BACHELOR THESIS
Spring 2015
School of Health and Society
Kristianstad University

Becoming comfortable with audit quality
- A quantitative study of the relationship between ethical climates and auditors’ comfort

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Abstract

There is no generally accepted way of measuring audit quality and prior research has shown that measurements used have produced conflicting results. Since auditors are those who carry out and sign off audits, they are the ones that know best how to assess and improve audit quality. Auditors assess the quality of their work in terms of how comfortable they are and the comfort of auditors is affected by the ethical climate in the audit firm. Thus, ethical climates are deemed important determinants for auditors’ perceived audit quality.

The purpose of this study is consequently to explain how ethical climates in audit firms affect audit quality, using the comfort of auditors as proxy. The study aims at offering a new and fresh perspective of audit quality from practitioners’ point of view and providing the research field of audit quality with a better type of measurement.

Audit quality was conceptualized through extracting a theoretical model based on the theory of ethical climate and comfort theory. Four hypotheses were derived from the model and tested on Swedish authorized auditors using a self-administered questionnaire as data collection method. In this respect, the study adopts a quantitative research design with a deductive approach.

The findings suggest that there is a positive significant relationship between the ethical climate in audit firms and the comfort of auditors. Overall, this study has proven the importance of having a strong ethical climate as a means to make the auditors feel comfortable and subsequently to enhance the perceived audit quality of auditors.

One limitation of this study is that only Swedish authorized auditors have been studied. Hence, the findings may not be generalized and applicable on authorized auditors in other countries. In addition, the result may have turned out differently if the study would have included non-authorized auditors as well.

The original value of the study is a new conceptualization of audit quality measured by the relationship between ethical climates and auditors’ comfort.

Keywords: Audit quality, comfort, profession comfort, business comfort, ethical climate, profession ethical climate, business ethical climate, social ethical climate
Acknowledgement

First and foremost, we would like to thank our supervisor, Johanna Sylvander, for guiding us and for sharing her expertise throughout the writing process. Your enthusiasm has inspired us to strive for excellence.

Second, we would like to thank Annika Fjelkner for her guidance in linguistics and Pierre Carbonnier for sharing his expertise in statistics. We would also like to direct a word of thanks to our opponent group, Anton Nyström and Cathrin Larsson. Your input has been highly appreciated.

Last but not least, we wish to thank all the auditors who took the time to answer our survey. Your participation made this study possible.

Kristianstad, May 27, 2015

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1 Introduction

This chapter begins with background information of the importance of true and fair views of corporate financial information, placing the auditor in a central role to produce high quality audits. The background is followed by a problematisation that concludes a need for a better way to evaluate audit quality. This leads to the research question and to the purpose of this study. Finally, the limitations of this study are presented, followed by a brief outline of all chapters.

1.1 Background

“I see the role of an auditor as guardian of “truth in markets”, acting in the public interest to maintain reliable and consistent reporting.” (Volcker, 2002, p.4). This statement is made in the aftermath of the Enron scandal back in 2001 where economic interests allegedly impaired the independence of the auditor (BBC, 2002; Francis, 2004). Volcker (2002) stresses the importance of the auditor’s responsibility to guard the interest of the market and he emphasizes the significance of providing authentic and reliable information to stakeholders. The importance of auditors is widely recognized by several other researchers (DeAngelo, 1981; Pentland, 1993; Watts & Zimmerman, 1981; Wines, 2011; Öhman, Häckner, Jansson, & Tschudi, 2006) as the audit profession is, among other things, considered to reduce the risk of management manipulation and expected to provide the stakeholders with credible financial information (Beattie et al., 1996, cited by Dart & Chandler, 2013). However, the aftermath of the many corporate failures and perceived audit failures in the beginning of the 21st century has had a detrimental effect on the reputation of the audit profession and as a consequence, the auditors are now subject to higher scrutiny by the whole society (Dart & Chandler, 2013; Wines, 2011). Thus, the reputation and the role of the auditors as guardians of the truth in markets have been damaged due to corporate failures and perceived audit failures (Volcker, 2002).

The European Commission (2010) states that in order to avoid future audit failures, standard setters focus on the quality of the audit process when establishing new laws and guidelines. During this process, they have the public interest and the protection of investors in consideration. Due to the demise of Arthur Anderson, following its involvement in the Enron scandal, there are only a few big audit firms left that have the
capacity to work with big and complex clients. If any of these remaining big audit companies would go under, the access to audited financial information of big companies would dramatically drop, which would harm the trust of the investors (European Commission, 2010). Hence, the European Commission (2010) finds it crucial to limit the risk of future financial crises by ensuring that auditors produce high quality audits.

Audit quality is two faceted, constituting both actual and perceived audit quality (Tagesson, Sjödahl, Collin, Olsson, & Svensson, 2006) and studies on audit quality has differed in terms of definition, influences, proxies and so forth. Since most reports are standard clean opinions and because the only visible outcome of the audit is the audit report, assessing audit quality in advance is hard (Francis, 2004). Assessing audit quality is easier in retrospect when audit failures occur, which does not happen very often. Using audit failure as indicator will only show whether minimum legal and professional standards have been met or not. It will not indicate whether or not audit quality go above and beyond the legal minimum standard (Francis, 2004).

Despite an increased amount of research on audit quality that has been conducted within these last few decades, the definition is still not unanimous (Neri & Russo, 2014; Broberg, 2013). According to DeAngelo (1981) and Watts and Zimmerman (1981) audit quality is referred to the perceived probability that auditors detect a violation and subsequently report it, whereas Palmrose (1988) view audit quality as the level of perceived assurance. These definitions are closely connected to the measurements used when assessing audit quality. Since quality is difficult to measure quantitatively and objectively, most studies have relied on peoples’ subjective perception. Some researchers have tried to use more objective measurements such as going concern opinion, discretionary accruals, audit tenure, audit fees, client importance, non-audit services and so forth (Hope & Langli, 2010; Svanström, 2013; Tepalagul & Lin, 2015). None of these variables singlehandedly nor together provide a holistic view of the concept. Thus, despite all research on this specific area there is no crystal-clear view of audit quality (Tepalagul & Lin, 2015).

A conclusion that can be drawn from current regulation and studies is that regulators’ perception of auditor behavior is not in harmony with recent findings on what influence audit quality (European Commission, 2010; Tepalagul & Lin, 2015). Auditors are considered to be self-interested, which helps explain regulators’ concerns regarding
auditors’ opportunistic behavior (Jensen & Meckling, 1979). Nevertheless, since findings show no negative relation between monetary factors and audit quality, regulators could benefit from updated knowledge on what affects auditors’ view of audit quality. Logically, to manage this gap of misperception one should study the practitioners, i.e. auditors, whom are said to be appropriate evaluators of what good audit quality is (Broberg, 2013). Broberg (2013) and Pentland (1993) claim that practitioners think of comfort when assessing the quality of their daily work. Since auditors evaluate the quality of their work through emotional aspects of their actions, audit quality can be evaluated through auditors’ level of comfort. Deeper studies revolving auditors’ comfort in relation to audit quality might help regulators make better decisions that are more in line with recent findings.

1.2 Problematisation
As there is yet no universally accepted definition and measure of audit quality, another way to efficiently measure the concept is needed. Audit quality is always to some extent present when regulators, investors and other social parties assess the work of auditors, especially due to the 21\(^{th}\) century’s big corporate scandals. Without high audit quality, the purpose of audits gets undermined and auditors lose their legitimacy (Wallace, 2004). Thus, the role of the auditor is to provide the public and other interested parties with high quality financial statements in order to comfort those who are vulnerable to erroneous, self-interested and fraudulent statements from management (Pentland, 1993). To uphold public trust and to feel comfortable with what they provide, auditors follow standards and do the things they feel enhance the quality of their work (Pentland, 1993; Wallace, 2004).

The review article by Tepalagul and Lin (2015) shows discrepancies on the definition of audit quality as well as contradictory results about how audit quality is influenced by different elements. The previous elements studied as proxies for audit quality are client importance, non-audit services, auditor tenure and client affiliation with audit firms. These proxies provide unclear effects on audit quality as different studies, using the same proxy, show irregular results (Tepalagul & Lin, 2015). Due to these discrepancies, regulators might make decisions that are detrimental to the quality of audits and that would not be recommended by academics (Humphrey, Kausar, Loft, & Woods, 2011). As there is yet no universally accepted proxy to accurately measure audit quality, a different perspective of the concept could provide further insights.
Since auditors are those who carry out and sign off audits, they are the ones that know best how to maintain and improve audit quality. Besides, more study is needed on practitioners’ perspective of what audit quality is and how it should be measured (Broberg, 2013). Auditors assess the quality of their work in terms of how comfortable they are. Hence, auditors’ pursuit for comfort is one of the main determinants for audit quality (Broberg, 2013; Pentland, 1993). The more comfortable auditors feel, the higher they perceive the audit quality (Broberg, 2013). Although there is a lot of research on audit quality from different perspectives and approaches (Tepalagul & Lin, 2015), studying auditors’ comfort as proxy for audit quality will allow for a new and fresh evaluation from auditors’ point of view (Broberg, 2013).

Even though Broberg (2013) identified that the concept of comfort in an auditing context includes two distinct aspects, the general concept of auditing comfort has previously been studied as a single dimensional concept. The primary focus has been on comfort elements related to the profession side of auditing such as how rituals enhance auditors’ comfort (Pentland, 1993). Although the business perspective of audit firms has been acknowledged for a few decades (Lee, 1995), elements of business comfort as a means to assess audit quality have not yet been studied (Broberg, 2013). In this respect, further investigation on both auditors’ profession comfort and business comfort in connection to audit quality could help explain how auditors perceive audit quality.

Auditors were previously considered to exclusively work as guardians of the truth in markets. Protecting investors and society at large was expected, rather than engaging in business. Thus, the professional perspective of auditing used to be the primary focus (Lee, 1995). Nevertheless, as any other firm, profit maximization is a vital motive for firm existence. That is, even though auditors exist to cherish the interest of external parties, they also act in the audit firm’s interest, which provides them with business comfort. The study conducted by Carrington and Cataús (2007) identifies that the level of comfort needed to sign off an audit differs among auditors and they suggest that there will always be some level of discomfort present. Thus, the auditor will always feel a sense of both comfort and discomfort when signing off an audit step. This can be related to the study conducted by Broberg (2013) where she dichotomizes comfort into two separate parts: profession comfort and business comfort. Auditors feel profession comfort when they consider and protect the public interest and when they have fulfilled their professional duty. Auditors experience business comfort when they satisfy their
clients and add further value beyond the audit itself (Broberg, 2013). She stresses that profession comfort and business comfort to some extent negatively correlates, preventing the auditor from feeling completely comfortable (Broberg, 2013). The acceptable level of discomforts at the state where auditors feel they are comfortable enough to sign off an audit step differs among audit firms (Carrington & Catasús, 2007). The difference is partly due to how audit firms support their own ethical climate regarding responsibilities towards society and how they promote their own interests (Cullen, Parboteeah & Victor, 2003).

Victor and Cullen (1988) state that several studies have found that numerous types of work climates affect a variety of organizational outcomes from performance to satisfaction. Somers (2001) argues that firms promoting and supporting ethical behavior gain numerous significant benefits including less perceived wrongdoing and higher levels of employee commitment. Moon and Choi (2014) find that organizational ethical climate is positively associated with customer satisfaction as well as financial performance. These arguments indicate that ethical climate positively affects work related outcomes (Moon & Choi, 2014). In this respect, applying the concept and implications of ethical climate in an audit context could contribute with insights on how the ethical climates in audit firms affect audit quality. The ethical climate in audit firms affects auditors’ actions and decision-making (Victor & Cullen, 1988) through the reflection of their profession and business comfort, which will subsequently influence their perceived audit quality (Broberg, 2013; Pentland 1993). Hence, studying the relationship between audit firms’ ethical climate and audit quality, using profession and business comfort as proxy, would offer insights on what kinds of ethical climate support and produce high audit quality.

1.3 Research question
How do ethical climates in audit firms affect audit quality, evaluated in terms of auditors’ profession comfort and business comfort?

1.4 Purpose
The purpose of this study is to explain how ethical climates in audit firms affect audit quality, using the comfort of auditors as proxy.
1.5 Limitations
A limitation of this study is that only Swedish authorized auditors are studied. Consequently, the findings may not be generalized to non-authorized auditors nor auditors in any other country. Another limitation could be the choice of research method. The use of qualitative research method would have generated a deeper understanding of the relationship between ethical climate and perceived audit quality. The choices made were due to personal preferences and resource limitations.

1.6 Outline
This study consists of six chapters of which the first chapter introduced some background information of the research topic. The background was followed by a problematisation through which the research question and the purpose were generated. The chapter ends with a limitation and an outline of the study. The second chapter presents the research method, including the research philosophy, approach and methodology. The chapter ends with a brief review of the upcoming theories applied in this study. The third chapter provides a deeper discussion of the reviewed theories, starting with fundamental theories, followed by adopted theories. This chapter ends with a formulation of four hypotheses through which a theoretical model is developed and presented. The fourth chapter presents the empirical method, including the research strategy, population, data collection method and operationalization of the concepts. This chapter ends with a presentation of reliability, validity, generalizability and ethical considerations. The fifth chapter presents the empirical result from the conducted tests starting with descriptive statistics of the empirical data. This is followed by an analysis of the empirical data and testing of the hypotheses. The chapter ends with a discussion revolving the findings in the analysis. In the final chapter, the findings of the study are summarized along with its different contributions. This chapter ends with reflections of the findings, followed by limitations and suggestions for future research.
2 Method

This chapter begins with a presentation of the research philosophy, approach and methodology that will characterize this study. The chapter ends with a brief presentation of the choices of theories that together constitute the foundation of this study.

2.1 Research philosophy, approach and methodology

Saunders, Lewis, and Thornhill (2009) state that the research philosophy adopted contains important assumptions about the way in which the researcher views the nature of reality. This includes personal values, the nature of the research question and other practical considerations (Crossan, 2003). Hence, personal experience, beliefs and understandings of philosophy will affect the choice of research method. Saunders et al. (2009) state that it is helpful to clarify these ontological assumptions, as they will underpin the research strategy and methods adopted to conduct a research study. The practical considerations are mainly influenced by the researcher’s epistemology, which is the researcher’s view of what constitutes acceptable knowledge and the process by which it is developed. These differences in the researcher’s ontological and epistemological standpoints will not only considerably affect the choice of strategies and methods used, but also the researcher’s views on what is important and useful information. No research method is better than another, but the research question may determine which philosophy is the most appropriate one (Saunders et al., 2009).

A positivistic research philosophy studies an observable social reality that can be objectively measured and verified, hence positivism adhere to empirical data and scientific measures. Unlike interpretivism, positivism is concerned with facts rather than subjective human beliefs and interpretations, hence positivism is said to be value free of the observer and more objective. Furthermore, positivistic research philosophy search for causal connections and strive for generalization rather than explaining one particular case (Crossan, 2003; Saunders et al., 2009). The aim of this study is to objectively explain the causal relationship between ethical climates in audit firms and audit quality, using the comfort of auditors as proxy. Using a scientific model consisting of objectively measured variables enables a causal relationship of the social reality of the research phenomenon to be studied without infecting it with own personal values. Repeating the same research study would then generate the same outcomes. By studying a sample of authorized auditors the intention is to generalize the findings for the whole
population. This is advocated by positive research philosophy where a research phenomenon will exist independently of the observer and is thusly not affected by the human mind (Crossan, 2003; Saunders et al., 2009). In this regard, the study undertakes a positive research philosophy.

This study uses a deductive approach to research in which a theoretical model is developed using scientific knowledge from theory of ethical climate and comfort theory. The deductive approach owes more to positivism than induction does, by which the researcher would collect the empirical data and develop the theory as a result of the data analysis (Saunders et al., 2009). The deductive approach is appropriate since the aim of this study is to objectively explain the causal relationship between ethical climates in audit firms and audit quality, using scientific knowledge from different areas of expertise to create a model. Furthermore, adopting a deductive approach to the theory development offers a more objective foundation of previous research and well-established theories. However, one must account for the risk of becoming too influenced and directed by the theoretical framework that important empirical data pass by unnoticed (Saunders et al., 2009). An inductive approach would have enabled an identification of alternative explanations of the phenomenon, though such an approach would be less objective (Saunders et al., 2009). Four hypotheses where deducted from the model to test the relationship between the different concepts, which were operationalized in a way that enables them to be measured quantitatively.

Quantitative research has the form of numerical data that could usefully be quantified to help explain the relationship between the different variables in the model (Saunders et al., 2009). Previous research within the field of auditor comfort has been conducted mainly qualitatively through observation and interviews (Broberg, 2013; Pentland, 1993). Using a qualitative research approach would generate a deeper understanding of the respondents’ feelings and perceptions and would allow the respondents to answer more freely (Bryman & Bell, 2011; Saunders et al., 2009). However, despite the criticism of the ability to generalize quantitative research, such research design will enable objective and measurable variables to be studied. Furthermore, due to this study’s positivistic research philosophy and the deductive approach, a quantitative research design comes naturally (Bryman & Bell, 2011).
2.2 Choice of theory

As the purpose of this study is to explain how ethical climates in audit firms affect audit quality using the comfort of auditors as proxy, an eclectic use of theories through a multi-theoretical framework is adopted. That is, different selected theories, divided into fundamental and adopted, constitute a combination of relevant parts that together help explain the research phenomenon from a holistic perspective (cf. Collin, Tagesson, Andersson, Cato, & Hansson, 2009).

In order to explain the underlying attributes of this study, fundamental theories that explain the behavior and reasoning of auditors and audit firms are applied. To explain the differences between the two forms of comfort, i.e. profession and business comfort, and the interaction between these two, profession theory and relevant parts explaining the business side of auditing are applied. Since the motivational theory helps explain what motivates people and since motivational factors are reflected in organizational culture, together motivational theory and organizational culture theory explain why auditors do what they do and how they react to different ethical climates (Armstrong, 2006; Schein, 2010).

The adopted theories are closely connected to the research question and constitute the cause-and-effect relationship studied. The adopted theories include the theory of ethical climate, developed by Victor and Cullen (1988) and comfort theory, developed by Kolcaba and Kolcaba (1991). The theory of ethical climate provides explanations revolving the types of climates that exist in organizations (Victor & Cullen, 1988) whereas comfort theory explains how comfort is achieved in a work environment (Kolcaba & Kolcaba, 1991).
3 Theoretical framework

This chapter consists of the theoretical framework, which encompasses all theories and other academic literature that are relevant to the study. The chapter begins with fundamental theories, including profession theory, elements of theories explaining the business side of auditing, motivational theory and organizational culture theory. The fundamental theories are followed by a presentation of adopted theories, which includes theory of ethical climate and comfort theory. These theories are essential components in the development of hypotheses and a theoretical model that are presented at the end of the chapter.

3.1 Fundamental theories

Auditors are perceived as being professionals with a social responsibility to assure true and fair views of financial information in the market. However, auditors are also obliged to appertain to the interests of the audit firm. As profit maximization is an essential motive to firm existence, auditors are encouraged and promoted to work commercially (Öhman, 2007). In this respect, there is both a profession side, which can be explained by profession theory, and a business side of the audit profession (Broberg, 2013). Motivational theory helps explain the actions and feelings of auditors and is an underlying element of organizational culture, which constitutes the behavior of audit firms (Armstrong, 2006; Schein, 2010).

3.1.1 Profession theory

According to Brante (2009), a profession is an occupation whose operation is based on scientific research and the professionals’ proficiency is grounded on theoretical knowledge. According to Freidson (1986), professionalism requires a high degree of education as well as employment in particular positions with considerable privilege. Brante (2009) argues that the competence of professionals is guaranteed through examinations after sufficient training and education. The integrity of the profession is guaranteed through work ethics and professionals provide services for the sake of society. The professionals possess great knowledge and skills within a certain area of social policy. Hence, professionals are given a certain self-regulation within their profession since they support their actions and decisions on the highest possible foundation of know-how. The members within a profession possess a feeling of identity and together they share common values and a language that is understood mainly by the
members within a specific profession (Brante, 2009). In short, professionals possess knowledge and skills that give them the power to control certain areas of social policy and institutions (Freidson, 1986).

Along with accountants, bookkeepers and tax consultants, auditors are considered to work within the economic profession (Freidson, 1986). Auditors are required to follow laws, regulation and guidelines when conducting audits. They are also required to possess a high degree of education and training as well as complete an approved professional examination to be authorized to audit financial information (SFS, 1995:665). Since the signing auditors attest that the audited information represent a true and fair view of the audited firm, they possess great responsibilities (Öhman, 2007). Auditors work on the behalf of the audit profession and must, therefore, act in line with general audit guidelines and rules exerted by the profession. If auditors do not abide by the conditions produced within the audit profession, they jeopardize their position as authorized auditor (Öhman, 2007).

3.1.2 The business side of auditing

In his composition *The wealth of nations*, published in 1776, Adam Smith introduced a praise for specialization since it led to greater productivity, thus providing a higher quantity and variety of goods to a lower price (Freidson, 2001). It is no secret that organizations strive for productivity and effective operations. As stated by Veblen (1978):

The motive of business is pecuniary gain, the method is essentially purchase and sale. The aim and usual outcome is an accumulation of wealth. […] Men whose aim is not increase of possessions do not go into business, particularly not on an independent footing. (Veblen, 1978, p.9)

The quote suggests that increasing wealth, i.e. making profit, is the main motive and purpose of a firm’s existence. The auditing profession is no exception of pursing riches. The commercial side of auditing has gained emphasis due to a change in the business environment and increasing competition within the audit market (Broberg, Umans & Gerlofstig, 2013). Consulting and non-audit services are significant parts in making business within the audit profession (Broberg, 2013). Öhman (2007) portrays the interaction between the audit profession, the accountable and the accountees. The accountable refers to the management representatives whom are obliged to provide true and fair information of their firm, whereas the accountees comprise of investors,
stakeholders and other parties that are entitled to financial information (Öhman et al., 2006). The audit profession also includes the audit firm and the auditors themselves. Öhman (2007) asserts that the interests of these parties ought to balance. The auditor is expected to cherish the interests of all accountees and the accountable but also the interest of the audit firm. Furthermore, the audit profession’s social interest must balance the audit firm’s interest. Even though auditors are expected to meet all needs and interests, some interests that essentially should be their primary focus become neglected due to economic circumstances (Öhman, 2007).

Öhman (2007) states that the agent-principal relationship does not only adhere to auditor and investor but also auditor and audit firm. Audit firms pay auditors to do their work in accordance with what is favorable for the audit firm and not to jeopardize its future existence. Within this agent-principal resembled relationship, auditors feel a pressure and an obligation to maintain their clients and to contribute to profitable business. This reflects a sort of psychological, moral commitment of satisfying the employer’s economic interest (Öhman, 2007). It is stated that auditors follow laws and regulations, but they may jeopardize their role as professionals when the primary focus is client satisfaction and adding value for the clients (Broberg, 2013). This aspect represents the business perspective of audit firms. When it comes to doing the right things within the business perspective of auditing, judgement or gut feeling make up for the main part of actions and decision-making (Broberg, 2013).

3.1.3 Motivational theory

The motivational theory examines the process of motivation and thus explains the behavior of human beings. The three most influential theories that motivational theory constitutes are Instrumentality theory, Content theory and Process theory. Instrumentality theory explains how performance related rewards and/or punishments affect their motivation to work in a desired way. Content theory states that motivation is fundamentally about satisfying one’s needs and this theory identifies the key needs that affect human behavior. Finally, the Process theory states that motivation depends on people’s expectations of the likelihood that rewards will follow their efforts (Armstrong, 2006).
In an auditing context, motivational theory helps explain why auditors and audit firms do what they do in terms of actions, decisions and desires. Studies have shown that higher levels of motivation were observed in those firms with codes of ethics. These studies suggest that firms concerned with ethical codes create a supportive climate that includes values that emphasizes integrity (Somers, 2001). That is, firms with high ethical culture can improve performance while maintaining firm legitimacy in the society (Moon & Choi, 2014). Subsequently, the ethical culture, reflected in auditors’ motivation, will influence their performance, including the quality of the audits.

3.1.4 Organizational culture theory
According to Schein (2010), organizational culture constitutes the behaviors and values that members of an organization are supposed to perceive, feel and act. Culture is present in every organization both formally and informally. Managers speak of developing “the right kind of culture” where they exert structures, reward and punishment systems and training programs to govern the members of the organization (Schein, 2010; Svanberg & Öhman, 2013). This refers to the formal side of organizational culture. Informal aspects include peer behavior and ethical norms where collective values and assumptions form members’ interpretation of what is acceptable and desirable behavior in a particular organization (Ravasi & Schultz, 2006; Svanberg & Öhman, 2013). As people socialize and gain experience within an organization, certain norms inevitably arise by which members obey. Such norms create an informal social order in the organization (Schein, 2010). In excess of norms, shared beliefs, informal rituals and artifacts may also help the members of an organization to find a meaning in what they do and make sense of the organization (Ravasi & Schultz, 2006; Schein, 2010).

The organizational culture in the accountancy profession is rigid due to auditors being strongly influenced and steered in a law-abiding direction. Besides following laws and regulation, auditors must follow guidelines and norms advocated by the audit firm (Öhman, 2007). According to Broberg (2013), it is important that auditors behave in a certain, appropriate manner that is desired by the industry and that they dress appropriately. Auditors ought to express themselves appropriately and possess knowledge and competence that is required by the industry.
The tone at the top in the accountancy profession has an important role in sustaining ethical behavior among auditors, since they can influence the mind-set of auditors by developing the culture that support the climate they desire. By implementing policies, procedures, communications of expectations and compliance, reward systems and sanctions, the tone at the top intentionally establishes a desired organizational culture where high audit quality can be preserved (Broberg, 2013).

Ethical culture is thought of as a subgroup of organizational culture and Shafer and Wang (2010) argue that ethical culture involves different formal and informal controls that boost desired ethical behavior. Treviño, Butterfield and McCabe (1998) argue that ethical culture affects employees’ attitudes and behavior when management clarifies what is considered legitimate and acceptable. Shafer and Wang (2010) define ethical culture of an organization as managers’ and employees’ perception of what controls are implemented to make sure that the behavior of the employees comply with what is considered ethical. Formal controls involve organizational policies, leadership characteristics, authority structures and reward systems (Shafer & Wang, 2010). Auditors are assumed to be greatly influenced by the ethical culture of their audit firm (Svanberg & Öhman, 2013). Broberg (2013) draws a link between tone at the top and audit firm culture. The audit firm management establishes the tone at the top as a means to create a cultural environment where high quality audits are supported. This in turn will affect the perceived ethical climate in the audit firm.

3.2 Adopted theories

The ethical culture is perceived by employees and affects their mind-set. Organizations will try to establish a combination of different ethical climates that together create a support for the employees to act and feel the way desired by the organization (Cullen et al. 2003). Cullen et al. (2003) have identified different criteria and levels of ethical climate. To fit an auditing context, this study has adopted an analysis on an organizational and social level. It is expected that audit firms will support a certain ethical climate that encourages the auditors to act and feel in a way that is in line with their own interests and also in a way that is in compliance with what is demanded from the profession and expected by the society (Cullen et al., 2003). Auditors embrace these expectations and obligations and when they satisfy them, they sense comfort. Broberg (2013) identifies a professional side and a commercial side of comfort. As a step towards explaining the relationship between ethical climate and comfort from a
theoretical perspective, theory of ethical climate and comfort theory in a general as well as in an auditing context will be further discussed.

3.2.1 Theory of ethical climate
Treviso et al. (1998) makes a difference between the concept of ethical culture and ethical climate. Whereas ethical culture aims at managers’ and employees’ perception of the instrument implemented to steer their ethical behavior, ethical climate aims at managers’ and employees’ perception of what is ethical and unethical behavior in an organization. Ethical climate can be explained by the desired level of serving client interests, while ethical culture refers to the extent of the desire that is explained by role modeling of managers, rewards and punishments (Treviso et al., 1998). Since the purpose of this study is to focus on auditors’ ethical reasoning and ethical behavior within audit firms, and not how various ethical controlling systems are perceived, the ethical climate perspective is more appropriate.

According to Cullen et al., (2003), organizational ethical climate is a subgroup of the more generic set of work climates. The construction of ethical climate consists of a group of normative climates. These normative climates mirror organizational practices with moral concerns and they appear when members of an organization perceive that particular forms of ethical reasoning and/or behavior are expected standards or norms within the organization. It is important to note that ethical climate does not refer to one’s ethical standards or level of moral development as it more accurately refers to how members perceive the components of their individual environment. The ethical climate of an organization is important to its members as it serves several functions. The ethical climate helps members when they face ethical issues and it will guide them to find the answer to “what should I do?” (Cullen et al., 2003).

3.2.1.1 Ethical climate model
In line with the purpose of this study, the dimensions of ethical climates (figure 3.1) identified by Victor and Cullen (1988) are applied. The model is one of the most utilized and influential framework when measuring ethical climate. Their ethical climate model consists of a two-dimensional matrix typology including nine possible climate types. Each cell represents the ethical criterion that is expected to influence decision-making in an organization (Cullen et al., 2003).
Figure 3.1 Dimensions of ethical climates

*(Based on: Victor & Cullen, 1988, p.104)*

The first dimension of the model consists of three ethical criteria, which affect organizational decision-making: egoistic, benevolence, and principle. When an organization promotes norms that support self-interested reasoning and behavior, the climate is highly egoistic. In such a setting, the decision-maker is expected to maximize the satisfaction of his or her needs and others’ needs are ignored. When an organization promotes norms that support a maximization of team and social group interests, the ethical climate is considered to be benevolent. Finally, when an organization endorses norms that support following principles regardless of situational consequences, a principled climate is present (Cullen *et al.*, 2003).

The other dimension of the matrix consists of levels of analysis and are divided into three different levels; individual, organizational, and social. These three levels of analysis further distinguish the elementary types of climates identified in organizations. Each level represents the reference group of people that influences an individual’s attitude or behavior. The analysis is positioned on an individual level, when a member of an organization uses the self as referent for moral reasoning. On an organizational level of analysis, social systems within which individuals are located are important groups of references for moral reasoning. The third and holistic level of analysis is the social one, which refers to sources of moral reasoning that are positioned on a greater level than organizations or groups, i.e. society and professions (Cullen *et al.*, 2003).
3.2.1.2 Ethical climate in an auditing context
The ethical climate model applied in an auditing context might help explain and describe the ethical subgroups of possible climates that are relevant in an audit environment. In practice, an audit firm supports a mix of different ethical climates rather than just one certain climate. Yet, due to the profession side and business side of the audit profession, organizational and social aspects of ethical climates become more prominent and individual ethical climates become less relevant (Broberg, 2013). In this respect, the focus lies on the organizational level and social level of analysis.

The audit profession has a certain monopoly-like position. However, audit firms compete with each other and as they are profit driven firms, they compete for clients and strive for economic profitability (Öhman, 2007). Due to the rivalry of market shares, audit remuneration has been brought down. This has made non-audit services more attractive as they make up for lost audit service remuneration and contributes with additional profits. Company profit is a desired outcome of the business perspective of the audit firm. The audit firm expects the auditor to cherish their economic interests and thereby to contribute to the audit firm’s profit. Consequently, from this point of view, auditors’ decisions should be made in terms of profit (Cullen et al., 2003). Hence, audit firms are expected to promote an ethical climate that encourages auditors to make decisions and act in a way that economically benefits the employer, i.e. the audit firm (Öhman, 2007).

Auditors are not only expected to act in the audit firm’s interest but also in the interest of the profession and society at large. Auditors are expected to protect the interest of the market and contribute to the efficiency of the profession. That is, they ought to consider the interests of the wider social and economic system (Cullen et al., 2003) through high standard profession management, which usually concerns cost reduction. Audit firms strive for efficiency, which is dichotomized into extrinsic and intrinsic efficiency by Öhman (2007). Extrinsic efficiency refers to doing the right things within the audit profession whereas intrinsic efficiency refers to pursuing legal and economic improvements (Öhman, 2007).

Auditors are interdependent in their audit process. When facing problems during the audit process, the auditor can turn to colleagues or experts for help and consultancy. In addition, the same auditor does not execute audit delivery and audit signing (Broberg,
The audit process is therefore characterized by teamwork and audit firms are expected to support an atmosphere of cooperation and well-being among employees. When the audit firm supports a *team interest* climate, the auditors are more likely to make decisions that benefit the greatest possible number of people in the firm (Cullen *et al.*, 2003).

Corporate *social responsibility* plays a central part in the auditing profession and no firm can afford ignoring it. Social responsibility is a great business driver and is often on firms’ agenda (Duff, 2010). Showing a concern for social responsibility indicates a care for public interest and restrain of self-interest. Offering services like audit and assurance proves an enhanced genuine care for the public rather than merely maximizing profits. Showing commitment to social responsibility will enhance the legitimacy of the audit firm as well as ameliorate its reputation and is a means of reducing operating costs (Duff, 2010). Thus, audit firms are expected to promote an ethical climate that encourages auditors to cherish the social responsibility of the firm (Cullen *et al.*, 2003).

Audit firms are strongly governed by laws and professional codes of conduct under which auditors must obey. Therefore social principle reasoning, where decision-making is ruled by argument of how *law and professional code* apply to a subject of matter, is expected. Such professional codes pertain to the whole audit profession and its legal system. That is, they are extra-organizational (Victor & Cullen, 1988). In addition, each audit firm also has their own *rules and procedures* that lie within the firm. These rules and procedures apply to the organizational principle climate and are composed to suit the audit firm and its interests (Victor & Cullen, 1988). Auditors carry out audits on behalf of the audit profession and they are obligated to follow external laws and professional codes. At the same time, the auditors appertain to certain internal norms and guidelines when carrying out audits (Öhman, 2007). In this respect, audit firms are expected to promote an ethical climate where both external and internal regulation is supported.

Previous research suggests that the *individual* level of analysis is neither applicable nor feasible in an audit context. The audit profession is strongly affected by professional codes of conduct. Furthermore, from the business perspective, audit firms are expected to promote an ethical climate where organizational interests are supported. Even though
auditors to some point follow their own judgement when making decision, one’s own personal morality must not affect the decision-making if it violates any rules, procedures, laws or professional codes. Hence, the auditors’ personal morality, self-interest and individual care are not of interest of this study, as such attributes are not expected to be supported by the firm.

In conclusion, the model of ethical climate in audit firms (figure 3.2) consists of two dimensions, organizational and social. The organizational level of ethical climate, including company profit, team interest and rules and procedures within the audit firm, is heavily related to the business side of the auditing profession. This is due to the organizational characteristics being related to the firms’ own interests and desires. In short, audit firms wishing to promote their own interests are expected to support a business ethical climate. The social level of ethical climate in audit firms, including efficiency, social responsibility and laws and professional codes, is strongly related to professional attributes. These attributes are greatly desired within the profession side of auditing as they relate to the responsibility to act in the profession’s and the public’s best interest. Thus, audit firms that wish to promote professional interests are expected to support a profession ethical climate.

Figure 3.2 Dimensions of ethical climate in audit firms

(Based on: Broberg, 2013; Cullen et al., 2003; Victor & Cullen, 1988)
Firms ought to make profits from an economically sustainable, going concern point of view. In this respect, it is expected that audit firms support a business ethical climate. In addition, major social responsibilities lie on the shoulders of audit firms as their mission and commitment are to provide society with truthful financial information and for that reason, they become highly scrutinized. It is therefore expected that audit firms also strive to establish a profession ethical climate where following firm rules and professional codes is supported. In short, audit firms are expected to promote a mix of profession and business ethical climates, albeit with different portions.

3.2.2 *Comfort theory*

Historically and contemporarily, the concept of comfort has been and still is associated with nursing and is the context where the theory is mainly developed. In the past, comfort referred to a desirable outcome or goal of nursing care, whereas the meaning of the term is nowadays used to denote acceptable standards of care (Kolcaba & Kolcaba, 1991). Kolcaba and Kolcaba (1991) identified three technical senses of the concept of comfort; the relief sense; the state sense; the renewal sense. The relief sense of comfort refers to the actions taken as a means to eliminate discomforts and consequently reach a desired level of comfort. The state sense of comfort suggests that one will never be free from all discomforts but refers to the situation where sufficient comfort has been gained to feel at ease. Finally, the renewal sense of comfort refers to the process of new perceptions on what sufficient comfort constitutes. In short, the renewal sense affects the level at which the state sense of comfort lies and the relief sense of comfort represents all actions taken to get there (Carrington & Catasús, 2007). Even though there are significant differences between nursing and auditing practices and how they produce comfort, the theory of comfort and the three technical senses have been shown to be applicable in the audit field (Carrington & Catasús, 2007).

3.2.3 *Comfort in an auditing context*

While Pentland (1993) was one of the first to introduce the concept of comfort in the field of auditing, Carrington and Catasús (2007) applied the three technical senses and modified them to fit the audit context. The relief sense refers to the actions the auditors take to relieve discomfort. The state sense relates to when the auditors are comfortable enough to sign off and give an audit opinion. The process of relieving discomfort to reach a state of sufficient comfort is also identified by Pentland (1993), whom states that the audit process begins with untrustworthy financial statements and transforms
into a trustworthy state where auditors and the public feel comfort. Finally, the renewal sense of comfort refers to new definitions of what is an acceptable audit. What auditors feel is a sufficient level of comfort might change over time as new laws and professional codes affect their sense of what is an acceptable audit (Broberg, 2013; Carrington & Catasús, 2007).

3.2.3.1 Profession comfort
According to Broberg (2013), auditors feel profession comfort when they abide by laws and professional codes of conduct during their audit process. When auditors have conducted an audit in line with laws and professional codes, they sense profession comfort. That is, they believe they have offered a clean audit report to the public. The audit profession comes with power, and with power comes responsibilities. Auditors are expected to work in the best interest of the public (Öhman, 2007). Signing off a scrutinized audit signals that the auditor has reached a state of sufficient comfort to let the audit pass. Feeling comfortable does not only concern the signing auditor but also the audit team carrying out the audit. The auditor, whom carries out audits, continuously signs off steps along the audit process and this happens when he feels comfortable enough to move on (Carrington & Catasús, 2007).

The sense of feeling pride at work influences the comfort of auditors. The sense of feeling professional pride includes different perspectives. Professional pride is, in general, self-experienced emotions of pride in one’s professional role. Professional pride may also appertain to feeling proud of one’s performance at work (Kusnierz & Pettersson, 2012). To attain the feeling of being a professional, auditors for instance dress and behave in a way that is considered appropriate within the audit profession. Hence, auditors’ appearance and behavior are expected to have an impact on their profession comfort (Broberg, 2013).

When auditors feel that they have sufficient skills and knowledge to execute high quality audits and provide the public with trustworthy financial information, they feel comfort as professionals. Pentland (1993) thinks of auditors as audit machines due to their high degree of socialization and their behavior. Unlike Pentland (1993), Broberg (2013) finds that firm manuals and systems have to some degree replaced audit knowledge. Rather than being audit machines, auditors are audit machine operators. It then becomes more important to have the knowledge and skills to operate the audit
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machine (Broberg, 2013). Regardless of being audit machines or machine operators, auditors feel profession comfort when possessing the skills and knowledge needed to conduct every step in the audit process accurately (Broberg, 2013; Pentland 1993).

Auditors are highly dependent on participation from the audited firm in order to produce accurate and trustworthy audits. Without input and collaboration from the CFO and other staff members, the course of eliminating discomfort and reaching a desired level of comfort becomes difficult. The client contributes with answering questions and providing numbers. Furthermore, the client is an important source of information regarding risk identification of the company (Carrington & Catasús, 2007). Receiving the demanded amount of information helps the auditors feel profession comfort.

In summary, four essential conditions are identified as important for auditors to perceive profession comfort. First, auditors follow laws and professional codes to feel profession comfort. Second, when auditors feel pride in their position as a professional they sense profession comfort. Third, when auditors feel secure in their possession of essential audit skills, they feel that they can provide the public with trustworthy financial information, which is reflected in their profession comfort (Broberg, 2013). Finally, auditors feel profession comfort when they have sufficient information to produce accurate audits (Carrington & Catasús, 2007).

3.2.3.2 Business comfort

According to Broberg (2013), auditors feel business comfort when they add value to and satisfy the client. Carrington and Catasús (2007) found that auditors feel a relief sense of comfort when they detect errors they can correct or when opportunity opens up for suggested improvements. Auditors feel good about themselves and worthy when they can offer something more than just an immediate approval of an audit. Detecting an error indicates that there has been an audit. Thus, the audit process starts off with discomfort and as a means of relieving this element of discomfort, auditors search for faulty numbers (Carrington & Catasús, 2007).

Auditors are expected to behave and communicate fondly with clients and provide clients with financial improvements in order to maintain long-lasting business relationships. This is due to audit firms being dependent on keeping and gaining clients for the sake of economical profitability (Öhman, 2007). Auditors’ understanding of their clients’ business increases as auditor tenure lengthens and they develop their expertise.
during the audit process (Tepalagul & Lin, 2015). When the client specific expertise evolves, auditors increase their ability to consult the client with possible improvements. Furthermore, the length of the auditor tenure is positively related to time efficiency, resulting in less chargeable audit hours, other things being equal. In this regard, the sense of having good client relationship and foundations for long-lasting client relationships provide a sense of business comfort to auditors.

One important motive of audit firm existence is profit maximization, which creates an expectation of auditors to act and behave in a way that is economically beneficial to their audit firm. From this perspective, auditors value the quality of audits in terms of cost efficiency (Broberg, 2013). As audit firms wish to maximize profits, they expect the auditors to maintain old clients and attract new ones (Öhman, 2007), therefore, auditors feel comfort when this expectation is fulfilled. Audit firms spend resources on continuous education for their auditors, whom are consequently expected to produce a real return for their money. These expectations put pressure on auditors to add value to their employer. Hence, auditors’ sense of business comfort increase as they add value to their audit firm (Broberg, 2013).

In summary, three essential conditions are identified as important for auditors to perceive business comfort. First, auditors feel a sense of business comfort when client satisfaction is achieved by adding value beyond the audit itself (Broberg, 2013). Second, when auditors have a good relationship with their clients, they feel comfortable (Carrington & Catasús, 2007). Finally, auditors feel a sense of business comfort when adding value to their audit firm (Öhman, 2007).

3.2.4 Comfort and audit quality

Auditors possess, in their role as professionals, a unique and autonomic position, that gives them the authority and ability to evaluate their own performance. Broberg (2013) finds that auditors evaluate their performance in terms of comfort, specifically business and profession comfort. She identifies a positive relationship between the comfort of auditors and audit quality. An increase in profession comfort and/or business comfort increases auditors’ perceived audit quality. The other way around, when auditors’ profession comfort and/or business comfort decreases, their perceived audit quality decreases (Broberg, 2013). As auditors’ comfort is considered to correlate with their
perceived audit quality, and since comfort is a more comprehensible measure for auditors, applying comfort as proxy for audit quality offers a robust way of evaluation.

### 3.3 Hypotheses and model-building

On the basis of fundamental and applied theories, four hypotheses are derived through which a model is developed. The model composes the connections drawn between ethical climate and comfort with a division into profession and business. The relationship will be further discussed and explained in this section and the hypotheses are presented.

#### 3.3.1 Profession ethical climate’s effect on profession comfort

The profession side of auditing is related to the social level of ethical climate, which includes efficiency, social responsibility and laws and professional codes. When audit firms promote an ethical climate where these qualities are supported, there is a strong profession ethical climate in the firm (Cullen et al., 2003). In such climates, auditors are more likely to embrace and fulfill the conditions connected to their profession comfort, i.e. follow laws and professional codes, feel pride in their profession and possess essential knowledge, skills and information to produce accurate audits (Broberg, 2013). Auditors’ profession comfort is thereby expected to increase. This leads to the first hypothesis:

*Hypothesis 1: The higher the level of profession ethical climate, the more profession comfort the auditors feel*

#### 3.3.2 Profession ethical climate’s effect on business comfort

When audit firms promote an ethical climate where professional attributes are supported, it is more likely that the auditor will adhere to efficiency, social responsibility and laws and professional codes (Cullen et al., 2003), whereas business attributes may be neglected. In short, profession ethical climates encourage auditors to strive towards fulfilling professional obligations. Auditors will consequently attempt to meet the desires promoted through the profession ethical climate and interests related to the firm and the client might fall short. In cases where the focus lies on profession ethical climate, auditors are less likely to concentrate on adding value to the client, attaining good relationships with the clients and adding value to the audit firm, which is
expected to result in a decrease in business comfort (Broberg, 2013). This leads to the second hypothesis:

*Hypothesis 2: The higher the level of profession ethical climate, the less business comfort the auditors feel*

3.3.3 *Business ethical climate’s effect on business comfort*

The business side of auditing is related to the organizational level of ethical climate, which consists of company profit, team interest and rules and operating procedures. When audit firms promote an ethical climate where these qualities are supported, there is a strong business ethical climate in the firm (Cullen et al., 2003). In such climates, auditors are more likely to embrace and fulfill the conditions connected to their business comfort, i.e. client satisfaction, client relationship and adding value to their audit firm (Broberg, 2013). Auditors’ business comfort is thereby expected to increase. This leads to the third hypothesis:

*Hypothesis 3: The higher the level of business ethical climate, the more business comfort the auditors feel*

3.3.4 *Business ethical climate’s effect on profession comfort*

When audit firms promote an ethical climate where business elements are supported, it is more likely that the auditor will adhere to company profit, team interest and rules and operating procedures (Cullen et al., 2003), whereas professional elements may be disregarded. In business ethical climates, auditors are encouraged to strive towards fulfilling organizational interests. Auditors will consequently focus on adding value to the client, keeping good relationships with the client and adding value to the audit firm. In cases where the focus lies on business ethical climate, auditors are less likely to focus on laws and professional codes, professional pride and having sufficient skills, knowledge and information to produce accurate audits. The professional accuracy of the audit may suffer as a consequence, which is expected to decrease the profession comfort of the auditors (Broberg, 2013). This leads to the final hypothesis:

*Hypothesis 4: The higher the level of business ethical climate, the less profession comfort the auditors feel*
These four hypotheses form the theoretical model (figure 3.3) that is applied in this study.

Figure 3.3 Theoretical model
4 Empirical method

This chapter begins with a discussion revolving research strategy, including a presentation of where and how the theoretical information was collected. The research strategy is followed by a presentation of the population studied and the method used to collect the empirical data. To convert the concepts in this study into measurable variables, an operationalization follows. This part consists of an operationalization of dependent variables, independent variables and control variables. The operationalization is followed by presentations of how the data was analyzed and the extent of reliability and validity in this study. The chapter ends with a discussion revolving the generalizability of the findings and possible ethical considerations.

4.1 Research strategy

According to Saunders et al. (2009, p. 631), research strategy is a “[g]eneral plan of how the researcher will go about answering the research question(s).” Research strategy encompasses the research process as a whole and the choice of research strategy is reflected by the research question and other objectives, the extent of existing knowledge, time and resources available as well as own philosophical beliefs (Saunders et al., 2009). In regard to the research question, time limit and other influential attributes, the research strategy adopted is a survey (Saunders et al., 2009). How the research process started should be accounted for, as the research strategy encompasses the whole procedure.

It is important to have a clear picture of the research phenomenon prior to data collection. With the help of existing knowledge presented in the theoretical framework a foundation of what is going on has been created, reflecting a description of the research phenomenon (Saunders et al., 2009). The creation of such a theoretical foundation has required a broad literary search. Hence, the research process began with a search for existing literature in terms of scientific articles and dissertations. Most articles were collected through Kristianstad University’s article databases. During the search process, the primary focus lied on peer-reviewed articles from graded journals. Yet, not all sources have been peer-reviewed. For the sake of obtaining generic information about the key concepts, following search terms were used at first; audit quality, comfort theory, ethical climate and profession theory. Subsequently, terms associated with
In this study, we added and combined the key search terms to obtain scientific articles relevant to the topic.

Inspired by Broberg (2013) and informed by Tepalagul and Lin (2015), a need for further empirical study on audit quality was identified. The review article written by Tepalagul and Lin (2015) contributed with insights on audit quality and provided a summary of the findings that have been made so far. Broberg (2013) was the key reference on the matters of business comfort and profession comfort. Using ethical climate as the independent variable in the cause-and-effect relationship led to Victor and Cullen (1988) and Cullen et al. (2003), who became key sources of expertise within matters of ethical climates in organizations. These articles have been inspirational and highly useful during theory collection and stand for the main sources of reference.

4.2 Population

The population in this study consists of Swedish authorized auditors. Authorized auditors were chosen because they possess the authorization to sign off audits and are consequently the ones who evaluate their comfort at the sign off state (Carrington & Catasús, 2007). Swedish auditors were selected due to accessibility of and personal knowledge about the Swedish auditing system. For this reason, the research sample consists of only Swedish authorized auditors. The Swedish auditing committee (Revisornsämnden) is required to comprise a register of all Swedish authorized auditors (SFS, 1995:665). The population represents 2984 Swedish authorized auditors, registered in March 2015 (Revisornsämnden, 2015). To spare the auditors from receiving an overload of questionnaires, the sample was split between three research groups. Thus, the sample consists of a third of the authorized auditors who had an e-mail address registered at the Swedish auditing committee. In addition, authorized auditors positioned in Kristianstad were included in the sample, summing up to a total of 985 auditors. A limitation of selecting the sample on the basis of registered e-mail addresses is that non-registered e-mail addresses are excluded. The register might also include auditors that are no longer active and exclude information about newly authorized auditors (Djurfeldt, Larsson, & Stjärnhagen, 2010).
4.4 Data collection method

This research study adopts a cross-sectional design, i.e. the data is collected from a large number of respondents at a single point in time (Bryman & Bell, 2011). Data from the selected sample was collected through a self-administered questionnaire (appendix 1). To facilitate the linguistic understanding of the questionnaire, the recipients received a Swedish version (appendix 2). Due to limited economic resources and time, this choice of method was deemed feasible. The questionnaire was open for the recipients during one week. Questionnaires are often used in association with descriptive or explanatory research and are less compatible with exploratory or other research that requires open-ended questions (Saunders et al., 2009). The utilization of a questionnaire allows for standardized questions and offers a technique by which all respondents interpret the same way and to obtain reliable measures, a multiple-item questionnaire was used (Saunders et al., 2009). The questionnaire was delivered through the Internet and completed by the respondents. The choice of Internet based questionnaire was mainly affected by the time available to complete the data collection and the ability to reach out to a high amount of auditors in a short period of time. Since the recipients are geographically dispersed, delivering the questionnaire through the Internet reduces the time needed. The disadvantage of electronic delivery might be that not all have access to computers and since the questionnaire is delivered by e-mail, the recipient might consider it spam or irrelevant (Bryman & Bell, 2011). In addition, since the e-mail addresses are retrieved from secondary sources, the risk of invalid e-mails must be taken into account.

Whereas descriptive research conducted through questionnaires ask for attitudes and opinions to recognize and describe the irregularity in different phenomena, explanatory research allows for explanations of cause-and-effect relationships. These two research techniques give rise to different research design requirements (Saunders et al., 2009). In order to explain the research phenomenon, intangible concepts must be converted into measurable variables, i.e. operationalized.

4.5 Operationalization

Operationalization relates to the process of converting concepts into measures so as to enable facts to be measured quantitatively. Consequently, to measure a certain concept that has no direct measure available, a translation into tangible indicators of their existence is needed (Saunders et al., 2009). As this study adopts a self-administered
questionnaire, the questions and statements are composed as indicators. Due to the cause-and-effect relationship format of the research question, an independent variable is expected to cause changes to a dependent variable (Saunders et al., 2009). Below follows an operationalization of the concepts in this study where a brief justification of the method of measurements used is presented.

4.5.1 Dependent variables

This study has audit quality as dependent variable, which is referred to and measured through auditors’ comfort. Comfort is measured at the sign off state, where auditors are expected to feel comfortable enough with the quality of their work to let the audit pass (Carrington & Catasús, 2007). Since no quantitative study of profession and business comfort as separate concepts has yet been conducted, the conditions identified as profession and business providers compose the basis for the statements made in the questionnaire. Hence, the tangible indicators will relate to auditors’ comfort, divided into profession and business comfort.

The comfort was measured by asking respondents to indicate their degree of agreement or disagreement with each of the statements. A 7-point Likert-type scale, ranging from fully disagree (=1) to fully agree (=7), was used for measurement. For psychological reasons, the statements did not follow a categorical line-up in the questionnaire but were intermixed.

4.5.1.1 Profession comfort

Profession comfort is measured through each and every condition that were identified as significant for auditors to feel comfort in their position as professionals. The first significant condition identified for auditors to sense profession comfort is following laws and professional codes. The second condition identified as important for auditors to feel profession comfort is experiencing pride in their position as professionals. The third condition identified as important for auditors to feel profession comfort is feeling secure in their possession of sufficient and essential audit skills and knowledge (Broberg, 2013). Finally, the last condition identified as important for auditors to sense profession comfort is having sufficient information to produce accurate audits (Carrington & Catasús, 2007). Since there is a positive correlation between comfort of auditors and audit quality, profession comfort is measured at the state where the auditor is ready to sign off the audit. Hence, every condition is measured through one related
statement and begins with a mutual phrase that aims at capturing the comfort of the respondents at this specific state. Therefore, the statements follow:

Before I sign off an audit I feel the need to ensure myself that I:

- have followed laws and professional codes. (PC1)
- can feel pride in my position as a professional auditor. (PC2)
- have had the ability and knowledge to execute every step in the audit process accurately. (PC3)
- have received sufficient information from the client to be able to execute the audit accurately. (PC4)

4.5.1.2 Business comfort

The three conditions that were identified as significant in auditors’ reach for business comfort were measured by asking the respondents to indicate their perceived level of business comfort when signing off audits. The first condition is adding value to the client (Broberg, 2013). The second condition is having good connections with clients so as to maintain long-lasting client relationships (Öhman, 2007). This condition is measured through two separate statements that together measure the client relationship from a business perspective. One statement is closely related to having good connections with client and the other is more related to attaining long-lasting client relationships. The last condition that was identified as important for auditors to feel business comfort is adding value to their own audit firm (Broberg, 2013). As is also the case with profession comfort, business comfort is measured at the state where the auditor is ready to sign off the audit. Thus, every statement begins with a mutual phrase that aims at capturing the comfort of the respondents at this specific state. Therefore, the statements follow:

Before I sign off an audit I feel the need to ensure myself that I:

- have added value to the client. (BC1)
- have had a good connection with the client. (BC2)
- have created conditions for a long-lasting cooperation with the client. (BC3)
- have added value to the audit firm. (BC4)
4.5.2 Independent variables

When composing the questionnaire with statements regarding ethical climate, a well-tried and reliable questionnaire, developed by Cullen et al. (2003), was adopted. However, the sentence construction was changed to better suit the context of this study. The questionnaire was used in a study of ethical climates in audit firms, enhancing its usefulness in the study. The questionnaire used by Cullen et al. (2003) consist of four statements related to each climate type and all statements received a Cronbach’s alpha coefficient above statistical significance except the ones related to the egoistic-organizational climate type. For this reason, the statements related to company profit were instead inspired by Sylvander (2014) whose four company profit related statements showed a higher internal consistency. Due to the similarities of the statements in Cullen et al. (2003) and Sylvander’s (2014) questionnaires, and in order to enhance the response rate, the number of statements for every climate type was reduced by two.

The ethical climate was measured by asking respondents to indicate their degree of agreement or disagreement with each of the statements. A 7-point Likert-type scale, ranging from fully disagree (=1) to fully agree (=7), was used for measurement. For psychological reasons, the statements did not follow a categorical line-up but were intermixed.

4.5.2.1 Profession ethical climate

To measure the profession ethical climate, two statements related to each climate type within the social level of analysis were made. The first climate type is efficiency, which is measured using social resource efficiency as indicator since auditors are expected to work in the profession’s best interest (Cullen et al., 2003). In this regard, the following two statements were made:

- Employees always strive to work in the most efficient way possible. (ES1)
- It is expected that every employee work in a socially resource-efficient way. (ES1)

The second climate type is social responsibility, which is measured using auditors’ concerns about the client and the public as indicators. If the ethical climate in the audit firm supports social responsibility, the auditors are more likely to be concerned about
the decisions that affect the interest of the clients and the public (Duff, 2010). Hence, the statements related to social responsibility are enunciated as follows:

- Decisions that affect the client and the public are primary concerns. (BS1)
- Employees are expected to do what is right for the client and society at large. (BS2)

The third climate type is laws and professional codes. This type of climate is measured using the extent to which auditors perceive they are expected to follow laws and professional codes as indicator. Auditors in audit firms that promote an ethical climate where following laws and professional codes is supported are more likely to perceive such expectations. Thus, the following statements were made:

- Employees are expected to strictly follow laws and professional codes. (PS1)
- Laws and professional codes are the primary considerations. (PS2)

4.5.2.2 Business ethical climate
To measure business ethical climate, two statements related to each climate type within the organizational level of analysis are made for the auditors to respond to. The first climate type is company profit, which is measured using expected economic contribution to the audit firm as indicator. Economic contribution can be made through increasing revenues or through cost reduction (Öhman, 2007). In this respect, the following two statements were made:

- Employees are expected to contribute to the highest economic profit for the audit firm. (EO1)
- Employees are expected to minimize the costs for the audit firm. (EO2)

The second climate type is team interest, which is measured using the extent to which the audit firm promotes a climate supporting the well-being of all employees and mutual interest as indicators. In this regard, these two statements follow:

- It is important to consider what is best for every employee. (BO1)
- The well-being of every employee is a priority. (BO2)
The final climate type is rules and procedures within the audit firm. This climate type is measured using the extent to which auditors perceive that they are expected to follow internal norms and guidelines as indicator. Hence, the last two statements read:

- It is important to strictly follow the audit firm’s rules and procedures. (PO1)
- Employees are expected to adhere to the audit firm’s rules and procedures. (PO2)

### 4.5.3 Control variables

Although a significant relationship between ethical climate and auditors’ comfort might be found, other exogenous variables might contribute to the observed effect because of their potential effects on the perception of the ethical climate and their comfort level (Bryman & Bell, 2011; Wimbush, Shepard, & Markham, 1997). Hence, it is important to identify possible intervening variables that may influence the outcome of the collected data. In addition, control variables contribute to the affirmation of the representativity of the collected data (Bryman & Bell, 2011). Individual characteristics such as gender, age and firm tenure are expected to influence ethical decision-making (Wimbush et al., 1997). Other variables that might influence the nature of the relationship studied are firm size, audit activity and being a partner in the firm. In this respect, these variables should be accounted for.

#### 4.5.3.1 Gender

Ethical judgement seems to differ between men and women (Wimbush et al., 1997). Research shows that women, in contrast to men, tend to be more concerned with ethical issues (Singhapakdi, Vitell, & Franke, 1999). Men are assumed to be more prone to engage in unethical behavior (Wimbush et al., 1997). This difference of ethical judgement between genders might affect what brings comfort to male and female auditors. Gender in this research is a dichotomous variable, divided into male and female.

#### 4.5.3.2 Age

Age tends to be positively related to ethical sensitivity. An older person has generally been more exposed to ethical problems and has gained a better understanding of how ethical violation might harm the organization and the stakeholders. Age is also considered to positively relate to the facility at finding solutions to ethical problems (Singhapakdi et al., 1999). The age difference may thereby affect how auditors perceive
ethical climates, which in turns affects the comfort. The age of respondents is operationalized as a continuous variable, measured in years.

4.5.3.3 Firm tenure
Firm tenure comprises the time an employee works in a particular firm. Individuals tend to self-select themselves into organizations with shared values and the caring of ethical issues increase with tenure. An individual that does not share the same values from the beginning will adapt as tenure lengthen (Oktug, 2013). Whenever individuals sense an incongruence of shared values they tend to leave the organization. Tenure is therefore expected to have a positive effect on perceived ethical climate and ethical behavior (Wimbush et al., 1997), which is reflected in the comfort of the auditors. The longer the auditor tenure, the more time have the auditors had to familiarize themselves with the climate of the firm, the clients, regulation and other factors that might influence the comfort of auditors. Firm tenure is a continuous variable, measured in number of years in current firm.

4.5.3.4 Firm size
Organizational factors, such as firm size may influence an individual’s decision making in ethical situations (Singhapakdi et al., 1999). Larger firms are generally more scrutinized, which creates an incentive to uphold an ethical climate that encourages the auditors to work in line with socially accepted and expected standards (Doshi, Dowell, & Toffel, 2013). Therefore, firm size is expected to positively relate to finding ethical solutions, which may affect the comfort of auditors. Firm size is operationalized as a continuous variable, measured in number of employees in the respondent’s firm.

4.5.3.5 Audit activity
Since comfort is used as proxy for audit quality and since comfort is measured at the state where the auditor is ready to sign off the audit, the questionnaire is primarily directed towards auditors that have been actively signing off audits. A six-month time period was deemed appropriate considering that a shorter time period would be vulnerable to temporary fluctuations in the auditing cycle and auditors might have difficulties assessing the number of signed audits within a longer time frame. Audit activity is operationalized as a continuous variable, measured as the amount of signed audits within the last six-month-period.
4.5.3.6 Partner

Apart from extra-organizational influences that are outside of their control, partners in audit firms have the responsibility and possibility to shape the ethical climate (Victor & Cullen, 1988). Therefore, partners have an important say in defining what is an acceptable audit (Carrington & Catasús, 2007) and will consequently try to create an ethical climate that supports what is deemed acceptable behavior. Then, partner auditors that are involved in creating the ethical climate in the firm are expected to have values, attitudes and behavior that reflect the ethical climate (Shafer, 2015). Hence, the perception of partners may be biased and differ from the perception of other non-partner auditors. In the respect of the question, the partner indicator is formed as a dichotomous variable with answer options of yes and no.

4.6 Data analysis

The empirically collected data that was generated by the self-administered questionnaire was analyzed using SPSS Statistics. The first part in the data analysis included a Cronbach’s alpha test that was conducted to check the internal reliability of the measures. This was followed by a Pearson correlation matrix, which explained the strength and direction of the relationships between the different ethical climates and comforts. The hypotheses were then tested using a multiple regression analysis, which shows to what degree different types of ethical climates explain the variance of profession and business comfort. The second part included a factor analysis to detect previously overlooked patterns in the relationships between the different measures. This revealed a new set of measures and the first part were repeated with the new measures.

4.7 Reliability

Bryman and Bell (2011) define reliability as the extent to which a study is repeatable and they divide the concept into stability, internal reliability and inter-observer consistency. The stability of the measure is tested through retesting the same research sample on another occasion. A high correlation between the original test and the retest indicates a high stability of the measure used. Due to the time limit, a retest was not conducted. However, if a retest would have been conducted, the responses given in the original test may have influenced the responses given in the retest and occurrences between the tests may also have had an impact (Bryman & Bell, 2011). Such contamination of respondents’ answers reduces the reliability of the data (Saunders et al., 2009). The degree of internal reliability depends on the items used as measures. The
adoption of Cronbach’s alpha test enables multi-items measures to be used. The use of multiple-items, where multiple statements are interrelated to measure the same concept, allows for an overall score. If the multiple-items measures lack coherence, they may however indicate something unintended and thereby harm the reliability. The inter-observer consistency, which refers to the subjective judgement involved, is low due to the choice of data collection method (Bryman & Bell, 2011). The use of questionnaire with close-ended statements prevents contamination of researchers’ subjective judgments.

Self-administered questionnaires will often have a lower response rate than interviewer-administered questionnaires. The risk of distortion in the findings is higher when the response rate is low, unless it can be proven that those who did not participate do not differ from those who answered (Bryman & Bell, 2011). Proving whether the non-participants would respond in a similar way or not is not a possibility in this study due to practical and personal limitations. Thus, a low response rate would result in a non-representative sample, which would prevent a valid generalization of the whole population (Bryman & Bell, 2011).

4.8 Validity

Validity relates to the degree to which data collection method accurately measures what was intended as well as the accurateness and consistency of the findings (Saunders et al., 2009). Bryman and Bell (2011) distinguish the validity of a measure of a concept between a number of types. The types relevant to this study are face validity and construct validity.

The face validity, relating to the extent to which a test is subjectively viewed as covering the concept it intends to measure (Bryman & Bell, 2011), has been strengthened by having members of the faculty at Kristianstad University with experience in the field judge the measures. However, no additional tests or complementary interviews of the population were done.

The measurements adopted in this study are primarily validated through construct validity, which refers to whether the operationalized definition of a variable actually reflects the true theoretical meaning of a concept (Bryman & Bell, 2011). By operationalizing the concepts that the hypotheses are based upon, construct validity has been generated. The measurement, i.e. the statements made in the questionnaire
regarding ethical climate, were to a great extent based on already validated statements for the same concept. The measurement for the concept of comfort is not based on a previously validated measure, but rather constructed on the basis of adopted theories.

4.9 Generalizability
The representativity of the responses is a determinant of the generalizability. That is, a representative sample of responses assures that the results are not unique to the particular group upon which the research was conducted (Bryman & Bell, 2011). The size of the received responses and the way in which the sample is selected will have an impact on the certainty of the data as well as the level to which it can be generalized (Saunders et al., 2009).

4.10 Ethical considerations
The auditors in the sample study were not given the opportunity to express their consent or disapproval prior to receiving the questionnaire. However, the recipients were by no means obliged to participate and they could without further effort decline the invitation. To enhance the transparency of the survey, a brief explanation of this study’s purpose was attached in the e-mail, by which the questionnaire was distributed. In case any recipient needed information in excess of what was already written in the e-mail, contact information to the authors as well as to the supervisor was attached. Finally, the responses have been preserved and analyzed with high confidentiality, which the recipients were informed of.
5 Empirical results and analysis

This chapter includes the empirical results from the tests conducted in this study, and begins with a description of the basic features of the collected data. A summary of the respondents, dependent variables, independent variables and control variables is provided, presenting a simple overview and a meaningful presentation of the data. A Pearson correlation matrix and a multiple regression analysis follow the descriptive statistics. The matrix presents the strength and direction of the relationships between the variables in this study and its data is then used in the multiple regression analysis where the hypotheses are tested. This is followed by a factor analysis where underlying patterns are revealed as a means to further the analysis between comfort and ethical climate. The factor analysis is followed by another Pearson correlation matrix and a multiple regression analysis for the new variables to present the model with the most explanatory value for both profession and business comfort. The chapter ends with a discussion revolving the findings in the analysis.

5.1 Descriptive statistics

This section provides a description of the central tendency of the frequency distribution for the collected data. The section contains descriptive statistics, including the minimum, maximum, mean and standard deviation. Individual and work related frequency distributions of respondents are highlighted to spot contingent patterns and to affirm the representativity of the valid surveys. The internal consistency of the dependent and independent statements is measured with Cronbach’s alpha. Normally, a value of 0.7-0.8 is acceptable leaving substantially lower values unreliable (Pallant, 2007). However, George and Mallery (2003) argue that although the generally accepted value of 0.8 is appropriate, due to the diversity of the constructs being measured, values of psychological perceptions may realistically lie below 0.7. In any cases, Cronbach’s alpha value should be analyzed with caution as the value depends on the number of items on the scale and may be affected by reverse scored items (Pallant, 2007).

5.1.1 Respondents

As can be seen in table 5.1, the total population of Swedish authorized auditors registered in March 2015 at the Swedish auditing committee amounted to 2984. From this population, a total of 985 auditors were selected as recipients of the questionnaire. The survey resulted in a total of 45 completed responses, which is sufficient for the
response sample to approximate a normal distribution (Körner & Wahlgren, 2005). Out of the study sample, 52 bounced, indicating that 5.3% of the e-mails were no longer active. Furthermore, a total of 32 e-mails, representing 3.2% of the sample, were deregistered from Survey Monkey, the online survey cloud used for the questionnaire distribution. Altogether, eight of the total numbers of responses were missing values, i.e. the respondents have not completed the survey. In these cases, the respondents have discontinued the survey after filling out the control variables. Hence, these responses were deemed invalid and were disqualified from the further analysis. In summary, the total number of valid surveys make up for 4.6% of the sample.

Table 5.1 Response frequency

<table>
<thead>
<tr>
<th>Response frequency</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population in March 2015</td>
<td>2984</td>
<td></td>
</tr>
<tr>
<td>Sample selection</td>
<td>985</td>
<td>100.0%</td>
</tr>
<tr>
<td>Bounced e-mails</td>
<td>52</td>
<td>5.3%</td>
</tr>
<tr>
<td>Recipients that unregistered</td>
<td>32</td>
<td>3.2%</td>
</tr>
<tr>
<td>Non-responses</td>
<td>848</td>
<td>86.1%</td>
</tr>
<tr>
<td>Number of responses</td>
<td>53</td>
<td>5.4%</td>
</tr>
<tr>
<td>Uncompleted responses</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Valid surveys</td>
<td>45</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

The firm dispersion shown in table 5.2 offers an overview of the firms that the respondents currently work in. The audit firms that are named, except for Grant Thornton, form the Big Four. As the fifth largest assurance firm in Sweden, Grant Thornton is an important audit firm in the Swedish auditing world and was therefore categorized as a big audit firm. Other audit firms were considered smaller and categorized as others. Approximately 62% of the respondents represent the big audit firms. By way of comparison, 38% of the respondents are working in a smaller audit firm.
Table 5.2 Firm dispersion

<table>
<thead>
<tr>
<th>Firm dispersion</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deloitte</td>
<td>5</td>
<td>11,1%</td>
</tr>
<tr>
<td>EY</td>
<td>8</td>
<td>17,8%</td>
</tr>
<tr>
<td>Grant Thornton</td>
<td>5</td>
<td>11,1%</td>
</tr>
<tr>
<td>KPMG</td>
<td>1</td>
<td>2,2%</td>
</tr>
<tr>
<td>PwC</td>
<td>9</td>
<td>20,0%</td>
</tr>
<tr>
<td>Others</td>
<td>17</td>
<td>37,8%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

5.1.2 Dependent variables

The dependent variables in this study are profession comfort and business comfort. As stated before, the dependent variables are proxy for audit quality. Below follows summary statistics of every dependent variable. Each summary includes calculations of the mean value of every statement. Grouping all values into one variable facilitates the interpretation and the comparison of the data. Furthermore, the internal consistency of the statements is measured with Cronbach’s alpha.

Table 5.3 depicts statistics of the statements measuring profession comfort. This variable was measured through a seven point Likert scale. The mean value of every statement ranges from 5,45 to 6,48. No statement received a minimum value of 1, which is the lowest value on the seven point Likert scale used. Considering that the highest possible value is 7, the mean values are quite high. These statements received a Cronbach’s alpha value of 0,767, which is deemed acceptable (Pallant, 2007).

Table 5.3 Summary statistics: Profession comfort

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC1</td>
<td>44</td>
<td>4</td>
<td>7</td>
<td>6,45</td>
<td>.697</td>
</tr>
<tr>
<td>PC2</td>
<td>44</td>
<td>2</td>
<td>7</td>
<td>5,45</td>
<td>1,620</td>
</tr>
<tr>
<td>PC3</td>
<td>44</td>
<td>3</td>
<td>7</td>
<td>6,02</td>
<td>.952</td>
</tr>
<tr>
<td>PC4</td>
<td>44</td>
<td>4</td>
<td>7</td>
<td>6,48</td>
<td>.628</td>
</tr>
</tbody>
</table>

Table 5.4 depicts descriptive statistics of the statements related to business comfort and measured through a seven point Likert scale. The mean value of all statements is also high for this variable, ranging from 5,11 to 6,11. The Cronbach’s alpha value of these
statements is 0.806, proving a good internal consistency (George & Mallery, 2003; Pallant, 2007).

Table 5.4 Summary statistics: Business comfort

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC1</td>
<td>44</td>
<td>1</td>
<td>7</td>
<td>5.41</td>
<td>1.352</td>
</tr>
<tr>
<td>BC2</td>
<td>44</td>
<td>2</td>
<td>7</td>
<td>5.11</td>
<td>1.205</td>
</tr>
<tr>
<td>BC3</td>
<td>44</td>
<td>3</td>
<td>7</td>
<td>6.11</td>
<td>.993</td>
</tr>
<tr>
<td>BC4</td>
<td>44</td>
<td>4</td>
<td>7</td>
<td>5.98</td>
<td>.902</td>
</tr>
</tbody>
</table>

5.1.3 Independent variables

The independent variables in this study are profession ethical climate and business ethical climate. Below follows summary statistics of the variables, includes calculations of the mean value of every statement. Here too, a seven point Likert scale has been used and the internal consistency of the statements is presented with a Cronbach’s alpha coefficient.

Table 5.5 summarizes the descriptive statistics of the statements measuring the profession ethical climate. The mean value of all statements is high, ranging from 5.02 to 6.40. Both statements related to efficiency and one statement of social responsibility received a minimum value of 2 whereas the other statements of social responsibility and both statements associated with laws and professional codes obtained a minimum value of 4. The Cronbach’s alpha value for these statements amounts to 0.844, indicating a good internal consistency (George & Mallery, 2003; Pallant, 2007).

Table 5.5 Summary statistics: Profession ethical climate

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES1</td>
<td>45</td>
<td>2</td>
<td>7</td>
<td>5.42</td>
<td>1.097</td>
</tr>
<tr>
<td>ES2</td>
<td>45</td>
<td>2</td>
<td>7</td>
<td>5.02</td>
<td>1.288</td>
</tr>
<tr>
<td>BS1</td>
<td>44</td>
<td>2</td>
<td>7</td>
<td>5.86</td>
<td>1.069</td>
</tr>
<tr>
<td>BS2</td>
<td>45</td>
<td>4</td>
<td>7</td>
<td>5.93</td>
<td>.889</td>
</tr>
<tr>
<td>PS1</td>
<td>45</td>
<td>4</td>
<td>7</td>
<td>6.40</td>
<td>.837</td>
</tr>
<tr>
<td>PS2</td>
<td>45</td>
<td>4</td>
<td>7</td>
<td>6.11</td>
<td>.859</td>
</tr>
</tbody>
</table>

Table 5.6 shows the descriptive statistics of the statements related to the business ethical climate. Here too, the mean value for all statements is high, ranging from 5.02 to 6.44. The lowest values given to these statements are 2 and 3 and the Cronbach’s alpha value
for all statements is 0.655. This alpha value is fairly low and questionable (George & Mallery, 2003). Excluding statement EO1 would generate a Cronbach’s alpha value of 0.687, which would still not reach the acceptable level of 0.7. However, considering the psychological constructs of the statements, a value below 0.7 is deemed realistic (George & Mallery, 2003).

Table 5.6 Summary statistics: Business ethical climate

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EO1</td>
<td>45</td>
<td>2</td>
<td>7</td>
<td>5.80</td>
<td>.919</td>
</tr>
<tr>
<td>EO2</td>
<td>45</td>
<td>3</td>
<td>7</td>
<td>5.02</td>
<td>1.097</td>
</tr>
<tr>
<td>BO1</td>
<td>45</td>
<td>2</td>
<td>7</td>
<td>5.60</td>
<td>1.214</td>
</tr>
<tr>
<td>BO2</td>
<td>45</td>
<td>2</td>
<td>7</td>
<td>5.73</td>
<td>1.156</td>
</tr>
<tr>
<td>PO1</td>
<td>45</td>
<td>3</td>
<td>7</td>
<td>5.84</td>
<td>.999</td>
</tr>
<tr>
<td>PO2</td>
<td>45</td>
<td>3</td>
<td>7</td>
<td>6.44</td>
<td>.813</td>
</tr>
</tbody>
</table>

5.1.4 Control variables

The control variables used in this study are gender, age, firm tenure, firm size, audit activity and partner. These variables are deemed relevant since they may influence the outcome of the data collected. Unfortunately, such statistics of the authorized auditing profession is difficult to access, which makes the responses difficult to verify and assess whether it gives a good representation of the whole population or not. Nonetheless, below follows summary statistics of the variables, followed by a probability assessment of the variables made to the best of our ability.

As is shown in table 5.7, the gender dispersion of the respondents is somewhat even with 60% of the respondents being male and 40% being female. According to the Swedish auditing committee, as of 2015-03-02, 66,4% of the Swedish authorized auditors was male and the remainder 33,6% was female (Revisorsnämnden, 2015). By comparison, the distribution between male and female auditors is more balanced among the respondents compared with the actual population. This makes the responses somewhat misleading as the number of female respondents is overrepresented in relation to the actual population. However, men still dominate the group of authorized auditors, indicating a fairly representative composition of respondents.
Table 5.7 Gender dispersion

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>27</td>
<td>60,0%</td>
</tr>
<tr>
<td>Female</td>
<td>18</td>
<td>40,0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100,0%</td>
</tr>
</tbody>
</table>

Table 5.8 summarizes the descriptive statistics of the control variables age, firm tenure, firm size and audit activity. The age variable, ranging from 28 to 64, covers the whole range from just barely authorized to close to retirement and has a mean value of 42.4 years.

Table 5.8 Summary statistics: Age, firm tenure, firm size and audit activity

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>45</td>
<td>28</td>
<td>64</td>
<td>42.40</td>
<td>9.545</td>
</tr>
<tr>
<td>Firm tenure</td>
<td>42</td>
<td>1</td>
<td>38</td>
<td>13.86</td>
<td>8.159</td>
</tr>
<tr>
<td>Firm size</td>
<td>41</td>
<td>3</td>
<td>350</td>
<td>44.66</td>
<td>66.463</td>
</tr>
<tr>
<td>Audit activity</td>
<td>44</td>
<td>0</td>
<td>150</td>
<td>53.39</td>
<td>45.752</td>
</tr>
</tbody>
</table>

Firm tenure represents the whole range from just started at the firm to been working at the same firm for most of their career. Three respondents chose not to answer this question. The responses indicate a somewhat overrepresentation of auditors with a little less firm experience. This indicates that they are more willing to answer surveys than their more experienced colleagues in the firm.

Among the responses of firm size, one was non-responsive and three answers were removed due to their absurdity in a Swedish context. These auditors probably misunderstood the question and gave an answer to how many employees there are in the entire organization in Sweden. The remaining answers ranged from very small firms with only 3 employees to big firms with approximately 350 employees. Considering that a majority of the respondents work in a big audit firm (table 5.2), it is reasonable that the average number of employees is approximately 45. However, considering that most Swedish audit firms are small, this number is probably higher than the actual average of firm size.
As is also shown in table 5.8, one answer on audit activity was removed due to its absurdity and was interpreted as a typing error. Four respondents stated that they had not signed off any audits within the past six months, which may have affected their answers regarding their ethical climate and comfort. Nonetheless, these answers were deemed valid since the auditors seemed to be part of the audit process. The mean value of 53.39 indicates that respondents on average sign off a little less than nine audits a month. Assessing whether this average number of signed audits is a good representation of the population or not is difficult due to inaccessible information.

Table 5.9 shows that 40% of the respondents are partners with the remaining 60% being non-partners. The partner frequency is deemed to be somewhat high and one possible explanation could be that partners are involved in creating the ethical climate in the firms (Shafer, 2015) and, therefore, find it more important to answer surveys regarding their own ethical climate.

Table 5.9 Partner frequency

<table>
<thead>
<tr>
<th>Partner</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>27</td>
<td>60.0%</td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>40.0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Taking into account the difficulty of accessing information about the whole population of authorized auditors in Sweden, the representativity of the responses is hard to assess. Overall, the control variables are considered to give a reasonably good representation of the actual population and will be deemed valid in the further analysis.

5.2 Pearson correlation matrix

To describe the strength and direction of the relationships between the variables in this study, a Pearson correlation matrix is formed. Pearson correlation matrix is primarily used to describe relationships between continuous variables (Pallant, 2007). In this study, a seven point Likert scale was used to measure most variables and a few variables were dichotomous. As Likert scales may be viewed as continuous measurements, the data from the survey is deemed suitable for a Pearson correlation matrix. The Pearson correlation coefficient ranges between minus one and plus one. A negative value indicates a negative relationship, i.e. as one variable increases, the other decreases. On the contrary, a positive value indicates a positive relationship between the variables, for
instance when one variable increases, so does the other. The closer minus one or plus
one the coefficient, the stronger the relationship (Pallant, 2007). The Pearson correlation
matrix (table 5.10) displays non-significant and significant numeric values, where one
or two asterisks follow significant values.

Table 5.10 Pearson correlation matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>-.289</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Firm tenure</td>
<td>-.094</td>
<td>.757**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Firm size</td>
<td>0.015</td>
<td>-.271</td>
<td>-.211</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Audit activity</td>
<td>-.339*</td>
<td>.633**</td>
<td>.311*</td>
<td>-.287</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Partner</td>
<td>-.111</td>
<td>.388**</td>
<td>0.225</td>
<td>-.251</td>
<td>.380*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Profession ethical climate</td>
<td>0.192</td>
<td>-.008</td>
<td>-.036</td>
<td>0.06</td>
<td>-.017</td>
<td>-.052</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Business ethical climate</td>
<td>0.157</td>
<td>0.009</td>
<td>-.052</td>
<td>0.086</td>
<td>0.019</td>
<td>0.000</td>
<td>.849**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Profession comfort</td>
<td>0.191</td>
<td>-.068</td>
<td>-.091</td>
<td>0.037</td>
<td>0.052</td>
<td>-.107</td>
<td>.642**</td>
<td>.627**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10. Business comfort</td>
<td>0.231</td>
<td>-.221</td>
<td>-.152</td>
<td>0.073</td>
<td>0.043</td>
<td>-.105</td>
<td>.367*</td>
<td>.332*</td>
<td>.550**</td>
<td>1</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation matrix (table 5.10) shows the strength of the relationship
between the independent variables and the dependent variables. Profession ethical
climate has a positive significant effect on both profession and business comfort. This
indicates that both profession comfort and business comfort increase in firms where a
profession ethical climate is supported. Likewise, business ethical climate seems to have
a positive significant effect on both profession and business comfort. The matrix also
suggests that profession ethical climate as well as business ethical climate has a more
significant effect on profession comfort than they do on business comfort. Furthermore,
there is a positive significant relationship between profession ethical climate and
business ethical climate. This positive relationship suggests that when an audit firm
promotes either ethical climate, it also tends to support the other ethical climate. Finally,
there seems to be a positive significant relationship between profession comfort and
business comfort, indicating that when auditors feel either type of comfort, they also
tend to feel the other type of comfort.
None of the control variables have a significant relationship with either ethical climate or comfort, though age and gender tend to have a relatively higher effect on comfort. Among the control variables measured, gender is the one with the greatest non-significant relationship to both profession and business comfort. Age seems to have a fairly higher effect on business comfort in comparison with the other control variables and is also highly correlated with firm tenure, audit activity, and partner. To avoid multicollinearity, and due to the vague effect firm size, audit activity, and partner have on ethical climate and comfort, only age and gender are hereafter included in the further analysis.

The Pearson correlation matrix has presented all relationships between the variables used in this study and has provided indications of how the control variables, the independent variables and the dependent variables relate to each other. However, the hypotheses will be tested through a multiple regression analysis, which allows for a more sophisticated exploration of the interrelationship among a set of variables (Pallant, 2007).

5.3 **Multiple regression analysis**

Multiple regression analysis is used to explore the relationship between one continuous dependent variable and a number of independent variables. The regression shows the degree to which the variance of the dependent variable is explained by the independent variables. This information is indicated by the standardized coefficient beta value and contains a prediction of the contribution of each of the independent variables converted to the same scale for better comparability. This is also indicated by the sig. value, where values below the 0.05 level make a significant unique contribution to the model. The model is formed using the unstandardized coefficient B. that shows the value of the variables in the regression model. The VIF value may indicate problems with multicollinearity between the independent variables in the model that may not be evident in the correlation matrix. VIF values above 10 are considered to indicate multi-collinearity (Pallant, 2007).

Using the multiple regression in this study allows for the whole model, including a constant dependent variable and one or more independent variables, to be tested and enables a comprising of control variables. The evaluation of the whole model is indicated by the model sig. value, where values below the 0.05 level indicate that the
whole model is significant. Another means to evaluate the model is using the R square value where the value is multiplied by 100 to determine how much of the variance of the dependent variable that can be explained by the model. A normal R square value tends to be too optimistic when using small samples, therefore an adjusted R square value is used in this study to attain a better representation of the model’s explanatory value (Pallant, 2007).

5.3.1 Regression test on profession comfort

Table 5.11 displays the model of profession comfort where professional ethical climate, business ethical climate, gender and age constitute the independent variables. As is shown by the unstandardized coefficient B., all variables except age are positively affecting profession comfort. Even though the whole model itself is significant, none of the variables, when included in the model simultaneously, are significant. By looking at the standardized coefficient beta it is clear that gender and age are making by far a lower contribution to the model compared with profession and business ethical climate. In this respect, gender and age should be removed from the model.

Table 5.11 Regression test on profession comfort

<table>
<thead>
<tr>
<th>Dependent Variable: Profession comfort</th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.771</td>
<td>.082</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profession ethical climate</td>
<td>.398</td>
<td>.380</td>
<td>.107</td>
<td>3.620</td>
</tr>
<tr>
<td>Business ethical climate</td>
<td>.378</td>
<td>.296</td>
<td>.203</td>
<td>3.578</td>
</tr>
<tr>
<td>Gender</td>
<td>.093</td>
<td>.057</td>
<td>.661</td>
<td>1.136</td>
</tr>
<tr>
<td>Age</td>
<td>-.004</td>
<td>-.051</td>
<td>.691</td>
<td>1.095</td>
</tr>
</tbody>
</table>

Adjusted R² = .385
Model Sig. .000

As is shown in table 5.12, removing gender and age from the model still does not make profession and business ethical climate significant. The model is significant as a whole, indicating that the variables contribute to making the model significant. However, when included simultaneously, they show no individual significance. Even though the VIF values are below 10 and are thereby acceptable, the Pearson correlation matrix showed a high correlation between profession and business ethical climate, causing multicollinearity, which might explain their non-significance. In this respect, the profession
and business ethical climate will be included in the profession comfort model separately when testing the hypotheses.

Table 5.12 Regression test on profession comfort 2

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.566</td>
<td>.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profession ethical climate</td>
<td>.414</td>
<td>.394</td>
<td>.087</td>
<td>3.575</td>
</tr>
<tr>
<td>Business ethical climate</td>
<td>.373</td>
<td>.292</td>
<td>.200</td>
<td>3.575</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .408$
Model Sig. .000

5.3.1.1 Profession ethical climate and profession comfort

The first hypothesis in this study predicted that the higher level of profession ethical climate, the more profession comfort the auditors feel. As is shown by the unstandardized coefficient B. in table 5.13, when profession ethical climate increases, so does profession comfort. This positive relationship is significant and, therefore, profession ethical climate makes a significant and unique contribution to the model. The whole model, including profession ethical climate, gender and age, is significant and explains 37.5% of the variance of profession comfort. However, gender and age are not significant and are thereby not contributing to the model. When removing these variables, the model’s explanatory value increases to 39.8%. In short, the multiple regression analysis gives support to the first hypothesis.

Table 5.13 Regression test on profession ethical climate and profession comfort

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>2.398</td>
<td>.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profession ethical climate</td>
<td>.662</td>
<td>.631</td>
<td>.000</td>
<td>1.041</td>
</tr>
<tr>
<td>Gender</td>
<td>.092</td>
<td>.057</td>
<td>.665</td>
<td>1.136</td>
</tr>
<tr>
<td>Age</td>
<td>-.004</td>
<td>-.046</td>
<td>.720</td>
<td>1.094</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .375$
Model Sig. .000
5.3.1.2 Business ethical climate and profession comfort

The fourth hypothesis in this study predicted that the higher level of business ethical climate, the less profession comfort the auditors feel. As is shown in table 5.14, when business ethical climate increases, profession comfort also increases. This positive relationship is significant and, therefore, profession ethical climate makes a significant and unique contribution to the model. The whole model, including business ethical climate, gender and age, is significant and explains 35.9% of the variance of profession comfort. However, gender and age are not significant and are thereby not contributing to the model. When removing these variables, the model’s explanatory value increases to 37.8%. In short, the multiple regression analysis gives no support to the fourth hypothesis.

Table 5.14 Regression test on business ethical climate and profession comfort

<table>
<thead>
<tr>
<th>Dependent Variable: Profession comfort</th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.725</td>
<td>.092</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business ethical climate</td>
<td>.785</td>
<td>.615</td>
<td>.000</td>
<td>1.029</td>
</tr>
<tr>
<td>Gender</td>
<td>.130</td>
<td>.080</td>
<td>.541</td>
<td>1.123</td>
</tr>
<tr>
<td>Age</td>
<td>-.004</td>
<td>-.050</td>
<td>.697</td>
<td>1.095</td>
</tr>
</tbody>
</table>

Adjusted R² = .359
Model Sig. .000

5.3.1 Regression test on business comfort

Table 5.15 displays the model of business comfort where professional ethical climate, business ethical climate, gender and age constitute the independent variables. As is shown by the unstandardized coefficient B., all variables except age are positively affecting business comfort. Neither the whole model itself nor the included variables are significant. By looking at the standardized coefficient beta, all variables are making relatively low contributions to the model when included simultaneously. Even though the VIF values are within the perimeter, the high correlation between profession and business ethical climate in the Pearson correlation matrix may be the reason for their low contributions to the model. It would thereby be more feasible to separate these variables when testing the hypotheses.
Table 5.15 Regression test on business comfort

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.789</td>
<td>.007</td>
<td>3.620</td>
<td></td>
</tr>
<tr>
<td>Profession ethical climate</td>
<td>.319</td>
<td>.273</td>
<td>.330</td>
<td></td>
</tr>
<tr>
<td>Business ethical climate</td>
<td>.119</td>
<td>.084</td>
<td>.762</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.202</td>
<td>.112</td>
<td>.476</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.018</td>
<td>-.187</td>
<td>.227</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted R² = .111
Model Sig. .076

5.3.1.1 Profession ethical climate and business comfort

The second hypothesis in this study predicted that the higher level of profession ethical climate, the less business comfort the auditors feel. As is shown in table 5.16, when profession ethical climate increases, business comfort also increases. Since this positive relationship is significant, profession ethical climate makes a meaningful and unique contribution to the model. The whole model, including profession ethical climate, gender and age, is significant and explains 13.1% of the variance of business comfort. Neither gender nor age is significant in the model and are thereby removed. After removing these variables, the model’s explanatory value decreases to 11.4%, which may be explained by the slight contribution age has in the model. In short, the multiple regression analysis gives no support for the second hypothesis.

Table 5.16 Regression test on profession ethical climate and business comfort

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.986</td>
<td>.001</td>
<td>.024</td>
<td></td>
</tr>
<tr>
<td>Profession ethical climate</td>
<td>.402</td>
<td>.344</td>
<td>.471</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.202</td>
<td>.112</td>
<td>.471</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.017</td>
<td>-.186</td>
<td>.225</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted R² = .131
Model Sig. .037
5.3.1.2 Business ethical climate and business comfort

The third hypothesis in this study predicted that the higher level of business ethical climate, the more business comfort the auditors feel. As is shown in table 5.17, when business ethical climate increases, business comfort also increases. Since this positive relationship is significant, profession ethical climate makes a meaningful contribution to the model. The whole model, including business ethical climate, gender and age, is not significant as the value exceeds the 0.05 level, albeit with a low margin. The whole model explains 11.3% of the variance of business comfort. As gender and age are insignificant in the model, they are removed. After removing these variables, the model’s explanatory value decreases to 8.9% while the model becomes significant. The decrease in explanatory value may be explained by the slight contribution age has in the model. In short, the multiple regression analysis supports the third hypothesis.

Table 5.17 Regression test on business ethical climate and business comfort

<table>
<thead>
<tr>
<th>Dependent Variable: Business comfort</th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.752</td>
<td>.007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business ethical climate</td>
<td>.444</td>
<td>.313</td>
<td>.038</td>
<td>1.029</td>
</tr>
<tr>
<td>Gender</td>
<td>.232</td>
<td>.128</td>
<td>.405</td>
<td>1.123</td>
</tr>
<tr>
<td>Age</td>
<td>-.018</td>
<td>-.187</td>
<td>.222</td>
<td>1.095</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .113$
Model Sig. .051

5.3.2 Summary multiple regression analysis

A multiple regression analysis was conducted to test the hypotheses developed in this study. The test clearly showed only significantly positive relationships between all independent variables and all dependent variables. Neither gender nor age seemed to significantly contribute to either type of comfort that auditors feel. Subsequently, the multiple regression analysis supported the following two hypotheses:

\[\text{Hypothesis 1: The higher the level of profession ethical climate, the more profession comfort the auditors feel}\]

\[\text{Hypothesis 3: The higher the level of business ethical climate, the more business comfort the auditors feel}\]
The following two hypotheses were not supported by the multiple regression analysis:

\textit{Hypothesis 2: The higher the level of profession ethical climate, the less business comfort the auditors feel}

\textit{Hypothesis 4: The higher the level of business ethical climate, the less profession comfort the auditors feel}

Due to the relatively low explanatory value of business comfort, there might be other underlying explanations that may have been overlooked in the prior analysis. As a means to further analyze the relationship between ethical climate and comfort and to detect underlying patterns, a factor analysis was conducted.

\textbf{5.4 Factor analysis}

To reduce the number of variables and to detect patterns in the relationships between the variables, a factor analysis is conducted. An exploratory factor analysis allows for an exploration of the interrelationships among a set of variables, which will help reveal underlying patterns and give indications to whether the hypotheses comport with the data or not. Performing a factor analysis requires a completion of three steps (Pallant, 2007).

The first step is assessing the suitability of the data, which is indicated by the Kaiser-Mayer-Olkin (KMO) index or the Bartlett’s test of Sphericity. The KMO index ranges from 0 to 1 and 0.6 is considered to be a good value for a factor analysis. A probability value less than 0.05 is deemed acceptable according to the Bartlett’s test of Sphericity (Pallant, 2007).

The second step in the factor analysis process is the factor extraction, which determines the smallest number of components that best represent the interrelations between a set of variables. As the Kaiser criterion is to exclude all components with eigenvalues under one, being the default in SPSS, only statements that together have an eigenvalue greater than one will appear (Pallant, 2007).

The third step in the factor analysis is rotation and interpretation (Pallant, 2007). In the factor analysis of the statements measuring comfort and ethical climate, an Oblimin rotation has been used. Rotation is used to detect underlying patterns and structures of interrelated statements. Statements found on one component only are strongly loaded
and more easily interpreted. Moreover, a component being represented by a number of strongly loaded items constitute a simple and clear structure (Pallant, 2007). The value of each statement gives information about the extent to which the variance can be explained. When the structure or pattern is unclear, it becomes more difficult for the researcher to understand and interpret the result. For the purpose of displaying clear and more easily interpreted tables, component values below 0.3 are excluded (Pallant, 2007). Below follows a factor analysis of the statements measuring comfort and ethical climate where statements with an eigenvalue of one or above create components.

5.4.1 Comfort
The statements related to comfort were given a KMO index of 0.739, which is well above the suggested value of 0.6. In addition, a probability value of 0.00 was shown by the Bartlett’s test of Sphericity, which is less than 0.05 and is thereby deemed significant. Hence, the statements measuring comfort are suitable for a factor analysis. The factor extraction revealed two groupings of the statements that have an eigenvalue over 1.

The pattern matrix of comfort (table 5.15) clearly shows that comfort is divided into two separate components. Component number one consists of three strongly loaded statements related to profession comfort and component number two includes three strongly loaded statements that are related to business comfort. The statement regarding professional pride (PC2) is slightly loaded towards business comfort, but since it loads more strongly on component one it belongs to profession comfort rather than business comfort. The statement regarding good connection with the client (BC3) is somewhat loaded towards profession comfort, which indicates that having good connection with the client brings both profession comfort and business comfort. However, the statement is more strongly loaded on business comfort and will thereby be classified on business comfort.
Table 5.18 Pattern matrix of comfort

<table>
<thead>
<tr>
<th>Statement</th>
<th>Component 1</th>
<th>Component 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC4</td>
<td>.882</td>
<td></td>
</tr>
<tr>
<td>PC1</td>
<td>.846</td>
<td></td>
</tr>
<tr>
<td>PC3</td>
<td>.801</td>
<td></td>
</tr>
<tr>
<td>PC2</td>
<td>.616</td>
<td>.302</td>
</tr>
<tr>
<td>BC3</td>
<td>.421</td>
<td>.570</td>
</tr>
<tr>
<td>BC1</td>
<td>.912</td>
<td></td>
</tr>
<tr>
<td>BC2</td>
<td>.775</td>
<td></td>
</tr>
<tr>
<td>BC4</td>
<td>.706</td>
<td></td>
</tr>
</tbody>
</table>

The components show that comfort consists of a profession perspective and a business perspective, which confirms the initial grouping of comfort and, therefore, no modification is needed. Since the components are compatible with the initial grouping, the Cronbach’s alpha value stays the same, which showed values of high internal consistencies.

5.4.2 Ethical climate

The statements used to measure the ethical climate received a KMO index of 0.798 and the Bartlett’s test of Sphericity showed a probability value of 0.00. These values indicate a high suitability for a factor analysis. Ethical climate was initially divided into two distinct groups, profession and business to be more precise. When running a factor extraction with an eigenvalue of 1, the statements formed three distinct groupings, revealing three different components of ethical climate.

Statements that have a tendency to load on two components are in the analysis classified on the component upon which the statement loads more strongly. One of the statements associated with efficiency (ES1), which was intended to measure the profession ethical climate, resulted in a double loading. When examining the statement *ex post*, it is evident that the formulation led the respondents to believe that efficiency was related to both commercial and profession efficiency. Due to the fairly equal value, classifying the statement to either component is difficult. The statement was thereby removed in the further analysis.
As is shown in table 5.19, the statements regarding firm rules and profession laws (PO, PS) conform to each other and together load on component one. This component is given a Cronbach’s alpha value of 0.898, which is a very high value bearing in mind that 0.9 is deemed excellent (George & Mallery, 2003). In other words, the statements related to firm rules and professional laws are highly interconnected. An explanation to this occurrence might be the fact that audit firms’ own rules and procedures are strongly connected to and dependent on laws and professional codes (Öhman, 2007). From this argument, it seems reasonable that these statements are grouped together and since they relate to internal and external rules that auditors as professionals must comply with, component number one is hereafter referred to as the modified profession ethical climate.

Table 5.19 Pattern matrix of ethical climate

<table>
<thead>
<tr>
<th>Statement</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO2</td>
<td>.950</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS1</td>
<td>.895</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO1</td>
<td>.847</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS2</td>
<td>.660</td>
<td>-.454</td>
<td></td>
</tr>
<tr>
<td>ES1</td>
<td>.452</td>
<td>-.427</td>
<td></td>
</tr>
<tr>
<td>ES2</td>
<td>.369</td>
<td>-.638</td>
<td></td>
</tr>
<tr>
<td>BO1</td>
<td></td>
<td>-.911</td>
<td></td>
</tr>
<tr>
<td>BO2</td>
<td></td>
<td>-.910</td>
<td></td>
</tr>
<tr>
<td>BS2</td>
<td>-.644</td>
<td>.361</td>
<td></td>
</tr>
<tr>
<td>BS1</td>
<td>-.448</td>
<td>.602</td>
<td></td>
</tr>
<tr>
<td>EO2</td>
<td></td>
<td>.820</td>
<td></td>
</tr>
<tr>
<td>EO1</td>
<td></td>
<td>.713</td>
<td></td>
</tr>
</tbody>
</table>

Table 5.19 displays a second component, including statements related to efficiency, team interest and social responsibility. This component loads on one statement related to efficiency (ES2), both statements related to team interest (BO1, BO2) and one statement related to social responsibility (BS2). In this respect, the factor analysis indicates that elements on an organizational level and elements on a social level together create an ethical climate. The statements loaded on this component receive a Cronbach’s alpha value of 0.864, being higher than the Cronbach’s alpha value of both profession ethical climate and business ethical climate before regrouping. The new combination is reasonable because efficiency and team interest are thought of as social
responsibilities and demanded by the society and desired by the employees (Baron, 2001; Elçi and Alpkan, 2009). Thus, it is reasonable to believe that, for instance, audit firms promoting an ethical climate that supports social responsibility also support efficiency and team interest. The statements that together form this group are associated with social characteristics and for this reason, component number two will hereafter be referred to as the social ethical climate.

As is also displayed in table 5.19, component number three loads on both statements used to measure company profit and one statement related to social responsibility. This component has a Cronbach’s alpha value of 0.605, which is lower in comparison to the original value. The occurrence is not surprising since only three statements are included in the new Cronbach’s alpha value, compared to four in the original Cronbach’s alpha test. Friedman (1970) stresses that social responsibility includes conducting the business in accordance with employers’ desires, which normally involves making as much money as possible while conforming to laws and ethical custom. Furthermore, embracing social responsibility will enhance the competitiveness in the business (Baron, 2001). In compliance with these arguments, it is reasonable to expect that audit firms that wish to encourage profit making will also promote a climate where social responsibility is supported. In this respect, a combination of company profit and social responsibility is logical. Due to the commercial implications of company profits, this component will hereafter be referred to as the modified business ethical climate.

5.4.3 Summary factor analysis

The factor analysis has helped identify groups of interrelated statements used in the survey to measure comfort and ethical climates. The factor analysis on comfort gave consistent component identification of the initial division of profession and business comfort. As can be seen in table 5.20, the initial grouping of comfort will, therefore, stay the same. Regarding ethical climate, the factor analysis identified three distinct groups of interrelated statements. In the original division of ethical climates, which consisted of two distinct groups, all elements on the organizational level was expected to appertain to business ethical climate whereas all elements on a social level was expected to relate to profession ethical climate. Not only were the elements in these two groups intermixed, but there is also a third, hereunto unobserved group of ethical climate existing. From this time forth, the new grouping that was extracted from the factor analysis will be used in the analysis, now being modified profession ethical
climate, social ethical climate and modified business ethical climate. New variables based on the new groups of components can be seen in table 5.20 and will be made to further the analysis in accordance with the factor analysis.

Table 5.20 Summary of variables after factor analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statement</th>
<th>Cronbach's alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified professional ethical climate</td>
<td>PS1, PS2, PO1, PO2</td>
<td>.898</td>
</tr>
<tr>
<td>Social ethical climate</td>
<td>ES2, BO1, BO2, BS2</td>
<td>.864</td>
</tr>
<tr>
<td>Modified business ethical climate</td>
<td>EO1, EO2, BS1</td>
<td>.605</td>
</tr>
<tr>
<td>Profession comfort</td>
<td>PC 1–4</td>
<td>.767</td>
</tr>
<tr>
<td>Business comfort</td>
<td>BC1–4</td>
<td>.806</td>
</tr>
</tbody>
</table>

5.5 Pearson correlation matrix with modified variables

The Pearson correlation matrix with modified variables (table 5.21) displays the correlation between ethical climate and comfort on the basis of the factor analysis. The comfort and control variables are the same as in the previous Pearson correlation matrix, whereas the ethical climate variables are those derived from the factor analysis.

Table 5.21 Pearson correlation matrix with modified variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Age</td>
<td>-.289</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Firm tenure</td>
<td>-.094</td>
<td>.757**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Firm size</td>
<td>.015</td>
<td>-.271</td>
<td>-.211</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Audit activity</td>
<td>-.339*</td>
<td>.633**</td>
<td>.311*</td>
<td>-.287</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Partner</td>
<td>-.0111</td>
<td>.388**</td>
<td>.225</td>
<td>-.251</td>
<td>.380*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Modified profession ethical climate</td>
<td>.337*</td>
<td>-.085</td>
<td>-.131</td>
<td>-.009</td>
<td>-.017</td>
<td>-.051</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Social ethical climate</td>
<td>.057</td>
<td>.03</td>
<td>.035</td>
<td>.054</td>
<td>.014</td>
<td>.014</td>
<td>.547**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Modified business ethical climate</td>
<td>.099</td>
<td>.006</td>
<td>-.092</td>
<td>.196</td>
<td>-.122</td>
<td>-.284</td>
<td>.359*</td>
<td>.331*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Profession comfort</td>
<td>.191</td>
<td>-.068</td>
<td>-.091</td>
<td>.037</td>
<td>.052</td>
<td>-.107</td>
<td>.560**</td>
<td>.625**</td>
<td>.367*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11. Business comfort</td>
<td>.231</td>
<td>-.221</td>
<td>-.152</td>
<td>.073</td>
<td>.043</td>
<td>-.0105</td>
<td>.247</td>
<td>.453**</td>
<td>.202</td>
<td>.550**</td>
<td>1</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

As is displayed in table 5.21, all three components of ethical climates seem to have a positive significant effect on profession comfort. Modified profession ethical climate and social ethical climate are significant at the 0.00 level, indicating a strong relationship, whereas modified business ethical climate is merely significant at the 0.05
level. Even though all three ethical climates seem to have a positive effect on business comfort, only social ethical climate shows a significant relationship. Finally, all three ethical climates seem to have a positive significant relationship to each other, indicating that firms supporting one climate also support the other two. The modified Pearson matrix provides useful indications on which variables to apply in the upcoming multiple regression analysis, based on modified variables.

5.6 Multiple regression analysis with modified variables
To produce a model that provides a better explanation of the variance in each type of comfort, a multiple regression analysis based on the modified variables was conducted. Since the factor analysis confirmed the initial division of comfort, the dependent variables still consist of profession and business comfort. The independent variables will include the ethical climates derived from the factor analysis and the control variables gender and age. Below follows a regression test of profession and business comfort.

5.6.1 Regression test on profession comfort with modified variables
As is shown by the unstandardized coefficient B in table 5.22, all variables except age are positively affecting profession comfort. The standardized coefficient beta shows that modified profession ethical climate and social ethical climate are contributing more to the model while the other variables do not contribute as much. When the model consists of all variables simultaneously, only social ethical climate appear to be significant even though the modified profession ethical climate is deemed contributive. Even though the VIF values do not indicate any multi-collinearity the Pearson correlation matrix showed a high correlation between all types of ethical climates. To avoid multi-collinearity, the variables that do not contribute to the model will be removed in order to attain the combination of significant variables that in the model provides the highest explanatory value.
Table 5.22 Regression test on profession comfort with modified variables 1

Dependent Variable: Profession comfort

<table>
<thead>
<tr>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.816</td>
<td>.082</td>
<td></td>
</tr>
<tr>
<td>Modified profession ethical climate</td>
<td>.260</td>
<td>.248</td>
<td>.121</td>
</tr>
<tr>
<td>Social ethical climate</td>
<td>.372</td>
<td>.446</td>
<td>.004</td>
</tr>
<tr>
<td>Modified business ethical climate</td>
<td>.130</td>
<td>.125</td>
<td>.341</td>
</tr>
<tr>
<td>Gender</td>
<td>.093</td>
<td>.057</td>
<td>.670</td>
</tr>
<tr>
<td>Age</td>
<td>-.004</td>
<td>-.044</td>
<td>.723</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .407$
Model Sig. .000

Out of the variables observed, the modified professional ethical climate and the social ethical climate together provide the highest explanatory value of profession comfort. As is shown by the unstandardized coefficient B. in table 5.23, modified profession ethical climate as well as social ethical climate is positively related to profession comfort. This indicates that when either of these climates increases, the profession comfort auditors feel also increases. Modified profession ethical climate and social ethical climate are significant in the model and contribute with explanations to the variance of profession comfort. The whole model is significant and has a 43.2% explanatory value, which is slightly higher than the value explained by the non-modified ethical climates. This indicates that the model based on the modified variables provides a better explanation to what influence the profession comfort of auditors.

Table 5.23 Regression test on profession comfort with modified variables 2

Dependent Variable: Profession comfort

<table>
<thead>
<tr>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.971</td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>Modified profession ethical climate</td>
<td>.326</td>
<td>.311</td>
<td>.029</td>
</tr>
<tr>
<td>Social ethical climate</td>
<td>.379</td>
<td>.455</td>
<td>.002</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .432$
Model Sig. .000
5.6.2 Regression test on business comfort with modified variables

As is shown by the unstandardized coefficient B. in table 5.24, all variables except modified profession ethical climate and age are positively affecting business comfort. The standardized coefficient beta shows that social ethical climate is the only variable that distinctly contributes to the model. When the model consists of all variables simultaneously, only social ethical climate appear to be significant. Even though the VIF values do not indicate any multi-collinearity the Pearson correlation matrix showed a high correlation between all types of ethical climates. To avoid multi-collinearity, the variables that do not contribute to the model will be removed in order to attain the combination of significant variables that in the model provides the highest explanatory value.

Table 5.24 Regression test on business comfort with modified variables 1

<table>
<thead>
<tr>
<th>Dependent Variable: Business comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unstandardized Coefficients</strong></td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Modified profession ethical climate</td>
</tr>
<tr>
<td>Social ethical climate</td>
</tr>
<tr>
<td>Modified business ethical climate</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Age</td>
</tr>
</tbody>
</table>

Adjusted R² = .196
Model Sig. .021

As is shown in table 5.25, the model that gives the highest explanatory value, including significant variables only, consists of the social ethical climate alone. As is shown by the unstandardized coefficient B., social ethical climate is positively related to profession comfort. This indicates that when the social ethical climate increases, auditors’ business comfort also increases. The whole model is significant and the social ethical climate explains 18.6% of the variance of business comfort.
Table 5.25 Regression test on business comfort with modified variables 2

<table>
<thead>
<tr>
<th>Dependent Variable: Business comfort</th>
<th>Unstandardized Coefficients B.</th>
<th>Standardized Coefficients Beta</th>
<th>Sig.</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>3.314</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social ethical climate</td>
<td>.420</td>
<td>.453</td>
<td>.002</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Adjusted $R^2 = .186$
Model Sig. .002

5.6.3 Summary multiple regression analysis with modified variables
Applying the revised groups of ethical climate derived from the factor analysis has enabled an improvement of explaining the variance of both profession and business comfort. The explanation value of both profession comfort and business comfort increased. The new explanatory value of profession comfort is 43.2%, which is explained by the modified profession ethical climate and the social ethical climate. The new explanatory value of business comfort is 18.6% and is explained by the social ethical climate. Social ethical climate seems to be an important influential factor in both profession and business comfort.

5.7 Discussion
On the basis of prior research and theory, this study predicted that the ethical climate in audit firms affect the comfort of auditors, which in turn affects how auditors assess the audit quality. Both the initial profession and business ethical climate proved to have a positive significant effect on both profession and business comfort. The initial profession ethical climate, including efficiency, social responsibility and laws and professional codes, seems to have a bigger effect than the initial business ethical climate. Since the initial profession ethical climate involves a fair amount of social elements, and considering that the social ethical climate has a significant effect on both profession and business comfort, this outcome is reasonable. By comparison, the initial business ethical climate has a smaller positive effect on profession and business comfort. An explanation might be that company profit, being an element in the initial business ethical climate, proved little effect on either type of comfort.
According to Pentland (1993), auditors are expected to be an exceptionally cohesive social group, which might explain why the factor analysis identified a third type of ethical climate, associated with social characteristics. This new type of ethical climate came to include efficiency, social responsibility and team interest and proved to have a positive significant impact on profession and business comfort. In his study, Shafer (2015) finds that elements of social ethical climates, e.g. social responsibility, affect the behavior, attitudes of employees. Since auditors’ feelings and perceptions are reflected by their actions, the social ethical climate is expected to affect the comfort of auditors.

The modified profession ethical climate, including firm rules and professional laws, proved to have a significant impact on profession comfort but not on business comfort. This outcome indicates that auditors comply with internal and external rules and guidelines in order to feel profession comfort whereas these elements seem to have little effect on auditors’ business comfort. This is confirmed by Broberg (2013), whom suggests that auditors produce profession comfort by exercising professional rituals and routines and by following professional systems. By doing so, less effort is addressed to business aspects (Broberg, 2013).

The modified business ethical climate, which clearly includes company profit and to some extent social responsibility, show no significant effect on either type of comfort. As company profit involves monetary attributes, this finding indicates that ethical climates supporting profit maximization gives little comfort to auditors. Weyland (2011) finds that the new generation values relationships over money, they are environmentally conscious and demand development for the long term. In this respect, it is reasonable to believe that the social ethical climate, rather than the modified business ethical climate, has a more significant influence on the comfort of auditors. Nevertheless, considering that making profit is a major concern for audit firms and since 40% of the respondents are partners, company profits would have been expected to have a significant influence on business comfort (Carrington & Catasús, 2007). In this regard, the finding in this study contradicts this expectation.

All types of ethical climates seem to have a positive relationship with each other, which indicates that, for instance, when an audit firm has a high social ethical climate, the other two types of ethical climates are also high. According to Cullen et al. (2003), organizations usually produce different variants of ethical climate types that encourage
employees to act in the best interest of the organization. Thus, it is expected that audit firms produce a mix of ethical climates that encourage auditors to satisfy the professional and commercial interests of the firm. This might explain why all three ethical climate types seem to positively affect both types of comfort. This in turn explains why the two hypotheses predicting a negative relationship were unsupported.

Profession comfort and business comfort also seem to have a positive relationship with each other. This indicates that when auditors feel a high profession comfort their business comfort is also high, and vice versa. Even though no negative effects were identified, Broberg (2013) argues that there is a negative relationship due to time and budget pressure. However, it occurs at a certain breaking point where auditors’ gain profession comfort on the expense of business comfort, and vice versa (Broberg, 2013). Hence, one explanation to the positive relationship between profession and business comfort might be that the respondents in this study have not reached this breaking point. That is, the negative relationship has not yet occurred.
6 Conclusions

This chapter contains the conclusions that can be drawn from this study and begins with a summary of the study and its findings. The summary is followed by empirical, methodological and theoretical contributions, which are in turn followed by ethical implications. Finally, reflections of the findings are presented followed by limitations and suggestions for future research.

6.1 Summary of the study and its findings

There is no generally accepted way of measuring audit quality and prior research has shown that measurements used have produced conflicting results. The underlying purpose of this study is consequently to offer a new perspective of audit quality from auditors’ point of view. Since they seem to evaluate the quality of audits on the basis of their profession comfort and business comfort, comfort was used as proxy for audit quality. In this regard, the study aims at answering the following research question; how do ethical climates in audit firms affect audit quality, evaluated in terms of auditors’ profession and business comfort?

Prior research and theories form the foundation upon which four hypotheses were derived. As a means to test the hypotheses and consequently answer the research question, a quantitative survey consisting of a self-administered questionnaire was sent out to Swedish authorized auditors. Even though the response rate was relatively low, the representativity of the respondents was deemed acceptable and makes for fairly generalizable results.

The first hypothesis predicted that the higher the level of profession ethical climate, the more profession comfort the auditors feel. This hypothesis is supported as the multiple regression analysis showed that profession ethical climate has a positive significant effect on auditors’ profession comfort. The second hypothesis predicted that the higher the level of profession ethical climate, the less business comfort the auditors feel. This hypothesis in not supported as the multiple regression analysis showed that profession ethical climate has a positive significant effect on auditors’ business comfort. In this respect, auditors perceive a high audit quality when their audit firm encourages efficiency, social responsibility and following laws and professional codes.
The third hypothesis predicted that the higher the level of business ethical climate, the more business comfort the auditors feel. The multiple regression analysis showed that business ethical climate has a positive significant effect on auditors’ business comfort, which supports the third hypothesis. The fourth hypothesis predicted that the higher the level of business ethical climate, the less profession comfort the auditors feel. This hypothesis is not supported as the multiple regression analysis showed that business ethical climate has a positive significant effect on auditors’ profession comfort. In this regard, auditors perceive a high audit quality when their audit firms encourage company profits, team interest and following firm rules and procedures.

None of the control variables seemed to have any significant effect on auditors’ comfort. Thus, personal, work related and firm characteristics, e.g. gender, age, firm tenure, firm activity, partner and firm size, are shown to have little effect on the audit quality perceived by auditors.

To identify groups of interrelated statements and detect previously overlooked patterns, the analysis was further developed through a factor analysis. The factor analysis on comfort gave consistent component identification in line with the initial division of profession and business comfort. Regarding ethical climate, the factor analysis identified three distinct groups of interrelated statements. Not only were the elements in the two original groups intermixed, but also an unobserved group of ethical climate was detected. The new grouping of statements was translated into new variables, which are referred to as modified profession ethical climate, social ethical climate and modified business ethical climate, and tested on the relationship between ethical climate and comfort. When applying these new variables to the model, a wider explanation of the variance of auditors’ profession and business comfort was achieved. The social ethical climate seems to have the strongest impact on both profession and business comfort, whereas the modified profession ethical climate only seems to influence profession comfort. The modified business ethical climate seems to have very little effect on both types of comfort.

In conclusion, a strong ethical climate, regardless of type, seems to increase the perceived audit quality of auditors. The extent of the increase is however dependent on the balance between the different types of ethical climates as they appear to affect the comfort of auditors to different degrees.
6.2 Empirical contributions

The findings in this study contribute with an alternative view on how to evaluate audit quality. Considering that this study has focused on the auditors, being the practitioners of audits, and considering that they are highly qualified to assess the quality of their work, the findings offer valuable insight to all parties of interest. The empirical data shows that the model developed by Victor and Cullen (1988) is applicable in an auditing context. Furthermore, the study contributes with empirics showing that ethical climates have positive effects on audit quality. The results also indicate that there are two distinct groups of comfort. Thus, the empirical data clearly confirm the findings of Broberg (2013). In summary, this study contributes with insights to the research of audit quality.

6.3 Methodological contributions

The ethical climate model developed by Victor and Cullen (1988) has been widely used in prior research and their questionnaire on ethical climate is well tried and validated. This study operationalized parts of the model and modified the statements in the questionnaire to suit the auditing context. Thus, this study contributes with a refinement of the statements that has proven to be applicable in an auditing context.

Previous research on auditors’ comfort has to a high degree been conducted using qualitative methods, e.g. observations and interviews (Broberg, 2013; Carrington & Catasús, 2007; Pentland, 1993). In this study, the concept of comfort was quantified using a seven point Likert scale, on which the auditors valued their own comfort. Thus, by adopting a quantitative method to capture the comfort of auditors, this study contributes with a different approach to measuring the concept of comfort.

6.4 Theoretical contributions

This study aimed at contributing with a conceptualization of audit quality and providing a new measurement that forward the findings of Broberg (2013). She found that auditors assess the quality of the audits they carry out in terms of profession and business comfort. Thus, this study offers research on profession and business comfort as proxy for audit quality and conceptualizes audit quality on the basis of the findings. The findings confirm that comfort, in an auditing context, consists of two distinct components where one component clearly includes elements associated with profession comfort and where the other component includes elements related to business comfort.
The study initially builds on the ethical climates identified by Cullen et al. (2003). When applying their model on an auditing context, profession and business ethical climates were derived. The implementation of the tests showed that both profession and business ethical climates have positive significant effects on both profession and business comfort. The analysis continued beyond the hypotheses testing and the factor analysis contributed with a regrouping of the elements of the initial profession and business ethical climates. The elements of the initial ethical climates were intermixed and a third component was identified. One component was predominantly associated with company profit and was thereby referred to as the modified business ethical climate. One component consisted of elements associated with the internal rules and procedures and external laws and professional codes. Auditors as professionals must abide by these rules and laws and because of this, the component is referred to as the modified profession ethical climate. The third component includes elements of social character and is thereby referred to as the social ethical climate. The new grouping of ethical climates gives a better explanation of the effects on profession and business comfort among auditors. Thus, this study contributes with a theoretical improvement of the model, developed by Victor and Cullen (1988), when applied as a determinant of auditors’ comfort.

Tepalagul and Lin (2015) indicate that prior research has been insufficient in measuring audit quality. Studying a new perspective might therefore be in favor of the theory revolving the concept of audit quality. On the basis of the premise that audit quality may be assessed in terms of auditors’ profession and business comfort, this study contributes with a new theoretical perspective on what affects audit quality.

6.5 Ethical implications
Parts of the ethical climate model, developed by Victor and Cullen (1988), were refined to better suit the context of this study and the elements of the model were regrouped in the process of the analysis. The regrouping resulted in three different components, including one socially characterized component that was previously overlooked. The original classification of the elements within the two dimensions in the ethical climate model proved to be intertwined when applied in an auditing context. The element of company profit merely stand on its own, though it proved to have little importance in establishing a climate where auditors enhance their comfort. Worth mentioning is that social responsibility have a tendency to relate to this component that was later named
modified business ethical climate. Friedman (1970) and Baron (2001) highlight that embracing social responsibility is crucial in staying competitive and maintaining a profitable business, making this grouping reasonable.

Elements of efficiency, social responsibility and team interest grouped together and proved to have a significant positive influence on both profession and business comfort of auditors. In line with this discovery, firms should promote and support a climate where efficiency and social responsibility are encouraged and desirable and where team interest is cherished. When auditors sense a climate pervaded with these social characteristics, their comfort increases and they will consequently feel that they produce high quality audits.

Finally, elements of firm rules and procedures and laws and professional codes were grouped together. The fact that audit firm rules and procedures may not violate professional laws (Öhman, 2007) might explain why internal and external regulation seems to internmix. This component was named modified profession ethical climate due to its professional implications and proved to have a positive significant effect on auditors’ profession comfort.

Overall, this study has proven the importance of having a strong ethical climate as a means to make the auditors feel comfortable and subsequently to enhance the perceived audit quality of auditors. The findings indicate that having a good social ethical climate will positively affect auditors’ comfort to the highest degree, and will therefore increase their perceived audit quality the most. Establishing a climate where following internal and external regulation is encouraged will also increase the perceived audit quality as it contributes to the profession comfort of the auditors.

6.6 Reflections of the findings

The findings in this study show that personal, work related and firm characteristics seem to have little effect on the comfort auditors feel, which is somewhat surprising. The personal characteristics, e.g. age and gender, have proven to affect comfort somewhat whereas work related and firm characteristics, e.g. firm tenure, audit activity, partner and firm size, seemed to have almost no effect on auditors’ comfort.
The findings suggest that there is a positive significant relationship between all types of ethical climate and both types of comfort. An interpretation of this occurrence is that the respondents were given statements that were all positively contingent, which may have created a tendency for the respondents to more easily answer all the statements in a similar way. By negatively reversing some of the statements, the outcome might have showed different results. On the other hand, using positive contingent statements exclusively was intended as a means to avoid misinterpretation and simplifying the answer process for the respondents.

The findings indicate that the social ethical climate, including efficiency, social responsibility and team interest, influence auditors’ comfort. This finding was not expected and seemed surprising at first since auditors are expected to strictly follow laws but at the same time work in line with the interest of the audit firm. Above company profit and rules and laws, auditors seem to increase their comfort in climates where social elements are supported. On a second thought, this outcome seems logical and is in line with the social development of the society where firms are expected to embrace responsibilities towards the employees, the profession and society (Baron, 2001; Friedman, 1970).

6.7 Limitations and future research

As this study only focused on Swedish authorized auditors, the findings may not be generalized and applicable on authorized auditors in other countries. In addition, the result may have turned out differently if the study would have included non-authorized auditors as well. Hence, future research may take inspiration from this study and apply the concept in other countries and on both authorized and non-authorized auditors.

A structured questionnaire was used in this study, which prevented the respondents from answering more openly. A qualitative research method, e.g. interviews, would have generated a deeper understanding of the relationship between ethical climates and auditors’ comfort. Thus, future research might contribute to a development of the findings by letting the auditors answer more freely.

Due to time and resource limitations, conducting a retest and a follow-up of the respondents was not possible. Hence, no verification of the responses has been done. Furthermore, the low percentage of respondents in relation to the whole population makes for a questionable generalization. The questionnaire was active for only a short
period of time, which might have contributed to the low percentage of responses. To attain a better generalizability, future researchers with more time and resources could apply the same concept and receive a higher response rate, preferably with a retest and a follow-up.

This study has proven that ethical climates explain a significant part of the variance of auditors’ comfort but there are still other determinants. The findings indicate that profession comfort is to a great extent explained by social factors, e.g. team interest, efficiency and social responsibility, and professional attributes, e.g. external and internal regulation, whereas the variance of business comfort received a far less explanation from the ethical climates observed. Future researchers could take inspiration from this study and search for other possible determinants, which would favor a deeper explanation to what brings comfort to auditors, particularly business comfort.

The control variables used in this study proved to have a vague effect on the comfort of auditors. There might be other, hereunto overlooked, variables that have a more significant effect on comfort. Broberg (2013) mentions time and budget pressures as influential factors. To further the study on audit quality by using comfort as proxy, future research might generate other explanations to how auditors’ comfort fluctuates by using time and budget pressure as independent variables.
7 References


Sylvander, J. (2014). To measure what is ethically important in the decisionmaking process for auditors as managers: the development of a multidimensional instrument.


Appendix 1: Questionnaire English

1. Gender
   - Female
   - Male

2. Age

3. Number of years as employee at current firm

4. Number of employees in your office (approximately)

5. Number of signed audit within the last 6 months (approximately)

6. Are you a partner?
   - Yes
   - No
7. Please answer to what degree you think that the following statement is consistent with the work climate at your firm.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Fully disagree</th>
<th>Fully agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Employees always strive to work in the most efficient way possible.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employees are expected to contribute to the highest economic profit for the audit firm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. It is important to strictly follow the audit firm’s rules and procedures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Decisions that affect the client and the public are primary concerns.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Employees are expected to minimize the costs for the audit firm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. It is important to consider what is best for every employee.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Employees are expected to strictly follow laws and professional codes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Employees are expected to adhere to the audit firm’s rules and procedures.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. The well being of every employee is a priority.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Laws and professional codes are the primary considerations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. It is expected that every employee work in a socially resource-efficient way.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Employees are expected to do what is right for the client and society at large.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Please answer to what degree the following statement is true.
Before I sign off an audit I feel the need to ensure myself that I:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Fully disagree</th>
<th>Fully agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>have added value to the client.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have followed laws and professional codes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>can feel pride in my position as a professional auditor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have added value to the audit firm.</td>
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<td></td>
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<tr>
<td>have had a good connection with the client.</td>
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<tr>
<td>have had the ability and knowledge to execute every step in the audit process accurately.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have received sufficient information from the client to be able to execute the audit accurately.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>have created conditions for a long-lasting cooperation with the client.</td>
<td></td>
<td></td>
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</tbody>
</table>
Appendix 2: Questionnaire Swedish

1. Körn
   ☐ Kvinnor
   ☐ Man

2. Ålder

3. Antal år som anställd på nuvarande byrå

4. Antal anställda på ditt kontor (vara ungefärligt)

5. Antal påskrivna revisionsuppdrag de senaste 6 månaderna (vara ungefärligt)

6. Är du partner?
   ☐ Ja
   ☐ Nej
7. Var vänlig och ange till vilken grad du anser att följande påstående stämmer överens med företagsandan på er byrå.

<table>
<thead>
<tr>
<th></th>
<th>Instämmer helt</th>
<th>Instämmer inte alls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
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<tr>
<td>2.</td>
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<td>8.</td>
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<td>9.</td>
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<tr>
<td>10.</td>
<td></td>
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<tr>
<td>11.</td>
<td></td>
<td></td>
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<tr>
<td>12.</td>
<td></td>
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</tbody>
</table>
8. Var vänlig och ange i vilken grad följdande påstående stämmer.

Innan jag undertecknar en revision känner jag ett behov av att försäkra mig om att jag:

<table>
<thead>
<tr>
<th>Instämmer inte alls</th>
<th>Instämmer helt</th>
</tr>
</thead>
<tbody>
<tr>
<td>geft klienten ett mervärde.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>följer lagar och professionella regler.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>kan känna stolt över min professionella roll som revisor.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>skapat mervärde för byrån.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>haft en god kontakt med klienten.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>haft förmågan och kunskapen att utföra alla steg i revisionen på ett korrekt sätt.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>fått tillräckligt med information från klienten för att kunna utföra revisionen på ett korrekt sätt.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
</tr>
<tr>
<td>skapat förutsättning för fortsatt samarbete med klienten.</td>
<td>〇 〇 〇 〇 〇 〇 〇 〇</td>
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</tbody>
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