is occurred after continuing exposure to job stressors, a longitudinal study is the appropriate design for capturing the impact on job performance.

A study like this in order to have timely and approachable results, a great deal of time is needed from the author and willingness from the participants in order to fill in the questionnaires during the time needed. This time may be extremely short, but it is fair enough to be considered as a waste of time for the accountant, who is so busy from the daily workload and she/he cannot be available all the time.

It should be highlighted that the literature review focuses mainly on the busy season, so there are two directions; therefore it will be included in our research this specific period; the first term (three months long). Firstly, the questionnaires should have shared in two times, in two different periods, in the same sample or secondly, the questionnaire should have included questions that the participants could approach this specific period. Undoubtedly, the first direction seems to be more reliable, but due to lack of essential time the second one was chosen. Finally, it is remarkable that the limitations of each research are motivations for further researches.

5.4 Suggestions for Further Research

The aim of this research was to search the impact of job stress on the performance of the accounting profession staff and managers, concerning the way and
the degree that stressors affect the performance, in Greece. It is reasonable that it was not possible to include all the stressors that affect the job performance in this investigation. Thus, factors such as “interpersonal relationships between colleagues”, and "organization of the working environment” are characteristics that clearly have a direct impact on the creation of stress and by extension, effect on the performance of accountants. So, it should not to be absent these two factors from a similar future study. As it is reasonable, not all people are affected by the same way from each stressor. Thus individual characteristics such as age and gender have their own importance to how a stressor might affect the performance. So, it is important to be done further studies to investigate the accountants’ performance, combining the stressors with individual characteristics.

Stress is a situation which, as it seems, cannot disappear from the accountant offices. However, it would be remarkable to become efforts and researches with regard to the finding of methods and techniques for its confrontation.
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APPENDIX A

QUESTIONNAIRE OF “THE IMPACT OF STRESS TO ACCOUNTING OFFICES PERFORMANCE” MODEL EVALUATION SURVEY
PART A - DEMOGRAPHIC VARIABLES

<table>
<thead>
<tr>
<th>GENDER:</th>
<th>AGE:</th>
<th>DEGREE OF POSITION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Male</td>
<td>1. 0-30</td>
<td>1. Employer</td>
</tr>
<tr>
<td>2. Female</td>
<td>2. 31-40</td>
<td>2. Employee</td>
</tr>
<tr>
<td></td>
<td>3. 41-50</td>
<td>3. Executive</td>
</tr>
<tr>
<td></td>
<td>4. 51+</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FAMILY STATE:</th>
<th>PARENT:</th>
<th>PERIOD WORKING IN PROFESSIONAL ACCOUNTING:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Married</td>
<td>1. Yes</td>
<td>1. 1 year</td>
</tr>
<tr>
<td>2. Single</td>
<td>2. No</td>
<td>2. 2-5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. 5-10 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. above 10 years</td>
</tr>
</tbody>
</table>

PART B – SOURCES OF STRESS

TIME PRESSURE SCALE

1) How often does your job require you to work very fast?
1 rarely 2 occasionally 3 sometimes 4 fairly often 5 very often

2) How much time do you usually have to do all your work?
1 plenty 2 A lot 3 some 4 a little 5 hardly any

3) How often does your job leave you with little time to get things done?
1 Rarely 2 Occasionally 3 Sometimes 4 Fairly often 5 Very often

4) During the periods of closing of months-quarter-year-tax statements etc. how many extra hours do you work?
1 The same as usually 2 0-2 hours 3 2-4 hours 4 4-6 hours 5 A lot more than usually

5) How much influence do you have over the hour that you work?
1 Very little 2 little 3 a moderate amount 4 much 5 too much

6) Is this influence negative?
1 Not at all 2 A little 3 A moderate amount 4 much 5 too much

7) Does it bother you when you take a test time pressure?
1 Not at all 2 A little 3 A moderate amount 4 much 5 too much

8) Do you feel in control of your time?
1 always 2 the most of times 3 not always 4 rarely 5 never

WORKLOAD SCALE

9) How often does your job require you to work very hard?
1 rarely 2 occasionally 3 sometimes 4 fairly often 5 very often
10) How many tasks or responsibilities do you have?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hardly any</td>
<td>A little</td>
<td>some</td>
<td>a lot</td>
<td>a great deal</td>
</tr>
<tr>
<td>2</td>
<td>A little</td>
<td>A moderate amount</td>
<td>much</td>
<td>too much</td>
<td></td>
</tr>
</tbody>
</table>
11) How much influence do you have over the amount of work you do?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very little</td>
<td>A little</td>
<td>A moderate amount</td>
<td>much</td>
<td>too much</td>
</tr>
</tbody>
</table>
12) Is this influence negative?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not at all</td>
<td>A little</td>
<td>A moderate amount</td>
<td>much</td>
<td>too much</td>
</tr>
</tbody>
</table>
13) I have too much to do and too little time in which to do it.

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<thead>
<tr>
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<th>1</th>
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<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly disagree</td>
<td>Moderately disagree</td>
<td>Neither agree nor disagree</td>
<td>Moderately agree</td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

ROLE AMBIGUITY SCALE

14) Are your job responsibilities clearly?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>yes they are</td>
<td>fairly often</td>
<td>sometimes</td>
<td>Not always</td>
<td>No they are not</td>
</tr>
</tbody>
</table>
15) Do you often deal with other jobs except of yours responsibilities?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>no I do not</td>
<td>rarely</td>
<td>sometimes</td>
<td>often</td>
<td>yes I do</td>
</tr>
</tbody>
</table>
16) Do you work on unnecessary things?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>no I do not</td>
<td>rarely</td>
<td>sometimes</td>
<td>often</td>
<td>yes I do</td>
</tr>
</tbody>
</table>
17) How often do you go to other departments to get your job done?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>never</td>
<td>rarely</td>
<td>sometimes</td>
<td>often</td>
<td>All the time</td>
</tr>
</tbody>
</table>
18) Does it play role to get a job done all alone?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No it does not</td>
<td>I do not think so</td>
<td>Maybe it does</td>
<td>Possible does</td>
<td>Yes it does</td>
</tr>
</tbody>
</table>
19) Does it bother you, when some of your co-workers get into your work?

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not at all</td>
<td>A little</td>
<td>A moderate amount</td>
<td>much</td>
<td>too much</td>
</tr>
</tbody>
</table>

CAREER DEVELOPMENT SCALE

20) How certain are you about your future career picture looks like?

<table>
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<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very certain</td>
<td>Fairly certain</td>
<td>Somewhat certain</td>
<td>A little uncertain</td>
<td>Somewhat uncertain</td>
</tr>
</tbody>
</table>
21) How certain are you about your job abilities?

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very certain</td>
<td>Fairly certain</td>
<td>Somewhat certain</td>
<td>A little uncertain</td>
<td>Somewhat uncertain</td>
</tr>
</tbody>
</table>
22) Do you think that there will be a lot of opportunities for you at the future?

<table>
<thead>
<tr>
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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am sure they will</td>
<td>I think so</td>
<td>They might be</td>
<td>Possible not</td>
<td>No I do not</td>
</tr>
</tbody>
</table>
23) Would you characterize yourself ambitious?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am very ambitious</td>
<td>I am ambitious</td>
<td>I am not sure</td>
<td>I am not ambitious</td>
<td>I am not ambitious at all</td>
</tr>
<tr>
<td>24) Does your ambitions caused you stress?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1  Not at all</td>
<td>2  A little</td>
<td>3  A moderate amount</td>
<td>4  much</td>
<td>5  too much</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>25) Does a likely future professional failure stress you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Not at all</td>
</tr>
</tbody>
</table>

TECHNOLOGY SCALE

<table>
<thead>
<tr>
<th>26) Which is your relationship with the technology and especially with pc?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Very good</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>27) Is technology a necessary tool for the improvement of your job?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  yes it is</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>28) Do you think that the use of new technologies makes your occupational life easier?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  yes I do</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>29) Do you believe that the use of new technology gave in your work a better organization?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Yes I do</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>30) Do you believe that the use of new technologies demand continuously training and necessary qualifications?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Yes I do</td>
</tr>
</tbody>
</table>

FAMILY RESPONSIBILITIES SCALE

<table>
<thead>
<tr>
<th>31) Do you have primary responsibilities for the care of a specific person? (e.g. parents, children etc.)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  No I do not</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>32) The time you spend for the accomplishment of you family responsibilities is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  very little</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>33) Do you believe that your family responsibilities have influenced your work?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  No I do not</td>
</tr>
</tbody>
</table>

PART C - JOB PERFORMANCE

<table>
<thead>
<tr>
<th>34) Please give your opinion of your job performance. Select an option that presents your response.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  excellent</td>
</tr>
</tbody>
</table>

PART D - JOB SATISFACTION

<table>
<thead>
<tr>
<th>35) How satisfied are you with your job overall?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  very satisfied</td>
</tr>
</tbody>
</table>
PART E - JOB STRESS EFFECTS

Rate the extent of your agreement or disagreement to the following items (scale: 1=strongly disagree, 5=strongly agree).

| 37) The cigarettes I smoke during my work are much more than the rest of the day. |
|------------------|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                | 5                |

| 38) I often use analgesic pills or tranquilizers during my work. |
|------------------|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                | 5                |

| 39) My job tends to directly affect my health. |
|------------------|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                | 5                |

| 40) Problems associated with your job have kept me awake at night. |
|------------------|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                | 5                |

| 41) I often feel nervous before going to work. |
|------------------|------------------|------------------|------------------|------------------|
| 1                | 2                | 3                | 4                | 5                |

PART F - VARIABLES’ IMPORTANCE

<table>
<thead>
<tr>
<th>SOURCES OF STRESS</th>
<th>1 NOT AT ALL</th>
<th>2 MODERATE SOURCE OF STRESS</th>
<th>3 MAJOR SOURCE OF STRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>42) TIME PRESSURE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>43) WORKLOAD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44) ROLE AMBIGUITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45) CAREER DEVELOPMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46) ROLE OF TECHNOLOGY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47) FAMILY RESPONSIBILITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B

AN OVERVIEW OF THE KEY FACTORS THAT INFLUENCE WELLBEING AT WORK
Appendix B: An overview of the key factors that influence wellbeing at work (Foresight Mental Capital & Well-Being Project, 2008)