#### **CRANFIELD UNIVERSITY**

Michelle Spiteri Bailey

# Conceptualising a Framework of Trust-Based Auditing by Focusing on Service Quality, Scepticism and Ethics

School of Management

PhD in Leadership and Management

PhD

Academic Year: 2018

Supervisor: Dr Andrea Moro (Laurea, MBA, PhD) Associate Supervisor: Dr Tomasz Piotr Wisniewski

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#### **ABSTRACT**

A number of financial scandals exposed over the past years have been perpetrated with the active involvement of auditors, negatively affecting the perception of trust and usefulness of the audit. The scope of this research is to understand auditors' and clients' perceptions of trust in the audit and identify factors to restore trust. Such a research has not yet been conducted in Malta, characterised mainly by small family businesses where all registered commercial companies, regardless of size, need to have audited financial statements. This study conceptualises a framework of trust-based auditing, based primarily on factors such as ability, benevolence and integrity.

Perceptions and opinions from auditors and their respective clients were collected using a questionnaire. The information collected determines whether a framework based on service quality, ethical behaviour and professional scepticism leading to audit usefulness could be established and to determine a set of client attributes perceived to increase trust.

Results revealed that whereas auditors perceive that service quality, ethical behaviour and professional scepticism increase trust, their clients, on the other hand, opined that service quality is inversely linked to reputation and the latter is inversely related to trust. Auditors perceive all observable factors as equally and positively influencing service quality, ultimately increasing trust. Clients perceive reputation as a substitute to trust and service quality as a substitute for reputation. They also expressed the view that increasing the independence of auditors will increase unethical behaviour. Findings revealed that auditors and clients agree that assessing the company's creditworthiness and performing a review for possible bias, fraud or error, increases audit usefulness, and to a lesser extent trust. A set of management attributes perceived by both auditors and clients to increase service quality and ultimately trust in the audit were also identified. These attributes mainly include the importance of adequate support by management and accurate record keeping by the client.

#### Keywords:

Audit, Ethical Behaviour, Professional Scepticism, Service Quality, Trust.

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#### LIST OF ABBREVIATIONS

ARM Audit Risk Model

ASA American Statistical Association

CRA Credit Rating Agencies

EC European Commission

ECT The Expectation-Confirmation Theory

EFA Exploratory Factor Analysis

EPQ Ethics Position Questionnaire

EY Ernest & Young

EU European Union

FRC Financial Reporting Council

IAASB The International Auditing and Assurance Standards Board

IFRS International Financial Reporting Standard

IESBA International Ethics Standards Board for Accountants

ISA International Standard on Auditing

ICAEW Institute of Chartered Accountants In England and Wales

PCAOB Public Company Accounting Oversight Board

PIE Public Interest Entity

PWC PricewaterhouseCoopers

RSA Royal Society for the encouragement of Arts, Manufactures and

Commerce

SEM Structural Equation Modelling

SME Small and Medium-sized Enterprises

SOX Sarbanes-Oxley Act of 2002

TPB The Theory of Planned Behaviour

US United States

"Trust is what auditors self"

(Buddery et al., 2014, p.12)

#### CHAPTER 1 – INTRODUCTION

#### 1.1 Motivation

Previous research identified that trust is based on benevolence, ability and integrity (Ridings *et al.*, 2002, Mayer *et al.*, 1995). Therefore the perception that the trustee has altruistic intentions, the skill, competence, characteristics to perform the job and is ethical, fosters a relationship of trust. Bayles (1986, p. 27) further specifies that a profession is identifiable due to three important characteristics namely: "the provision of an important service, the possession of special knowledge requiring higher education, and the existence of an organisation". The underlying reason why I set out to perform this research is my belief in the importance of these qualities that define the professional auditor.

Considerable resources are invested in ensuring that auditors have the appropriate knowledge and expertise to apply laws and regulations in the performance of their work. The work performed by institutions and audit companies worldwide are an attestation to this. This research does not focus on this aspect but on the other more human side, which requires a set of attributes that are not solely of a technical nature. It focuses on service quality, ethical behaviour and professional scepticism in the performance of an audit. A litany of financial scandals, have been exposed over the past years, such as Enron, Worldcom and Parmalat amongst others. Unfortunately it transpired that these have been performed with the participation of auditors. This has put pressure on the perception of trust in, and the usefulness of the audit. This was further accentuated in the European Union (EU) by the intervention of the European Commission (EC) when it introduced a number of measures to reaffirm trust. When I first started this research the primary motive was my belief in the usefulness of the audit of financial statements tarnished by these unfortunate developments at the time, that were discrediting the auditing profession. In the process of my research it transpired that these motives were not only mine but also shared by professionals, regulators, legislators, and

academics, notable through the increase in discussion of the importance of trust, quality and integrity.

A report issued by Ernest & Young (EY), one of the Big 4 audit firms worldwide, stated that, "an effective audit truly challenges and tests the contents of the financial statements in order to form an opinion on whether they present a true and fair view" (2013, p.1). It further stated that amongst other qualities an audit should be performed with appropriate scepticism taking into consideration the risks of the entity and its control environment, continuous improvement and a high level of audit quality has to be maintained, with communication and interaction with those charged with governance, management and audit committees, if confidence is to be maintained. The arguments put forth by EY were further endorsed by the International Federation of Accountants (IFAC) (2014) who developed a framework for audit quality stating that a quality audit is achieved if the team: exhibits the appropriate values, ethics and attitudes; is knowledgeable and dedicates the appropriate time for the audit; is rigorous in its audit procedures; provides useful reports and interacts with its stakeholders, amongst others.

The Institute of Chartered Accountants In England and Wales (ICAEW) (n.d.) expresses its concern that scandals involving auditors unfortunately continue to happen. Describing the incidents and their impact of greater proportion than before. ICAEW (*Ibid.*) further questions the continued relevance of auditors. Challenging auditors to keep abreast of the changing needs of users of financial statements, such as the request for more audited non-financial information and challenges brought about by technology. It also highlights that as professionals they should focus less on the technical and defensive debates and more on "removing opacity in the public interest" and using empathy, reasoning and a broader multidisciplinary technical skill set".

Recently the work of the auditors has again been brought into disrepute due to further auditing scandals. Major cases brought to light in 2018 included the collapse of the Carillion group in the UK. This was attributed to the collective role of the internal and external auditors, namely Deloitte and KPMG respectively, where it was declared that this was not due to inexperience or

incompetence, but ultimately lack of care and independence, fearing a loss of fees (Financial Times, 2018). Another case involved PWC, also a notable Big 4 firm. The Financial Reporting Council (FRC) in its capacity as the UK regulator, fined PWC £6,500,000 and the audit partner £325,000, also barring him from practicing as auditor for 15 years, due to failure to apply the appropriate methodology (Accountancy Daily, 2018).

A survey published by the FRC (2016) highlighted that stakeholders require that auditors have strong technical and analytical skills. These skills however have to be supplemented with other specialist and communication capabilities, specifying that an auditor should be able to "build honest and positive relationships", "conform to high ethical standards", have "a healthy dose of cynicism and scepticism", "being curious and gaining knowledge of the business" and "must not be afraid to challenge management" (FRC, 2016, p.26). The developments and opinions of all involved further increased my determination to continue with my research. A statement by Sir Winfried Bischoff, Chairman of the FRC encompasses in a few words the scope of this research:

"Strong corporate governance and audit quality are essential to good decision taking in business, maintaining public and investor confidence in the integrity of business, and in particular, building trust in the reporting of company performance. However, over recent years, we have seen failings in governance, reporting and audit which not surprisingly have led to a loss of public respect, and ultimately, trust in business.

Trust is very important. I personally believe that to regain trust, we in business probably need to focus also on building respect..."

(FRC, 2018)

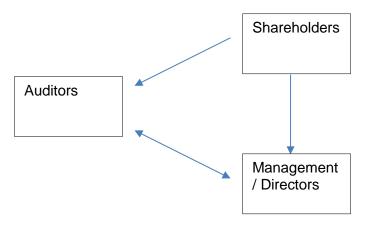
#### 1.2 Background Infromation

#### 1.2.1 A relationship of trust

The role of auditing is ultimately to provide an independent review of the financial information. One of the auditor's roles is to oversee the interest of shareholders (Schilder *et al.*, 2005). Therefore the auditor facilitates social

relations (Malsch & Gendron, 2009) by providing an independent check on the information provided by management. The audit consequently reassures shareholders that the financial information provided by management is trustworthy (Malsch & Gendron, 2009).

Figure 1-1 The relationship of trust between the auditor, shareholders and management



The directors are entrusted with managing the company, including engaging the auditors on approval by the shareholders. Trusted audited financial information, ultimately strengthens the position of directors within the company and improves the publicly held image of the company. It is of utmost importance therefore, that the directors trust the appointed auditors (Power, 2003). "*Trust is a reciprocal relationship*" (Haws *et al.*, 1989, p. 1) wherein an effective relationship requires both parties to trust each other. Auditors have to establish a relationship of trust with management to be able to perform the audit (Popova, 2013). As stated by Rennie *et al.* (2010, p. 279) "*A financial statement audit cannot be conducted in the absence of the auditor's trust of members of client management*". Client management know the company more than any other person, due to their involvement in the day to day running of the company, therefore their help is vital and the auditor must inevitably place an element of trust in management (Rennie *et al.*, 2010).

#### 1.2.2 The Expectations Gap

The statutory audit has a social function involving a relationship of trust. Whether this function is being addressed depends on whether the auditor is providing assurance. It also depends on whether the auditor is meeting the expectations of the intended users. If the auditor fails to fulfill such expectations, then an expectation gap occurs (Ruhnke & Schmidt, 2014). Interested parties, namely regulators, auditors, users and preparers of financial statements have raised the issue of the expectations gap within the audit profession a number of times. Therefore one can conclude that this gap has been a catalyst for many debates, discussions and change. However failure to address the expectations gap brought with it an impairment of the "legitimacy of the statutory audit in society" (Ruhnke & Schmidt, 2014, p. 573).

A number of accounting scandals jeopardized the financial sector in 2002, brought about by the collapse of companies such as Enron and WorldCom. The perpetrators of this downfall were officials of the companies themselves, but unfortunately the auditors were also involved. The US responded to this calamity by enacting the Sarabanes-Oxley Act of 2002 and establishing the Public Company Accounting Oversight Board (PCAOB). Consequently for the first time, auditors in the US were subject to external oversight (PCAOB, n.d.). In the aftermath of the economic crisis, the EC issued the Green Paper, 'Audit Policy: Lessons from the Crisis' (EC, 2010). In its press release (ref IP/11/1480), the EC (2011) declared that audits of some large financial institutions have before, during and since the 2008 financial crisis resulted in 'clean' audit reports despite weaknesses in the financial health of the organization. Consequently, the EC introduced, amongst other measures, more stringent rules for the audit sector aimed at strengthening the independence of auditors. These included the amended EU Directive 2014/56/EU (European Commission, 2013) and the new EU Regulation 537/2014 (European Commission, 2014). In December 2017, the FRC issued its three-year strategy, whereby it announced that it intends to increase its oversight of the audit profession, introducing new monitoring and supervisory practices.

Auditing is a public service. This service provides confidence to business and society in a set of financial statements. Legislative amendments within the EU have over the years increased the number of exempted small and micro companies from the requirement of an audit. Although all public interest entities, namely companies whose shares are traded on a regulated market, credit and insurance institutions and any other companies designated by the member states, are still required to submit audited financial statements. The only two countries within the EU that require all financial statements to be audited are Cyprus and Malta (Accountancy Europe, 2016). All the other EU countries have exempted small and micro companies from the requirement to submit audited financial statements for statutory purposes. In the US only public companies are required to submit audited financial statements. When a company registers its securities with the Securities and Exchange Commission it has to publish their annual audited financial statements.

A number of factors have contributed towards the decrease in legislative requirements including the view to reduce the burden of the cost of the audit for small companies. Therefore it is important that the audit is believed to be useful to both large and small companies. Practicing auditors are conscious of the problems facing the auditing profession at the moment, but might be well served in terms of self-interest and view reform as threatening. However it is important to bear in mind that if "stripped to its essentials, the auditing profession has nothing to offer without public confidence and trust" (Boland, 1982, p.125), and should therefore concentrate on adopting the "romantic ideal of deserving public trust" (Ibid.). Regulators cannot make auditors trustworthy. Trust should be earned and developed outside regulation. This can be achieved by research and investigating the opinions and concerns of all the effected parties.

#### 1.2.3 Trust and Audit Usefulness

The focus of the research is trust in the auditor and the resultant perceived usefulness. Trust will be evaluated using the factors of ability, benevolence and integrity, cited in previous research (Mayer *et al.*, 1995; Ridings *et al.*, 2002). Focus on these determinants of trust has been conducted in view of the distinguishing features of auditing, which as described by Pandit *et al.* (1999),

include; intangibility, immediate delivery and consumption, perceived importance of the reputation of the audit firm, and the high degree of interaction between the parties. These features necessitate a high degree of trust as one of the most important psychological states determining the relationship between the auditor and the client. Perceived usefulness of the audit is the next step leading to continued acceptance of the audit of financial statements (Mou J. et al., 2017).

#### 1.3 Contribution to research

A number of studies have evaluated the importance of auditing and the importance of upholding audit quality. However to date few studies have focused on the importance of a relationship of trust, which ultimately leads to increased audit usefulness. Therefore the importance of trust should be brought into highlight. This research aims to close this gap and formulate a conceptual framework of trust-based auditing. The framework primarily consists of the application of the factors of ability, benevolence and integrity identified by Mayer et al. (1995), to the auditing function. These factors have been used to validate whether a framework of trust-based auditing conceptualised on the factors of professional scepticism (ability), service quality (benevolence) and ethical behaviour (integrity) will effectively lead to a useful audit.

The observable indicators of the factors of service quality, ethical behaviour and professional scepticism have been used in this study to examine trust and usefulness. As analysed in the literature review these indicators have in the past been examined individually within the context of auditing, however never together and in a framework to validate trust. Furthermore Ashani *et al.* (2016) describe that within the wider context of trust in general there are a limited number of studies that focus on the different sub-constructs. In looking at prior studies in preparation for this research, studies have for example focused on auditors' trust and confidence in the client (Aschauer *et al.*, 2015; Keller & Killough, 2009), openness of communication and demonstration of concern (Rennie *et al.*, 2010), audit usefulness by Tabone & Baldacchino (2003), however never collectively to establish trust.

Other studies have focused on these factors in other relationships apart from auditing such as Whitener *et al.*'s (1998) identification of communication and demonstration of concern influencing employees' perceptions of managerial trustworthiness. Shapiro *et al.* (1992) contended that trust in business relationships leads to less monitoring, also confirmed by Ratnasingham (1998) who stated that trust increases confidence and security in business. This research looks at these studies and applies those perspectives to the relationship between the auditor and the client. Considering whether better communication and empathy has a relationship with trust and understanding the interaction of increased monitoring by regulatory authorities and trust.

#### 1.3.1 The applicability of the trust-based framework in the local context

This research aims to investigate the applicability of trust-based framework for auditing within the local context. Other recent studies have been conducted in Malta such as the study by Cluett (2016) who looked at issues related to the Agency Theory in the context of Maltese family businesses or the relevance of the annual audit for owner managed companies in Malta (Tabone & Baldacchino, 2003), however the studies did not evaluate the concept of trust between the Maltese entity and its auditor.

This research will study the contribution of the observable factors of service quality, ethical behaviour and professional scepticism on trust and continued usefulness, in Malta which is characterised by small and medium-sized companies, mostly owner managed. Additionally it will also contribute towards understanding the relationship between the auditor and the client in other countries of the European Union (EU), since ultimately small and medium-sized entities characterize most of the EU, constituting 99% of its economy (EC, n.d.). As previously observed another distinct characteristic of Maltese registered companies is that unlike the rest of EU countries, with the exception of Cyprus, all companies have to audit their financial statements regardless of size. Therefore although the rest of the EU countries have exempted small companies from auditing their financial statements, the regulatory authorities in Malta and Cyprus still require that companies audit their financial statements for tax purposes (Accountancy Europe, 2016). The obligatory requirement to

prepare an audit impinges on the perceptions of the companies in question (Europe.eu, 2016), in view of the fact that the 'Think Small First' principle advocated by the EU is not followed but rather the transactions costs of abiding by regulations and legislation decreases the perceived trust and usefulness of the audit. Therefore the ambience of this study will provide an interesting and innovative insight.

#### 1.3.2 Service Quality

As mentioned earlier this research attempts to combine a set of factors to conceptualise a framework. Service quality is one of these factors and the SERVQUAL model by Parasuraman *et al.* (1988) has been used to determine some of the observable indicators leading to better service. Therefore the dimensions of assurance, empathy, reliability, responsiveness, and tangibles of SERVQUAL have been adapted to measure service quality in auditing. Kilgore *et al.* (2011) studied the relationship between audit firm and audit team attributes to identify which factors were given priority by the respondents. This research applies a number of the factors identified by Kilgore *et al.* (2011) to confirm or otherwise whether they also apply within the context of the Maltese economy and the relationship between the auditor and the client. Duff's (2009) theory that responsiveness to the client's needs and Pandit's (1999) involvement by higher members of the firm leads to increased service quality, have also been applied in this research.

#### 1.3.2 Professional Scepticism

A number of accounting scandals have been attributed to the lack of professional scepticism in the performance of an audit. It naturally follows that the application of this attribute is vital if trust is to be upheld. Nelson (2009) distinguishes between the neutral and the presumptive doubt perspective, advocating the latter as the preferred option. Bowlin *et al.* (2015) further state that regulators are also in favour of the presumptive doubt. This study will evaluate the contribution of scepticism to trust and usefulness in an audit, and contemporaneously identify the preferred option in the local economic scenario between the two. As part of the research evaluating professional scepticism

Hurtt's (2010) 'Scepticism Scale' as well as Knapp & Knapp's (2012) 'Theory of Cognitive Bias' have been used to identify certain specific characteristics, which contribute towards scepticism and ultimately lead to an increase in trust. The issue of whether the auditor should offer other services besides the audit has been, and continues to be a bone of contention. Critics have propounded that this impinges on the auditor's independence and professional scepticism. Although others (Ryan *et al.*, 2001) are also of the view of that this creates positive synergies. This concept has been used in this research to understand as to whether the auditors and clients perceive whether this would ultimately lead to an increase in trust and audit usefulness.

#### 1.3.3 Ethical Behaviour

Finally ethical behaviour as a sub-construct was also researched. Starting from the evaluation of the contribution of ethical education, which is also a subject of strong debate. Esmond-Kiger (2004), for example called for an increase in the level of ethical education, substantiated further by Rothenburg (2003) who stated that the style of education for ethics is inadequate. An important factor that also needs to be taken into consideration is the integrity of the person, which goes beyond education and extends towards the moral obligation towards the public in general (Mintz, 2016). These factors have all been included in the determination of what constitutes trust in the auditing process. Kohlberg's Theory of Cognitive Development (Kohlberg, 1973) is a frequently cited theory exploring an individual's level of ethical reasoning. Shaub (1994) stated that auditors tend to reason out ethics using a rule-based procedure and Eynon et al. (1997) further stated that auditors tend to exhibit lower levels of moral reasoning. Farmer et al. (1987) also argued that client retention affected an auditor's decision-making. These theories and opinions have been studied individually, however to date they have not been linked to the perception of trust and usefulness of the audit, whereas this research aims to fill this gap.

#### 1.3.4 The link between trust and usefulness

This research seeks to address a gap in research linking trust and usefulness as no specific studies were identified when performing the literature review. This

study will consequently look at factors/ attributes linked to audit usefulness, which includes an assessment of the creditworthiness of the company and contribution towards accuracy and possible management bias, as a consequence of trust in the auditor.

#### 1.3.5 Obtaining views from corresponding parties

The study consisted of collecting perceptions and opinions from auditors and their respective clients. This task entailed a time-consuming procedure whereby initially all practicing auditors were sent a questionnaire. A list of all registered companies in Malta was then obtained, their details were scrutinised and using a simple random selection, only clients serviced by auditors responding to the questionnaire were selected. Both auditors and clients were sent the same questionnaire. This methodology therefore involved the collection of views about the same matters from the auditors and their respective clients contemporaneously.

Ashnai *et al.* (2016) contend that trust is based on emotions between two individuals. However this trust is also extendable to trust between two organisations, which are made up of individuals (Tomkins, 2001). This study undertakes to establish the relationship between the auditor as an individual and organisation, with the respective financial controller or owner of the company. It therefore provides an innovative insight into the relationship of trust between these parties in whatever form. Relationships nurturing trust between two organisations have previously been studied, however very limited studies have been performed which deal with the issue of trust in a relationship between an audit firm and its respective client. Furthermore the dyadic nature where only clients of the respective auditors participating in the study were selected, further adds to the validity of the results and to the distinctive attributes of this research.

## 1.3.6 Evaluating the same model from the perspective of the auditors and the clients

The information collected as described above will be used to determine whether a framework of trust-based auditing based on service quality, ethical behaviour and professional scepticism could be established for auditors and their respective clients. This research therefore will determine whether the same framework is applicable for both parties. The resulting frameworks will thereafter be compared and evaluated for similarities and differences. The comparison of a trust-based auditing framework between auditors and their respective clients did not result in previous literature and the detailed comparison will certainly add to academic research and instigate further debate.

#### 1.3.7 Comparing and contrasting views held by auditors and clients

As described above, this research uses information collected from previous studies and examines their relationship to trust. It consequently also delves into a detailed evaluation of the views held by both parties with respect to the individual observable factors and their relationship with trust. Such an in-depth analysis and comparison between the two parties, about the detailed observable factors was not encountered in the preparation of this thesis, and will consequently contribute significantly in the area of trust and audit usefulness.

## 1.3.8 The determination of management attributes to foster a relationship of trust

Another area addressed by this research is the determination of a set of management attributes that facilitate a trust-based relationship. Client management know the specific details of their organization more than the auditor, therefore the auditor has to trust management. Consequently an audit cannot be performed without the support of management. This entails that management responds to the queries posited by the auditor, but also that information given to the auditor has to be accurate. Therefore the auditor also has to trust management. This research will aim to determine the set of attributes perceived by both auditors and client, in their respective bid to foster a relationship of trust.

# 1.4 The underlying conceptual theory, the research questions and hypothesis

The scope of this research is to understand the perceptions of trust in the audit, by the auditors and their clients, ultimately leading to increased audit usefulness. Various studies and opinions were taken into consideration, ultimately it transpired that the three most cited determinants of trust were: ability, benevolence and integrity, as identified by Mayer *et al.* (1995). This research consequently addresses these concepts by examining the relationship between an auditor and the client. It involved measuring the observable indicators for the latent, unobservable, intermediate variables of **service quality, ethical behaviour**, and **professional scepticism.** These intermediate factors correspond to the factors cited by Mayers *et al.* (1995) of benevolence, integrity and ability respectively, ultimately linking them to **trust** and **increased audit usefulness**.

Increased audit usefulness is the result of a relationship of trust in the auditor. The aspects considered were the perceived increase in creditworthiness of the company, and the deterrent of management bias and identification of possible fraud or error in the preparation of financial statements. A study by Carcello *et al.* (1992) identified that auditors and preparers of financial statements evaluate audit quality differently. This concept has therefore been applied in the development of a framework and opinions were collected from both parties.

The views collected were consequently used in this study to address the following main research questions:

- A. Can trust in the auditor produce a useful audit?
- B. What client attributes are necessary components of trust to enable a useful audit?

Whereas the following are the hypothesis supporting the research questions above, that this research set out to confirm:

H1 Perceived quality of the auditor's service affects management's trust in the auditor.

H2 Auditor's ethical behaviour promotes auditor's trust in management.

H3 Auditor's professional scepticism is positively related to management's trust in the auditor.

H4 Usefulness of the audit increases credibility and confidence in financial reporting.

### **CHAPTER 2 LITERATURE REVIEW**

#### 2.1 Introduction

This literature review investigates the various determinants of trust with particular focus on the auditor-client relationship. It initially gives a brief overview of the origin of auditing and its scope. An exploration of the causes of lost trust ensues, analysing determinants such as the financial crisis and the expectations gap. This is followed by an in-depth analysis of the concept of trust, focusing on the definition of trust. Exploration of published literature on the concepts of client risk, knowledge management and trust in the client, highlights the importance of reciprocal trust in the client. Finally, studies discussing the relationship between interpersonal trust versus inter-organisational trust taking into consideration the audit firm's hierarchical structure shed light on another aspect of trust.

The above sets the groundwork to identify the pillars of a model of trust between the auditor and the client. Reference is made to literature published to date by other academics and institutions combining the various attributes grouped under two dimensions - service quality and technical quality. The dimensions were studied by focusing on service quality in terms of customer focus and technical quality in terms of professional scepticism. The importance of ethics as another essential pillar for constructing a model of trust was also evaluated. The literature review concludes with a consideration of the importance of professionalism and regaining trust.

#### 2.2 Auditing, its roots and its purpose

#### 2.2.1 Auditing - the beginning

The roots of auditing can be traced as far back as 3000 BC, in ancient China, Egypt, Greece and Rome, where anthropologists discovered records of auditing (Schilder *et al.*, 2005). However, the importance of financial statement auditing surfaced during the industrial revolution, where management of a company

moved from the owners to third party managers. This change brought with it the need for the services of an independent auditor to detect any possible errors or fraud (Basu, 2009), ensuring that shareholders' interests were protected. In the mid-nineteenth century, audits were initially performed by the individual shareholders, and therefore principals acted as auditors. It soon became clear that they did not have the skills required and expert auditors were appointed to act on behalf of the shareholders (ICAEW, 2005).

The demand for auditing as a service has been explained in various ways amongst which are: the "Policeman Theory", "Lending Credibility Theory", "Theory of Inspired Confidence" and the "Agency Theory" (Schilder *et al.*, 2005). The Policeman Theory focuses on the prevention and detection of fraud, as well as arithmetical accuracy, whereas the Lending Credibility Theory is concerned with enhancing the stakeholders' assurance in the stewardship of the company. The Theory of Inspired Confidence takes it a step further relating to the possibility that management in control of the stewardship of the company might be biased, leading to a possible divergence in interests thus requiring an audit. Lastly, the Agency Theory proved to be a resilient and popular framework in understanding the request for external auditing (Carey *et al.*, 2000). The Agency Theory advocates that a company:

"is the result of more or less formal contracts, in which several groups make some kind of contribution to the company, given a certain price. Company management tries to get contributions under optimum conditions for management: low interest rates from bankers, high share prices for stockholders, low wages for employees. In these relationships, management is seen as the 'agent', trying to obtain contributions form 'principals' such as bankers, stockholders and employees" (Schilder et al., 2005, p. 46).

The principal-agency problem however occurs because the "interest of managers (the agent) is not in line with the interest of owners (the principal)" (Sami et al., 2011, p. 107). An auditor is therefore appointed to oversee the interest of third parties and shareholders.

#### 2.2.2 The external audit – its continued importance

The separation of ownership and management is not the only reason why the audit of a company's financial statements is still important. Another important consideration is the preparation and publication of the company's financial statements. Capital movements are possible if companies prepare financial statements using globally accepted financial reporting standards. These financial reporting standards include for instance, US Generally Accepted Accounting Principles accepted by North American Free Trade Agreement countries and International Financial Reporting Standards recognised by the EU (Yalkin *et al.*, 2008).

These internationally accepted financial reporting standards have to faithfully reflect the operations of the company. On the other hand, operations have in recent years increased in complexity, and financial reporting standards also had to adapt to the change in circumstances. Consequently, "...developments in financial reporting in recent years include significant changes in financial reporting standards, a greater use of fair values and the growth of narrative reporting" (ICAEW, 2009, p. 4).

Financial reporting standards have evolved from brief guidance notes to rigorous, comprehensive and detailed standards. The newly drafted standards, however, still require judgement due to uncertainty, complex business transactions and economic models. Of notable importance is the use of fair value accounting, i.e. the measurement of assets and liabilities at their current value, which have been on the increase for the past two decades (Ramanna, 2013). Challenges in fair value accounting include: estimation based on conditions prevalent at measurement date, judgements concerning significant assumptions made by experts, availability of information and subjectivity (IAASB, 2008). These complexities naturally affect the preparation of true and fair financial statements, and increase further the importance of the auditor in evaluating the correctness of the estimation and disclosure of fair values. Consequently, the increase in the complexity of financial reporting standards and increase in fair value accounting also brought about an increase in disclosure and narrative reporting. ICAEW (2009) argues that this is coupled

with a growing interest in narrative reporting and non-financial information. The auditor is therefore responsible for the truthful representation not only of the numerical information included in the primary financial statements, but also the notes to the accounts included in the financial statements, and to a limited extent non-financial information included in the management report (Directive 2014/95, EU).

It is therefore clear that information presented in the company's financial statements must be relevant, correct, complete and timely. Stakeholders such as shareholders, creditors, and potential investors require this information for decision-making purposes (Chaharmahali *et al.*, 2013). Whereas government, tax and legal authorities also want to ensure that publicly reported information is relevant and reliable. The function of auditing is and will therefore continue to be important in ensuring that financial information is reliable.

#### 2.2.3 Auditing in an owner-managed company

There are situations where the need for an audit of financial statements is not so evident, such as when the company is a small owner-managed company. The EU is characterised by small and medium-sized enterprises (SMEs), constituting the backbone of Europe's economy. "They represent 99% of all businesses in the EU. In the past five years, they have created around 85% of the new jobs and provided two-thirds of the total private sector employment in the EU" (European Commission, n.d.). The determinants of a SME as defined by the EU are staff headcount, and either turnover or balance sheet total as detailed in Table 2-1 below.

| Company      | Staff | Turnover | or | Balance sheet |
|--------------|-------|----------|----|---------------|
| Micro        | <10   | ≤ €2m    |    | ≤ €2m         |
| Small        | <50   | ≤€10m    |    | ≤€10m         |
| Medium-sized | <250  | ≤€50m    |    | ≤ €43m        |

(Source: European Commission, n.d.)

#### Table 2-1 Determinants of company size

Likewise Malta is characterised by small and medium-sized companies.

Statistics compiled in 2015 (Table 2-2) indicate that these constituted 99.8% of the share of companies registered in Malta, the vast majority of which are family

run (PWC, 2016; Lia, 2017). The consequence of this is that most of the businesses are owner-managed.

| Companies    | NUMBER | SHARE |
|--------------|--------|-------|
| Micro        | 25,371 | 93.5% |
| Small        | 1,399  | 5.2%  |
| Medium-sized | 318    | 1.2%  |
| SMEs         | 27,088 | 99.8% |
| Large        | 52     | 0.2%  |
| TOTAL        | 27,140 | 100%  |

(Source: European Commission - 2016 SBA Fact Sheet Malta)

Table 2-2 Number of companies registered in Malta in 2016

The distinction between ownership and control induces the principal to engage an auditor and incur additional financial costs to monitor the activities of the appointed agent (Tabone & Baldacchino, 2003). Therefore, in the case where the owner is also the manager of the company, the relevance of an audit might initially seem superfluous. However, all companies in Malta are required to audit the financial statements of the company for statutory purposes. Consequently, an audit of financial statements has to be undertaken regardless of the need for such charge.

Nonetheless, a study performed by Tabone and Baldacchino (2003) identified that the benefits gained from a statutory audit in an owner-managed company were twofold: it is useful to third parties, such as banks, creditors and tax authorities, having an interest in the company and secondly it has a positive effect on the owner-manager and staff. The expertise of an external auditor increases the creditability of the financial statements. Whereas the requirement of an audit imposes financial discipline on the owner-manager and his staff to ensure that transactions, balances and disclosures are faithfully reported in the financial statements. A study conducted in the UK by Collis *et al.* (2004) appraised the need for an audit in the case of small companies that do not require an audit of its financial statements for statutory purposes. It emerged that an audit was still considered to be important due to these two main factors. Similar to the study by Tabone and Baldacchino (2003), it emerged that banks, as lenders, still value an independent check and require that the accounts of their clients should be audited. Demand for auditing in the context of a family

business also increases in situations where capital is raised from outside investors that are non-family members. When diversity of ownership increases, an agency conflict is created because the 'family' owners, in certain cases, are interested in diverting funds for their personal use, to the detriment of the non-family owners. "As the proportion of non-family ownership and director representation rises, a greater demand for monitoring will be exhibited" (Carey et al., 2000, p. 39).

Collis *et al.* (2004) claim that an audit is not only considered to be useful to provide an independent check in situations when the shareholders in a small company are not entirely family-owned, but also when they are not involved in the day-to-day running of the business. As the proportion of managerial work delegated to non-family members increases, the greater is the possibility of management inefficiencies, misappropriation of assets, fraud and information asymmetry between management and owners (Carey *et al.*, 2000). In these cases, the loss of control by the owners introduces the agency/ principal issue referred to earlier and consequently the need for an independent audit of the company's financial statements.

#### 2.3 Lost Trust?

#### 2.3.1 The Financial Crisis and Loss of Trust

The auditor's role is clearly instrumental in bridging relationships: between shareholders and managers, between regulators and managers, and between third parties and owner-managers. An underlying prerequisite common to all roles is the prominence of trust in the auditor.

The basis of an audit is therefore a relationship of trust, whereby the auditor is entrusted with the role to provide an independent check on the work of managers as agents and of the information provided by the agent. Regrettably, due to a number of international scandals over the years, auditing is losing this important function of gatekeepers. Instead of improving the efficiency of markets by ensuring that financial statements are trustworthy, auditors were viewed as enablers "for their clients' efforts to mould financial statements to present pretty pictures that aren't true" (Miller & Bahnson, 2004, p. 14).

This was made possible amongst other reasons by hiding behind rule-based principles, rather than following principle-based accounting and auditing practices. Examples include Enron, which had billions of US dollar liabilities hidden in unconsolidated special purpose entities, coupled with doubts about the independence of Arthur Andersen as their auditors. Other financial frauds included the recording of billions of dollars as improper expenses by Worldcom, and the case of Xerox where six billion dollars were reported in artificial profits during a five-year term, just to mention a few of the financial scandals (Hans-Jurgen, 2007). The US reacted to this situation by issuing the Sarbanes-Oxley Act (SOX), signed by President Bush in July 2002. SOX was enacted to decrease or possibly eliminate "managerial misconduct and deceptive accounting in an effort to ensure alignment between managers' and shareholders' objectives" (Nejadmalayeri et al., 2013, p. 2991). SOX introduced a number of new requirements including an extensive change in the regulatory framework for public accounting and auditing, as well as increased guidance to strengthen corporate governance (Verchoor, 2012).

In Europe, audit guidelines are not as prescriptive as in the US and the focus is on financial statements to show a 'true and fair' view. Nonetheless, Europe also had its fair share of scandals, such as the auditors and bankers of FlowTex Technologie GmbH & Co KG in Germany who were oblivious to a scam of billions of Euros (BBC News, 2001); Grant Thornton S.p.A. in Italy signed off Parmalat's offshore unit Bonlat 2002 allegedly on the basis of a false document, which then resulted in a €3.95 billion fraud (Reuters, 2003); and the case of Ahold in Germany, where Deloitte, the auditors at the time, were accused of issuing misleading opinions when the Dutch retailer was involved in a multibillion euro accounting scandal (Reuter, 2012).

In the aftermath of the recent economic crisis the European Commission issued the Green Paper, "Audit Policy: Lessons from the Crisis", disputing the fact that banks incurred hefty losses between 2007 and 2009 regardless of the fact that auditors issued clean audit reports in that period. The Green Paper also refers to a report by the House of Commons Treasury Committee (2009) wherein auditors' responsibility was slammed because auditors endorsed banks'

financial statements as showing a true and fair view, and shortly thereafter the same institutions went bankrupt. This was the beginning of a European Audit Reform by the EC, followed by intense discussions. This culminated in an amended Directive 2006/43/EC and a new Regulation (EU) No 537/2014, which entered into force on 17 June 2014 allowing Member States two years to adopt the regulations at national level (Mazars, 2014). The new regulations include the reinforcement of the role of the audit committee within public interest entities (PIEs), the promotion of accountability and transparency in audit reports, increased transparency in the appointment of auditors for PIEs, increased regulation in the provision of non-audit services by auditors, mandatory firm rotation, and the promotion of joint audits (Mazars, 2014).

# 2.3.2 The Audit Expectation Gap and Loss of Trust

Misunderstanding of the scope of the audit by users, the audit report and audit methodology are all factors that created the Audit Expectation Gap. Unfortunately, an increase in management fraud, circumvention of rules by management and accountants as well as negligence by the auditors also contributed to widen the existing Audit Expectation Gap. Looking at these various factors holistically one can categorise them into two main causes: the gap between the auditor's role in providing assurance and the expectations of investors, and the gap between information made available to investors and the information needed by investors (Franzel, 2016). International Standard on Auditing (ISA) 200 (IAASB, 2016) describes the overall responsibility of an auditor when conducting an audit of financial statements. ISA 200 specifies that the scope of the auditor's opinion is to increase the confidence of users of financial statements confirming that the financial statements have been "presented fairly, in all material respects, or give a true and fair view in accordance with the framework" (IAASB, 2016, p. 72). However, an audit does not give an assurance that the company is a going concern, nor that management is efficient and effective. The responsibility for preparing the accounts is of the directors, and it is unrealistic to expect that the annual audit uncovers a complex fraud or an imminent collapse (The Economist, 1992). Peterson (2016) also argues that the audit report is not the

only issue, another key reason of the diminished usefulness of the audit is the inadequate audit methodology, largely based on the audit risk model and sampling methodology. He argues that audits should be redirected towards "indicators of potentially large-scale breakdowns" (Peterson, 2016:9).

As described by Salehi (2011), many users of financial statements not only misunderstand the scope of an audit, but also the meaning of the auditor's opinion. Users believe that an unqualified opinion means that the financial reporting of the entity is fool proof. The "standardized, commoditized language" (Peterson, 2016, p. 7) of the audit report has been heavily criticized. The simple pass/fail confirming that the financial statements are largely fine was giving the users no comfort at all. So much so that the PCAOB in the US, the FRC in the UK and the IAASB, all drove a strong agenda towards improving the audit report.

The misconceptions created by the Audit Expectations Gap between users' expectations of auditors and auditor's performance impinges on the trust held by users in auditors. ICAEW (2012b) reported that if the profession wants to regain trust, it is important that auditors communicate more effectively and transparently the results of the audit work performed. As discussed previously, the Audit Expectations Gap has not been eliminated and although much work has been performed internationally, it still needs to be addressed.

#### 2.4 Trust

Various studies have been conducted discussing trust, the quality of audit reporting, and the importance of ethical behaviour. The following sections initially give a brief overview of the concept of trust in general, and then focus on the determinants of trust within the context of an audit of financial statements.

#### 2.4.1 Defining Trust

"The nature of trust is such that, for the most part, it is taken for granted as we act out our daily lives, only being considered when trust is low" (Bews & Rossouw, 2002, p. 378). It is a vital concept facilitating economic, business,

social, and a number of other interactions (Ben-Her & Halldorsson, 2010). Without trust, many relations would be difficult and its absence would result in a pervasive loss to all parties involved. "The multidisciplinary nature and multitude of different perspectives, levels and facets behind trust research make agreement on a universally accepted definition of trust difficult." (Hoffman et al., 2010, p. 102) As explained by Rousseau et al. (1998, p. 394), "confident expectations and a willingness to be vulnerable" are included in most definitions. Therefore, trust is not 'blind faith', but is a calculated action taken following a rational decision making process, involving an element of risk (Firmstone & Morrison, 2000). Consequently, following the definition adopted by Rousseau et al. (1998, p. 395) that it is "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another".

Trust is an important commitment in a relationship (Morgan & Hunt, 1994). The trustor decides whether or not to trust, whilst the trustee wants to be trusted (Sekhon *et al.*, 2014). As explained by Mayer *et al.* (1995, p. 714), this relationship is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party." Mayers *et al.* (1995) state that this definition applies in situations where the trustor consciously enters into a relationship with the trustee. Furthermore, this relationship should not be confused with cooperation, confidence, and predictability, mainly due to the underlying concept of risk. The latter mentioned relationships have many commonalities with trust, but it does not necessarily mean that the parties involved are taking a willful risk, as in the case of a trust relationship.

# 2.4.2 Trust, Distrust and Mutual Trust

Trust and distrust are sometimes held to be on opposite ends of a continuum (Bigley & Pearce, 1988), wherein a trustor either does or does not trust another individual. On the other hand many academics are of the view that although trust and distrust are separate concepts, they are also related (Vlarr *et al.* 2007). Indeed Lewicki *et al.* (1998, p. 439) define trust as "confident positive"

expectations regarding another's conduct" and distrust as "confident negative expectations regarding another's conduct". Flores and Solomon (1998) contend that the concepts are not exclusive, but can co-exist, and stating the contrary would be an "oversimplified view of emotions" (Flores & Solomon, 1998, p. 214).

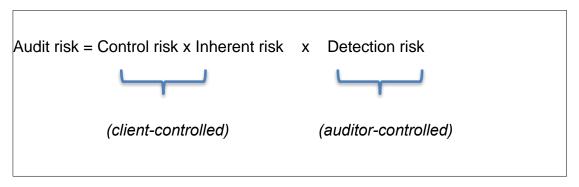
Some situations contribute towards the growth or erosion of trust, whilst other situations increase or decrease distrust (Lewicki *et al.*, 1998). This change is caused by the repeated interaction between the parties involved. Therefore, trust is not static and the diverse and repeated experiences will contribute towards the development of the various aspects of the relationship. The interaction will contemporaneously nurture the sentiment of trust and distrust depending on the various facets of this complex interpersonal relationship (*Ibid.*). On the other hand, this does not exclude the possibility that trust or distrust in a particular situation does not infer the same sentiment in a separate and distinct situation with the same person.

"Everyday life includes many mutual engagements" (Simpson, 2011, p. 408) requiring a trusting relationship. Self-interest might seem to threaten this relationship of trust and cooperation, abandoning the possibility of a joint effort (Simpson, 2011). On the other hand, the common objective to succeed in any particular endeavour entered into, will ultimately determine the actions of both parties. Haws et al. (1989, p.1) are of the view that "trust is a reciprocal relationship", wherein an effective relationship requires both parties to trust each other. The outcome of mutual trust in a dyadic business relationship is different to a situation where the parties do not trust each other or where trust is unilateral (Svensson, 2001). Trust in a downstream or upstream dyadic business relationship may be affected by a reciprocal relationship of mistrust in the chain. It is therefore important to have a synchronised trust chain.

### 2.5.1 Client risk, knowledge management and trusting the client

"The consideration of audit risk is a major focus for balancing the trade-offs between efficiency and effectiveness in audits" (Dusenbury et al., 2000,p. 105). The Audit Risk Model (ARM) is an operational tool used by auditors to determine the risk associated with an audit and to manage it (Accounting Tools, 2017). The ARM specifies that audit risk, is determined by control risk, inherent risk and detection risk:

Figure 2-1 The audit risk model



# Where:

- Audit risk refers to the overall audit risk;
- Control risk refers to the risk that the controls of the client do not detect a material misstatement (client controlled);
- Inherent risk is the risk that a material error exists due to the inherent nature of the items tests, for example there is a high element of judgement in a number of accounting entries (client controlled); and
- Detection risk is the risk that the auditor does not identify a material misstatement in the financial statements (auditor controlled).

When performing an audit, the auditor has to constantly review the above-mentioned risks to monitor the overall audit risk level (Accounting Tools, 2017). The auditor can only control detection risk, therefore audit risk should be set at an acceptable low level based on the auditor's assessment of the risks and audit evidence obtained (DeMartinis *et al.*, 2011). If control risk or inherent risk increases, then the auditor has to increase audit testing to decrease detection risk. Thus ensuring that the ARM is always in balance.

Client representations are a major determinant of audit risk within the ARM. In an auditor-client relationship, the auditor issues an audit opinion by performing audit tests based on information prepared and received by the financial controller. Therefore, the main focus of this relationship is the transfer of knowledge. Meier (2011) refers to knowledge transfer as the transmission of existing knowledge within or across firm boundaries. Further stating that entities voluntarily enter alliances for a number of reasons, with the ultimate scope of creating, transferring or applying that knowledge for commercial ends. An audit cannot be performed without the support of client management. They have indepth knowledge of the organisation they lead and are in a position to provide the auditor with the information required. As stated by Rennie *et al.* (2010), the auditor has no option but to trust members of client management to some degree. Trusting the financial controller, as client management, to transfer knowledge about the entity truthfully is therefore important to balance the ARM, to achieve audit quality and ultimately audit usefulness.

Trust is built as a result of continuous communication between the parties involved and thereafter develops or deteriorates following positive or negative relationships with the parties involved. It naturally follows therefore that an auditor's assessment of fraud risk related to a particular client, coming from negative experiences with that same client, is also negatively related to trust. Professional scepticism is a concept that will be analysed in subsequent sections. However, it is important to draw attention to a study performed by Keller & Killough (2009). They found that although a prior positive experience with a client might lead to an increase in trust by the auditor in the client, this on the other hand did not undermine the level of professional scepticism by the auditor. They argue that the explanation to this might be a result of the auditor's expertise and training, as well as the increase in the importance of professional scepticism by the press and various auditing standards (Keller & Killough, 2009).

Since the audit is also performed to provide an independent check on management, there are a number of components that are considered as relevant management attributes to foster a relationship based on trust.

#### 2.5.2 Clients' Attributes

Whitener *et al.* (1998) draw on agency and social exchange theories and examine the antecedents of managerial trustworthy behaviour and trust. They identify a number of behavioural factors that influence employees' perceptions of managerial trustworthiness, including communication and demonstration of concern. Furthermore, they reiterate that researchers identify three factors affecting the perception of trustworthiness, namely: accurate information, explanations for decisions and openness. Demonstration of concern or benevolence, on the other hand, consists of showing consideration and sensitivity to the needs of others, acting in the best interests of the others and refraining from benefiting at the expense of others.

Rennie et al. (2010) also examined the antecedents of trust by focusing on the attributes of openness of communication and demonstration of concern within the context of an auditor-client disagreement. Their findings were consistent with the arguments set by Whitener et al. (1998) who analysed employees' trust in management. Results indicated that the openness of communication and demonstration of concern displayed by a client during a disagreement were positively associated with the trust that the auditor has in his client. Whitener et al. (1998) discuss that accurate information in a principal-agency relationship is the strongest form of relationship when compared to other variables such as interaction, summarisation, gatekeeping and overload. An audit following International Standards on Auditing is conducted on the premise that management has acknowledged and understands that it has certain responsibilities (IAASB, ISA 210). These responsibilities include its obligation to ensure that there are adequate internal controls in place enabling the preparation of financial statements to be free from material misstatement. Furthermore, management is responsible "to provide the auditor with:

- a) Access to all information of which management is aware that is relevant to the preparation of the financial statements such as records, documentation and other matters;
- b) Additional information that the auditor may request from management for the purpose of the audit; and

c) Unrestricted access to persons within the entity from whom the auditor determines it necessary to obtain audit evidence."

(IAASB, ISA210, p.103).

Once management adheres to the above-mentioned obligations, an engagement letter is signed between management and the auditor, detailing the responsibilities of each party and formalising their relationship.

Drawing on arguments posited by Turner & Muller (2004) and Turner (2004) on agency theory, project management and formal agreements, written contracts cannot cover all eventualities. Although contracts aid cooperation and align the objectives of the parties involved, every contract is almost certainly incomplete. As described by Whitener *et al.* (1998), employees trust the managers more when communication is accurate and forthcoming. This same argument is also applicable within the context of an auditor-client relationship. The contract detailing the terms of engagement will cover the formal terms of agreement, however the auditor relies on the client's cooperation to receive accurate and adequate information. An open communication channel between the auditor and the client will increase the auditor's trust in the client.

Demonstration of concern has been discussed and tested as an antecedent to trust, in a number of studies (Rennie *et al.* 2010). Williams (2001) describes that cooperative behaviour is perceived to be benevolent actions or demonstration of concern and will act positively on perceived trustworthiness. Benevolence or demonstration of concern has been described as consisting of three actions, namely the demonstration of consideration and sensitivity to the other party, actions promoting the best interest of the other party and the restraint by one party from exploiting the other. These actions will contribute towards increased trustworthiness by auditor in the client.

The two attributes of openness of communication and demonstration of concern by the client increase the trust held by the auditor in his/ her respective client. This will contribute positively to aid in raising the bar of audit quality and ultimately the trust of the client in the auditor. However, as referred to previously, trust in the client might be perceived to impinge on the

independence of the auditor. On the other hand, management is also responsible to ensure that the auditor's independence is not impaired.

# 2.5.3 The client, independence and scepticism

Threats to independence put heavy pressure on an auditor's ability to maintain professional scepticism. Threats include "threatened dismissals and litigations, client pressure to reduce extent of audit work in order to reduce fees, having close family ties with client employees, lengthy audit tenures or acceptance of material gifts and hospitality from client" (Tahir et al., 2014, p. 73). The International Ethics Standards Board for Accountants (IESBA) Code (2014) describes these as self-interest threat, self-review threats, advocacy threat, familiarity threat and intimidation threat. The IESBA Code also details several safeguards, which the auditor should create to eliminate or reduce these threats.

The magnitude of the threats also depends on the pressure exerted by management. This pressure also referred to as the 'bargaining process', is a power struggle between management and the audit firm (Knapp, 1985). Where the bargaining power of management is due to its control over audit fees and continuity of the relationship. The audit firm also has its power sources, most importantly the audit opinion, although Knapp (1985, p. 203) argues that it is "insufficient to counterbalance management's broad power base".

Management therefore has a responsibility to maintain an ethical stance in this power struggle if it wants to maintain the relationship of trust with the auditor. Loss of trust in management will cause an imbalance in the ARM, increase in agency cost, decrease in audit usefulness and ultimately a decrease in trust held in the auditor.

## 2.6 Inter-organisational Trust

### 2.6.1 Interpersonal vs. Inter-organisational trust

Interpersonal trust facilitates cooperation and enables coordinated social interactions (Williams; 2001). So much so that "a group within which there is extensive trustworthiness and extensive trust is able to accomplish much more

than a comparable group without that trustworthiness and trust" (Coleman; 1998, p. 101). In studying the relationship between the auditor and the client, the consideration of the personal relationship established between the individuals is however as important as the relationship between the organisations. Similarly, as argued by Williams (2001), trust is also extendible to inter-organisational partnerships and other cooperative structures, because it facilitates informal cooperation, reduces negotiation costs and aids in the coordination of work.

## 2.6.2 Organisational trust

Ashnai *et al.* (2016) argue that very often trust is studied as a unidimensional construct, and there are only a few studies, which focus on the different subconstructs. Nonetheless, they claim that the main source of interpersonal trust is emotions, where a person trusts another person in a different company. On the other hand, the main source of inter-organisational trust is rationality, which involves a company relying on another company. In other words, holding positive expectations that an organisation can expect the other to fulfill its obligations, given its proven capability based on trust.

As described by Zaheer et al. (1998, p. 141) "trust in cooperative relationships is of fundamental importance". Trust is gained as a result of the service offered by an audit firm and is a combination of personal service offered by the manager, as an individual assigned to the job, as well as the holistic service offered by the audit firm. An organisation is a group of people, and can agree to place trust in another group (Tomkins, 2001). Therefore, in analysing the trust relationships between the auditor and the client, one also has to consider the relationship between the two organisations.

# 2.6.3 The positive interaction of Interpersonal and Inter-organisational trust

This relationship between an audit firm and a client, involves interpersonal trust placed in an individual member of the partner organisation, as well as interorganisational trust placed in the partner organisation. As identified above, trust at the two levels is related, ultimately translating into improved performance.

Zaheer *et al.* (1998) argue that the role of an individual within an organisation, acting within accustomed practices and routines influence inter-firm relationships, creating a stable context within which trust develops.

Highly institutionalised acts are resistant to change by personal influence (Zucker, 1977). Institutionalisation creates 'blueprints' where roles are enacted by parties, playing out preordained roles and routines, as well as facilitating inter-organisational relationships through continuity and predictability (Ring & Van de Ven, 1994). Consequently, established norms of the inter-organisational relationship are recreated in the process of personal exchange, nurturing interpersonal trust between the individuals involved, therefore implying "*that inter-organisational trust and interpersonal trust exert a positive influence on each other*" (Zaheer *et al.* 1998, p. 144).

Gulati (1995) also poses the question on whether there can be trust between two organisations, since intuitively people look at trust as an interpersonal rapport. He then concludes that findings indicate that relationships at organisational level do exist, exuberated by recurrent interactions, which create close relationships. This argument is reinforced further by Andrikopoulus & Prodromidis (2001), who state that long-term cooperation and confidence between an organisation and its external parties is based on goodwill and trust, resulting from personal interaction and cooperation. They posit that the interpersonal relationships created between an organisation and its external collaborator, contribute towards a reduction in uncertainty with reference to the expected behaviour of the participants.

In conclusion, as claimed by Jakobsen (2010), inter-organisation trust has a number of advantages, amongst which one identifies its role as a lubricant to smooth coordination between the parties. Established inter-organisational contacts aid in solving problems and helping each other out. Finally, trust between organisations reduces costs through coordination.

## 2.7 Constructing a model of trust

## 2.7.1 The importance of trust

As stated by Shapiro *et al.* (1992) trust in business relationships translates into less monitoring and greater speed in making decisions. Trust can reduce transactions costs, increase confidence and security (Ratnasingham, 1998). Trust aids in promoting information exchange between the parties, it reduces uncertainties and conjointly increases coordination and cooperation in a business relationship (Ratnasingham, 1998).

Focusing on trust within the services sector, researchers have professed a number of arguments promoting trust, contending that trust increases customer commitment, value, and loyalty towards the service provider (Schumann *et al.*, 2010). Providing a service includes an element of personal trust as well as abstract trust. Setó-Pamies (2012) summarised the definition of trust within the services industry as being the perceived credibility and benevolence of the provider, the willingness to rely on the service provider, the acceptance of vulnerability towards the service provider and the expectancy of positive outcomes resulting from the provider's motives. As posited by Firmstone & Morrison (2000) through predictability trust instills confidence.

Trust is the basis of ethical behaviour and affects all actions. As iterated above, trust results in increased business, customer loyalty, and profit margins. When people trust each other, they listen to each other, are likely accept criticism better and are more inclined to discuss and help each other. "If businesses are to thrive in the global marketplace, trust must be at the core of everything that is done" (Sonnenberg, 1994, p.14). However, trust is not guaranteed but must be earned by continuously nurturing and reinforcing it (Sonnenberg, 1994).

#### 2.7.2 A model of trust

The model conceptualized in this research is based on the concept of trust as explained by Mayer *et al.* (1995, p. 714). They explain that the relationship of trust is based on the "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that

other party." Mayers et al. (1995) further state that this definition applies in situations where the trustor consciously enters into a relationship with the trustee, and consequently applicable in situations where the client and the auditor enter into a relationship, in the performance of a financial statement audit.

(Mayer *et al.*, 1995) and Ridings *et al.* (2002) purport that scholarly research identifies trust as being supported by three main factors: benevolence, ability and integrity. Each factor is related to one another, but they are separable and therefore do not vary in unison (refer to Figure 2-2) (Mayer *et al.*, 1995).

Factors of Perceived Trustworthiness

Perceived Risk

Risk

Risk

Risk

Relationship

Outcome

Trustor's

Propensity

Propensity

Figure 2-2 Mayer et al.'s proposed model of trust

(Source: Mayer et al., 1995, p. 715)

Trust is based on benevolence, which encompasses an altruistic stance and is based on the expectation that the trustee desires to do good to the trustor. The trustee offers appropriate advice, help, and discussion with the intent to help, support, and care for others (Ridings *et al.*, 2002). However, trust earned due to benevolence is not enough, but requires other important elements such as ability.

Ability is a precondition that enables a party to have influence in a particular area due to a set of skills, competencies, and characteristics (Mayer *et al.*, 1995). Ability has been referred to using several synonyms such as competence, perceived expertise, interpersonal competence, business sense, and functional/ specific competence. Although some of the terms are generic, ability is held to be an antecedent to trust, which is task and situation specific (*Ibid.*). As described by Das (2001), ability is based on a number of prerequisites, including the resources and capabilities of a firm.

Last but not least is the construct of integrity, whereby the trustee is expected to adhere to a set of socially accepted moral and ethical principles. Integrity, as termed by McFall (1987) is not personal integrity, which depends on a person's conception of what counts, but rather "*a higher order virtue*" (McFall, 1987, p.14). As identified in the research carried out by Barnard *et al.* (2008), there are certain core values and principles that are agreed upon by everyone with integrity, regardless of religion or culture.

## 2.8 Audit Quality and trust

# 2.8.1 Audit Quality

The function of auditing is to establish whether the financial statements are true and fair. Ensuring therefore that audit quality is maintained is necessary for nurturing a trustworthy relationship between the auditor and the users. A particular feature that affects the quality of audited financial statements and which poses challenges for audit quality is the perceived usefulness of the audit. "An audit involves those responsible for preparing financial information (the directors of a company), engaging a firm of accountants (the auditor) to report in a way prescribed by legislation (a true and fair view opinion) to the users (the shareholders of the company)" (FRC, 2006, p.17). Ultimately, the level of audit quality depends on the perceptions of users of audited financial statements and is evidenced by the level of trust and respect that users have for auditors and auditing practice.

Pandit (1999) outlines four important, elusive characteristics, which amongst others distinguish auditing from other services. Auditing being a service is

intangible, therefore service quality is as important as technical quality, with a particular feature wherein the service is delivered and consumed contemporaneously. Consequently, the audit service given has to be followed up with reports and useful suggestions. The size and importance of the firm affects the credibility of the audit work and credibility of the audit opinion. Lastly, there is high interaction between the auditor as service provider and the client, therefore client communication can positively or negatively affect client satisfaction.

Another characteristic of the auditor is the way it sells its services. A financial audit is obligatory for certain companies and there is no other alternative to achieve the same objective, i.e. an alternative competing service is not available. The audit process and findings are very often obscure to the users of financial statements, who only see the end result consisting of a standard form audit report established by standards, except for cases when the audit report is modified and gives some more detail. Users are therefore unable to determine the quality of the audit due to the lack of information. Knechel refers to the characteristics of audit quality as being economically motivated. The end result of the audit is the audit report giving reasonable assurance. Therefore the residual risk is unknown, each engagement is unique, the audit process is a systematic activity, and finally the audit process is dependent on professional judgement.

An early definition of audit quality is that by DeAngelo (1981). DeAngelo states that users measure audit quality by assessing the probability of the auditor in both discovering and reporting a breach or misstatement in the accounting system or financial statements. As explained by Knechel *et al.* (2013), this definition refers to two facets of audit quality, namely the probability that the auditor finds misstatements and acts appropriately on the discovery of the misstatement. Knechel *et al.* (2013) detail further that the first part refers to an auditor's competence and effort, whilst the latter refers to the qualities of objectivity, scepticism, and independence.

In this study, audit quality has been linked to trust by taking into consideration the parameters that emanate from the definition by DeAngelo (1981) and

Knechel *et al.* (2013) described in the previous paragraph namely, higher audit quality in terms of general service standards, technical standards and independence. Service quality refers to client satisfaction and recognizes the importance of giving high-level service as a means of obtaining trust. In terms of technical standards, an audit of higher quality would involve adherence to relevant auditing and accounting standards and expertise demonstrated by the auditor. Finally, ethical behavior throughout the audit ensures that the final audit opinion increases the confidence of the users in the financial statements. Studies also revealed that audit quality is also dependent on the perceptions of the users. However over the years a difference in perceptions between the auditors and their clients has unfortunately been linked to the audit expectations gap.

Therefore this study uses the theory purported by Mayer *et al.* (1995) which identifies that trust is dependent on the factors of benevolence, ability and integrity and links them to the parameters of audit quality. Therefore service quality has been linked to benevolence, technical quality, in terms of professional scepticism, has been linked to ability, and ethical behavior, in terms of independence has been linked to integrity. Finally, this study examines the effect of these factors on the resultant perceived audit usefulness by the users. The following sections analyze these individual components in detail by referring to the various literature sources exploring the individual concepts.

#### 2.8.2 Service Quality and Customer Focus

Parasuraman *et al.* (1988) define the measurement of service quality as referring to a customer's assessment of excellent or superior service, resulting from comparing expectations with perceptions of performance. Parasuraman *et al.* (1988) developed the SERVQUAL model, which contains five generic service quality dimensions. These are assurance, empathy, reliability, responsiveness, and tangibles. Assurance refers to the knowledge and courtesy of employees and their ability to convey trust and confidence, whilst empathy is ensuring caring and individualised attention. Reliability entails the ability to perform the promised service dependably and accurately, responsiveness depends on the willingness to help customers and provide prompt service and,

finally, tangibles refers to the material appearance of physical facilities, equipment, personnel and communication materials (Duff, 2004).

An extension of the concepts in this model to auditing is perhaps required if auditors are to regain trust by the public. This would involve a conscious effort by auditors to involve themselves in activities such as discussions of the service provided with finance directors, identification of buyer preferences, including technical competence and reliability, and focusing on marketing, specifically external communications (Duff, 2004).

Service quality focuses on the behavioural perspective of audit quality to reaffirm trust in auditing, particularly the audit team attributes responsible for the particular client. Kilgore et al. (2011) distinguish between audit team attributes and audit firm attributes. Audit team attributes include characteristics such as: level of partner attention to the audit, communication and quality of working relationships between the audit team and client management, and the skills and experience of the audit, herein classified as service quality attributes. Kilgore et al. (2011) refer to audit firm attributes inferring on audit quality as being: audit firm size, industry experience, auditor reputation, audit tenure, provision of nonaudit services, audit quality review, and industry experience. The study undertaken by Kilgore et al. (2011) found that audit team attributes were considered relatively more important than audit firm attributes, with the exception of audit firm size. The study by Kilgore et al. (2011) revealed the following ranking of attributes in order of preference: 1) audit firm size, 2) partner/ manager attention to the audit, 3) manager knowledgeable of the client/ industry, 4) very knowledgeable audit team, 5) communication between audit team and client management, 6) audit firm industry experience, 7) partner knowledgeable about client industry, 8) provision of non-audit services, 9) audit partner tenure, 10) audit quality assurance review.

Duff (2009) identifies service quality as "a sustainable means of providing clients (and stakeholders) with what they want or need, better, and more effectively" (Duff, 2009, p. 401). Duff's statement is therefore a cue indicating that responsiveness to client's needs is an unobservable factor, which is vital for effective trust between the auditor and clients/ stakeholders. Studies found that

responsiveness to client needs is positively associated with auditor retention (Pandit, 1999 & Butcher, 2013). Auditor retention is naturally a result of high quality, satisfaction, and consequently trust. Therefore, auditors should continue or rather increase their focus on responsiveness to client needs. The study by Pandit (1999) also confirmed that involvement by higher members of the firm, such as senior audit managers, directors, or partners, is positively related to the clients' intentions to retain the audit firm. Results indicated that perceived increased involvement in the audit process, such as more frequent visits and communication by higher-level officials also increased client satisfaction. A report prepared jointly by the Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA)'s Action and Research Centre and Audit Futures (2014), highlights the possibility that the audit function in its traditional meaning risks "being overtaken by current events" (Buddery et al., 2014, p.10). The report argues that, if the auditor wants to continue being relevant, it should stop looking at the past, look forward, and embrace change. The focus of the auditor is to try to expand the focus of trust, by recognising the notion of shared advantages beyond the immediate user of the financial statements to other stakeholders. The information requested by stakeholders is nowadays more vast and forward looking, including environmental impact, employee health and safety initiatives, community development, supply chain practices and fair trade practices amongst others (Borkowski et al., 2011). The latter mentioned issues can be addressed by the promotion of sustainability reports and integrated reporting. At present, except for large public interest companies with more than 500 employees (EC-2, n.d.), reporting focuses on the company's own four walls (Deloitte; 2012): namely labour costs, manufacturing, logistics etc. However, changes are needed and reporting needs to be more relevant in today's difficult and ever-changing environment.

Another matter that auditors should take into account is the change in the nature of their job, the number of companies that are exempt from the requirement of an audit is growing and will likely increase due to the introduction of laws and regulations promoting small and medium sized businesses.

Although in Malta all companies are subject to an audit, the trend in Europe is to

exempt small companies from this requirement. There are a number of opportunities, which require the expertise and knowledge of the auditor, such as assurance required for limited reviews. Auditors therefore have to be more proactive and not wait for others to make their changes. They should emphasise the offering of innovative services, such as assurance on sustainability reporting and limited reviews.

Finally a study by Neu (1991), takes service quality a step further, and identifies four generic practices that encourage trust, namely hefty professional entrance requirements, control of the profession in terms of standards and codes of conduct, involvement in sustainable practices in society and the importance of disciplinary action of malpractice.

# 2.8.3 Technical Quality and Professional Scepticism

Lack of professional scepticism in the audit of financial statements, was labeled internationally by audit oversight bodies as one of the primary causes of the global financial crisis between 2007 and 2008. Unfortunately the lack of professional scepticism by the auditor still continues to be a major concern in current times. The exercise of professional judgement, but most importantly an attitude of professional scepticism, throughout the planning and performance of an audit, increases the quality of an audit (IAASB, 2012) and consequently the trust held by users in financial statements. Guilas *et al.* (2010, p.153) argue that this is due to three aspects, namely "*selective perception*, *escalation of commitment and discounting of information*", leading to the lack of professional scepticism.

In a speech delivered by the US Public Oversight Board Chief Auditor Martin Baumann at the AICPA Conference on Current SEC and PCAOB Developments in December 2012, stated that professional scepticism is fundamental to the performance of an audit. He continued stating as follows: "Regulators in many other countries such as Australia, Canada, Germany, The Netherlands, Singapore, Switzerland and the United Kingdom have each citied concerns in public reports about the lack of professional sc(k)epticism in audits they have inspected" (Sec Wire, 2013).

The lack of professional scepticism is evidenced by a lack of properly challenging explanations and assumptions. This was reported in a number of articles, reports and studies. An example of the latter is a study conducted by ACCA (2017), wherein it was reported that in 2014, the Australian Securities and Investment Commission found examples of auditors being over-reliant on explanations by management without properly challenging the underlying assumptions. Furthermore, evidence was only sought to corroborate estimates already given without challenging them. Locally, the Quality Assurance Unit, falling within the auspices of the Maltese Accountancy Board, stated in its report for 2016, that statutory auditors are not applying sufficient scepticism in challenging key assumptions in a number of financial statement items (Accountancy Board, 2017).

The International Federation of Accountants (2010, p. 27) defines professional scepticism as being: "An attitude that includes a questioning mind, being alert to conditions which may indicate possible misstatement due to error or fraud, and a critical assessment of evidence." As reported by ACCA (2017), professional scepticism is entrenched in the fundamental principle of objectivity, and contained in the Code of Ethics issued by the International Ethics Standards Board for Accountants. Objectivity should be strictly adhered to by professional accountants and requires that accountants should not compromise their judgement due to bias, conflict of interest or influence by others.

The EC also stressed the importance of scepticism. In Directive 2014/56/EU it specified that:

"Whilst the primary responsibility for delivering financial information should rest with the management of the audited entities, statutory auditors and audit firms play a role by actively challenging the management from a user's perspective. In order to improve audit quality, it is therefore important that the professional scepticism exercised by statutory auditors and audit firms vis-à-vis the audited entity be reinforced. Statutory auditors and audit firms should recognise the possibility that a material misstatement due to fraud or error could exist, notwithstanding the auditor's past experience of the honesty and integrity of the audited entity's management."

As detailed in Auditing Standard 230.09 (AU230.09) by the Auditing Standards Board in America, scepticism does not assume that management is dishonest, and neither does it assume unquestionable honesty. A study by Nelson (2009) revealed that academic literature distinguishes between the neutral perspective and the presumptive-doubt perspective in auditing. The neutral perspective adopts a doubtful stance without focusing on a particular direction. The presumptive perspective maintains that auditors assume some level of dishonesty and require more evidence to conclude that an assertion is free from material misstatement. Nelson (2009, p.1) advocates a more presumptive attitude towards professional scepticism and states that it is "indicated by auditor judgements and decisions that reflect a heightened assessment of the risk that an assertion is incorrect, conditional on the information available to the auditor". Furthermore, Bowlin et al. (2015) stated that regulators (although not equally) are increasingly in favour of the presumptive doubt approach, wherein auditors assume the possibility of management dishonesty. However, the right balance has to be struck, as an overly sceptic stance might result in an inefficient and excessively expensive audit, ultimately effecting audit quality. On the other hand, stakeholders of a corporation include investors, employees, customers, suppliers, and other interested parties, who require an independent review of the financial information. Therefore, the exercise of an adequate balance of professional scepticism is an important technical quality as a prerequisite for audits of high quality and consequently trustworthiness. Various factors have been identified as determinants of professional scepticism. Of particular note are the notions of auditor knowledge, traits, and incentives, which appear repeatedly in academic research. Risk-assessment studies have linked auditors' knowledge of their clients' competence, turnover, management integrity and other firm characteristics to the ability to modify the perceived risk assessment (Nelson, 2009). Popova (2013) specifies further that professional scepticism stems not from general auditing experience, but from 'client-specific experiences'. Client specific experiences refer to previous interactions between the auditor and a particular client. However, it does not refer to the character

traits exhibited by the client, such as the willingness to cooperate, but entails 'objective issues' such as any audit adjustments required. Traits include attributes, which have not been acquired through learning, but include the auditor's problem solving ability and ethical reasoning (Nelson, 2009). Hurtt's (2010) Scepticism Scale is a notable tool in this regard. Hurtt developed a scale measuring an individual's level of professional scepticism as a trait. The scale was created using characteristics "derived from audit standards, psychology, philosophy, and consumer behaviour research" (Hurtt 2010, p.150). Hurtt (ibid.) identified six characteristics including: a questioning mind, suspension of judgement, search for knowledge, interpersonal understanding, self-esteem, and autonomy. When tested on a group of auditors, the mean score was 77 using a 100-point scale.

ACCA (2017) also believes that since scepticism is a state of mind, which cannot be observed directly, one should refer to psychology for further guidance, specifically referring to the concept of cognitive bias. Cognitive bias affects the auditor's decision-making during an audit. It also influences users in their perceptions of audit quality and ultimately trust, in the auditor. The psychologist Daniel Kahneman and his associate Amos Tversky, (Tversky & Kahneman, 1974, Knapp & Knapp, 2012) defined the term cognitive bias as the tendency of decision makers to make systematic judgement errors. The errors are the result of information processing shortcuts or behaviour stemming from the decision-making process. Responding to cognitive bias will aid to mitigate the effect of known biases, including lack of scepticism, ultimately resulting in a high quality audit and increased trust in the auditor.

Competition and clients put heavy pressure on an auditor's ability to remain sceptical. Disagreements with clients and the importance of nurturing a long-term relationship all impose pressure on the auditor's independence and scepticism. This is particularly relevant in the on-going debate on the possible excessive familiarity in lengthy relationships between the auditor and the client, also possibly impinging on the trust held by other stakeholders of the auditor's independence. The relationship between the auditor and the client is particular, as it requires that auditors interact with the clients extensively, creating a

degree of closeness. As explained by Arel *et al.* (2005), this close relationship might create a conflict of interest and increase the auditor's tendency to relate to management's perspective, consequently impacting on the auditor's level of scepticism.

#### 2.9 Ethical Behaviour

In an interview, Jorgen Holmquist, Chairman of the IESBA (Holmquist, 2013) stated that following the economic crisis, the auditing profession was not criticised as much as rating agencies and banks, however the profession still received a setback and was not viewed as favourably as before the economic crisis. Mr Holmquist also stated that the board intended to continue raising awareness of the code, in spite of the fact that unfortunately it is not universally recognised that "professional accountants are committed to abiding by strict ethical requirements" (Holmquist, 2013, p. 54).

Ethics education should start when training to become an accountant. Esmond-Kiger (2004), states that "h(H)istorically, there have been many calls for increasing the level of ethics education in the accounting curriculum. These calls turned to screams in the wake of the corporate scandals of the past few years" (Esmond-Kiger, 2004, p. 42). Critics of the existing ethics education in schools maintain that presently the auditing course focuses on professional and business ethics in the third or fourth year when most of the students would have lost interest in the profession. This added to the fact that most of the coursework is concerned with the specifics of generally accepted accounting principles, which have increased in complexity in recent years, and unfortunately ignores ethics (Rothenburg, 2003). Observations by the IAASB-IAAESB-IESBA, Professional Skepticism Working Group stated as follows: "Instilling professional skepticism starts at the beginning of one's career. For auditors, some have said it needs to be "part of their DNA." Education and training can raise awareness and develop the needed attitude" (IFAC, 2017, p. 4). At present, accounting education places emphasis on developing students' capability to reason out ethical dilemmas, however one also has to take into consideration the emotional side of ethical decision-making. This also includes

the moral obligation to act in the public interest by remaining true to their role as "independent watchdogs over publicly traded corporations" (Mintz, 2016, p. 8). The IESBA code of ethics specifies that a professional accountant's responsibility should not be focused solely on the needs of an individual client, but shall act in the public interest (IESBA, 2013). However, rather than only focusing on the purely procedural, mechanistic or rules based duties, a better approach is to also look at ethics from a principle-based perspective (Satava et al., 2006). Hosmer (1994, p. 20) states as follows:

"The principles of ethical analysis are the means by which a person can objectively determine whether the decisions or actions that either have led or will lead to an expected mixture of benefits and harms are 'right' or 'wrong, 'just' or 'unjust,' 'fair' or 'unfair. Ethical principles are not subjective measures that vary with cultural, social, and economic conditions; they are objective statements that transcend countries, religions, and times". A plethora of academic literature refers to Kohlberg's theory of "cognitive development" (Kohlberg, 1973), when referring to an auditor's individual ethical reasoning. The scope of a moral development theory is to understand the processes a person goes through when faced with an ethical guandary (Sweeney & Roberts, 1997). Kohlberg identified three sequential levels of individual cognitive moral development, each composed of two stages. At the first 'preconventional' level an individual assesses what is right or wrong based on the consequences of the action. The second 'conventional' level of an individual's actions is affected by the expectations of others, and relies on rules to assess what is the correct course of action. At the last 'postconventional' level, an individual's actions are determined by universal ethical principles (Jones et al, 2003). "An individual's moral growth results from exposure to more advanced forms of moral judgement" (Sweeney & Roberts, 1997, p. 338). As described by Reiter (1996) people are unable to respond to moral dilemmas above their moral development. Specifying further that moral reasoning scores in the cognitive moral theory in general increase with age and education.

| Level Three – Post<br>Conventional | Stage Six: | Actions based on universal moral principles |
|------------------------------------|------------|---|
| Conventional                       | Stage      | Resolve differences impartially with        |
|                                    | Five:      | due consideration of everyone's             |
|                                    |            | interest                                    |
| Level Two –                        | Stage      | Society's laws or rules provide             |
| Conventional                       | Four:      | guidance                                    |
|                                    | Stage      | Actions influenced by a desire to           |
|                                    | Three:     | conform to group norms                      |
| Level One – Pre-                   | Stage      | Satisfaction of individual's own needs      |
| Conventional                       | Two:       | is primary motivation                       |
|                                    | Stage      | Avoidance of punishment                     |
|                                    | One:       |   |

(Source: Reiter 1996, p. 35)

Table 2-3 Kohberg's Cognitive Development Hierarchy

Auditors very often "think of ethics using a rule-based approach" (Shaub, 1994, p. 22), consequently engaging at the conventional level of moral development. However, auditing as a profession should perhaps start focusing on the next post-conventional level, promoting the awareness of moral ethical theories such as the 'Universal Rules' set by Kant, wherein actions are directed towards the greater good for society and away from self-interest motivated actions. This will enable an auditor faced with an ethical dilemma to act beyond the rules and consistent with internal held beliefs (Sweeney & Roberts, 1997). "Prior research finds that auditors who are more concerned with professional ethics exhibit greater professional scepticism" (Brown-Liburd et al., 2013, p. 311). Another research undertaken by Eynon et al. (1997) revealed that accountants unfortunately generally exhibit lower levels of moral reasoning ability than other professionals. Their research identified that this could be partly due to an educational environment, which does not promote the development of ethical decision making skills and a work environment, which is unsupportive of a higher moral reasoning process. The latter finding is disturbing given that accountants and auditors are entrusted with a role requiring independence at all times.

Auditors might occasionally find themselves in a negotiation process due to the fact that management might pressure auditors to show positive results in situations involving judgements and estimates. Some financial statement items cannot be measured with absolute certainty and may involve an element of

judgement and/or estimation. Bargaining power and expectations are major determinants in the negotiation or resolution process (Brown-Liburd & Wright, 2011). Unfortunately, in a study by Farmer *et al.* (1987) it was concluded that the loss of a client might influence the decision making by the auditors in situations of judgemental accounting treatments. Independence aided by professional scepticism is therefore an essential ethical principle in this negotiation process.

The previous argument links to thoughts expressed by Shapiro (2005). He discusses that the client will not insist that the auditor should "correct more subtle, hard-to-detect distortions in information presentation if those distortions depict the client in good light" (Shapiro, 2005, p. 1039). However, the auditor is also responsible to the public, particularly users of financial statements, who rely on the auditor's integrity to report truthfully. Professional and principlesbased ethics therefore play a crucial role in determining the actions of the auditor. Furthermore, an auditor has an incentive to adopt an ethical stance, since it is in their long-term interest to maintain their good reputation. This is an important economic asset if auditors want to continue enjoying public trust. An individual on his/her own however cannot promulgate ethics. It also has to be supported by the organisation within which they are employed. Ethics has to be promoted by implementing an "ethics code of conduct, obtaining top management commitment and support, the appointment of an ethics officer, ethics training, reward systems, a system to report unethical behaviour and the auditing of ethical performance" (Lloyd & Mey (2010, p. 2). Lloyd & Mey (2010) affirm that the importance of an ethical organisation cannot be underemphasised. An organisation's morality and ethical stance have increasingly become important qualities that stakeholders use to "define, perceive, and evaluate a company" (Douglas et al. 2015, p. 682), and are being held at par with an individual's morality and ethical attributes.

## 2.10 Audit Usefulness

Trust and relevance support each in the continued relevance of the profession. It is therefore vital that auditors and clients perceive that the audit is useful.

Studies performed by Dedman & Kausar (2012) and Duréndez Gómez-Guillamón (2003), identified that an audit and the audit report affects the creditworthiness of companies. Another important role of the auditor is the contribution of an auditor in reviewing accounting estimates, in view of the fact that they require judgement and are susceptible to bias, error and fraud. As reported by ICAEW (2005) an audit of financial statements aids in resolving unconscious bias involved in these situations. It also argues that directors also require an audit either because they do not have the necessary expertise in certain areas, or as check on errors in the financial statements, amongst others.

## 2.11 Regaining Trust

Auditors are privileged professionals on whom the society has placed trust in today's capitalist economy. This privileged position of a 'professional', gives auditors an autonomy and monopoly, which should not be taken for granted (Herrbach, 2005). As noted by Lewis & Weigert (1985, p. 462), "trust begins where knowledge ends". Trust is relied upon in dealing with situations of uncertainty, including complexity and possibly threatening perceptions of the future. Therefore, the element of trust increases as shared knowledge decreases (Neu, 1991). As professionals, it is the possession of this special knowledge that enables auditors to have an important role in society. The function of auditing is to ensure that work performed by other people is accurate, adequate and appropriate (Neu, 1991). Trust in the audit function is therefore important for an efficient and effective capital market. There are many public and private benefits to be gained from reinstating this trust, including "the equitable distribution of investment gains, reliable financial statements that encourage a broader range of investors, and the potential for higher investment returns through reducing financial statement risk." (IGAP Research Centre, n.d.).

Boland (1982) outlined his worry that although managers, auditors, and regulators are conscious of the problems facing the auditing profession at the moment, they are at the same time well served in terms of self-interest and view reform perhaps as threatening. He also concluded that if "stripped to its

essentials, the auditing profession has nothing to offer without public confidence and trust' (Boland, 1982, p.125), and should therefore concentrate on adopting the "romantic ideal of deserving public trust" (ibid.).

"Trust is what the auditors sell" (Buddery et al., 2014, p.12). The importance of trust should therefore be continuously brought into highlight regardless of the number of times the concept has been studied and discussed. Various studies have delved into the link between auditing and trust. This thesis will contribute towards a better and updated understanding of the importance of this relationship. A trust-based framework will be formulated by focusing on service quality, scepticism and ethical behavior, resulting in increased usefulness (refer to figure 5-2 for a schematic representation of the theory). As described in the literature review these indicators have in the past been examined individually within the context of auditing, however never together and in a framework to validate trust. The next section will focus on the research methodology adopted to study this relationship.

# CHAPTER 3 - RESEARCH METHODOLOGY

#### 3.1 Introduction

The research methodology adopted in this study is primarily of a quantitative nature. The empirical data is hard data, i.e. in the form of numbers, and relies mainly on positivist principles, focusing on variables and hypotheses. The ultimate scope of the study is to try to "verify or falsify a relationship or hypothesis" already established (Neumann, 2013, p.169).

The following section will initially elaborate on the research philosophy adopted in undertaking the study, describing the underlying epistemological assumptions. The next section will then detail the research design selected, namely the properties of the questionnaire including, its advantages and disadvantages. Finally, an outline will be given of the research analysis undertaken, also ensuring reliability and validity of the study.

## 3.2 Research Philosophy

Epistemological assumptions are important because they determine the selection of a particular method of evaluation (Smith, 1987). In this research the epistemological stance selected is of a positivist nature, although not entirely, as complete objectivity is not always possible, subjectivity (Hazan, 2016) and hence an element of interpretation was also deemed to be adequate for this particular study.

### 3.2.1 The Positivist Approach

"It would be helpful if we could begin this chapter with a clear definition of the term 'positivism', but unfortunately, that is not possible, since it has been, and continues to be, employed in varied ways." (Gordon, 1991, p. 271) On the other hand, there is general consensus that positivist research focuses on two central concepts. One of which is that reality can be explained by explanatory/independent variables and dependent variables. The other is that knowledge

can only be built on observation and experience by constructing complex statistical models using large volumes of data, wherein relationships are tested and hypothesis formulated (Major, 2017)

Positivism is an influential methodology in social science, with empirical positivism dominating psychological analysis. The school of thought of empirical positivism as advocated by Popper, implies that hypothesis are subjected to empirical testing to determine their statistical significance. One can therefore infer that Popperian empirical positivism strongly relies on *a priori* theorisation, although it does not stress on causality since the methodology does not permit large-scale generalisations as in the case of Cometian logical positivism (Babones, 2016).

As with any other theory, the positivist perspective is heavily criticised. Rodwell (1987) stated that although the positivist framework defines principles and procedures into clearly objective principles, this methodology is not suited to questioning and understanding the complexity of socio-behaviour. Hasan (2016) argued that the concept of 'variables' has serious flaws as it reduces change to quantifiable measures and not the underlying cause. Therefore, limitations of the positivists point of view which include ideas of emphasis on verification, proobservation, anti-causality, downplaying explanation, anti-theoretical "restricting reality to the observable", (Johnson, 2006, p. 229) were taken into consideration and an alternative has been sought as described in the following paragraphs. In formulating the model, a rough idea was initially conceived, but it was still rather unrefined even though conceived on a sound basis. The general idea formulated in a mathematical model was then reviewed to ensure that it was based on a good or reasonable interpretation. In determining the latter, choices had to be made based on "intuitions, hunches and ideas of what is needed that is not yet been fully rationalised" (Greiffenhagen et al., 2011, p. 103). Therefore, one can observe that although the methodology adopted was of a quantitative nature, the reasoning still included elements of an interpretive nature, thus diluting the element of positivism.

Audit is a Latin word for 'he hears', derived in this way because in ancient times the accounts of an estate were checked by having them called out by those who prepared them to those in authority. Adopting a philosophical approach to the concept of hearing, the research methodology and interpretation of findings of the research will mainly follow a positivist approach. Nonetheless an interpretive quantitative approach will also be adopted. This approach will ensure that the analysis is more meaningful in many ways including: providing a strong philosophical foundation on the appropriateness of the research questions asked or the data being analysed, and ensuring that the outcomes are identifiable to the rationale behind their construction. Finally, "interpretive quantitative methodology is all about the observed data and how they came to be generated" (Babones, 2016, p. 459).

## 3.3 Research Design

The research methodology focused on measuring the observable indicators for the latent, unobservable, intermediate variables. The scope of measuring the intermediate variables was to ultimately assess whether management trusts the auditor. The intermediate variables were also linked to discovering the necessary management attributes required to foster a relationship of trust. Questionnaires were sent to auditors and financial controllers to establish whether a framework of trust can be formulated based on the three pillars of service quality, ethical behaviour and professional scepticism.

# 3.3.1 The research question and the hypothesis

As mentioned in the introductory chapter the main research questions this study set out to find out were: whether trust in the auditor can produce a useful audit and what client attributes are necessary components of trust to enable a useful audit. A study addressing these research questions was initially contemplated using a dyadic approach. This approach is used to study relationships, interactions and exchanges between members of a dyad (Krazikova & Breton; 2012). Wherein data is collected at the individual level from the individual members. However, due to ethical, legal and methodological restraints this was unfortunately not possible. To be able to perform a dyadic study the individual auditors would have had to disclose the names of the clients they service, and

the corresponding client would have had to divulge certain practices by their auditor. However, in view of the fact that the auditor is bound by professional secrecy in ethical terms and legally due to data protection regulations, this was not possible. Furthermore, the business environment in Malta consists of a restricted community where everyone knows each other. Therefore, even if the restrictions described were not applicable, respondents would have been reluctant to disclose facts about the working relationship with their auditor, although anonymity would have been guaranteed. The idea of a corresponding trust relationship with management was deemed too important to disregard. Therefore, an exploratory research design was used with the aim of collecting the views held by both auditors and management.

# 3.3.2 The Population

The population consisted of auditors and their clients within the Maltese economy, and questionnaires were sent out between July 2015 and July 2016. Practicing auditors in Malta have to be registered with the Maltese Accountancy Board. At the time of research, the auditors included circa 1,000 members (Accountancy Board n.d.), wherein a list of these members was extracted and compiled. The names of the auditors were individually scrutinised by comparing their details to the LinkedIn profiles to identify whether they practice as auditors or professional accountants in business. 459 individuals were identified as possible candidates and questionnaires were sent by post to each individual. Non-responses were followed up with 2 or 3 emails. Another group of recent accounting graduates, who however did not yet hold a warrant, were identified as possible candidates. 72 individuals from the latter group were identified as working with an audit firm and the questionnaires were duly sent out. Repeated emails were sent out when replies were not received.

The target population of clients consisted of all companies who receive audit services from local audit firms. An official list of around 34,900 companies was obtained from the Registrar of Companies. This task was time consuming since questionnaires were sent out to the corresponding clients of the auditors who replied to the previously mentioned questionnaire. As detailed earlier a dyadic analysis was not possible, however as described by Tomkins (2001) an

organisation is a group of people and as such trust can be placed in an organisation. It was therefore decided to study the relationship between the two corresponding groups: the auditors and the corresponding client. A sample of clients was selected using a combination of stratified and simple random sampling. Shipping companies registered in terms of the Maltese Merchant Shipping legislation were excluded from the list, since at the time they did not require an audit. All public listed companies were selected, and private limited companies were selected using simple random sampling. 1,140 questionnaires were sent by post to financial controllers. Email reminders could not be sent out to companies, because email addresses were not available.

#### 3.3.3 The Questionnaire

Initially a pilot study was performed before carrying out the main study to collect the views of a selected close group of auditors and financial controllers whether the questions were clear and to identify any problems (Everitt, 2002). A few minor errors were detected and corrected before sending out the finalised questionnaire to the respondents.

An important quality of a questionnaire, which needs to be evaluated as it affects the response rate is its length. "There is little research on the absolute length of the questionnaire and how it affects the quality of the data" (Moskowitz et al., 2003, p.194). However, it is a fact that respondents, very often pressed for time, become bored with long questionnaires. Attention was therefore given to avoid asking the same questions posed in different ways, and subdividing the questions into sections.

The questionnaire consisted of two parts. A copy of the questionnaire can be found in Appendix A The first part focused on demographic information and asked for background details of the respondents such as age, gender, company / firm type and size and other specific questions referring to their employment as auditor, director, or manager. This was important as these details help to ensure that the sample is representative of the population. As stated by Boyton & Greenhalgh (2004, p. 1313) "Research participants must be able to give meaningful answers", therefore collecting information about their status gives additional insight as to the competency and adequacy of the respondents.

Whereas the second part included 42 questions, addressing the pillars of service quality, ethical behaviour, professional scepticism and increased audit usefulness. Questions focused on: a proactive / contributory attitude, higher concern, responsiveness, external communications, offering of other assurance services, the importance of reputation, capability, ethical position, indicators of professional scepticism and independence wherein participants were asked questions addressing length of tenure, trust in the client, provision of non-audit services, confidence in the client and ethical disposition. Finally, questions were also asked about the determinants of trust and the audit usefulness. All answers to questions to the second part of the questionnaire had to be graded on a Likert scale.

Using a questionnaire for data collection includes many relative benefits when compared to other data collections techniques. A questionnaire is quick to complete, economical, and easy to analyse amongst other attributes (Bork & Francis, 1985). However, the aforementioned advantages are counteracted by various criticisms. It is assumed that the researcher and respondents share the underlying assumptions of language and interpret the statement wording in a similar manner. Additionally, the closed questions "may restrict the depth of participant response and thus the quality of data collected may be diminished or incomplete" (Rattary & Jones, 2007, p. 235).

Respondents were asked to evaluate the items on a seven-point Likert scale from 'strongly agree' (1) to 'strongly disagree' (7) (Everitt, 2002). To counter the effect of bias in the responses, some items were reversed, i.e. coded in the opposite direction of the other items. A construct may have multiple meanings, therefore the design of the measurement instrument is important to ensure validity (Ograjensek & Gal, 2012). Research by Weijters *et al.* (2010) identified that when developing a new scale, it is advisable that the scale is fully labelled as "otherwise results may be biased against the inclusion of reversed items". Weijters *et al.* (2010, p. 245) also suggest that when determining the number of gradations, the 'type' of population has to be taken into consideration. A population rating high "on cognitive ability, verbal skills and/or experience with questionnaires" (Weijters *et al.*, 2010, p. 245) can respond better to increased

gradients, such as 7-points Likert scales, rather than the general population. This questionnaire was distributed to auditors and managers of a high academic level, therefore 7 category constructs were considered to be adequate for the purposes of this study.

Tse-Hua & Xitao (2007) argue that different studies use their own definition of response rate, therefore it is important that the computation of the response rate is standardised. They advocated that an estimated response rate that is not overly optimistic is calculated as follows:

RRM (response rate of mail surveys) = 
$$\frac{Number\ of\ mail\ surveys\ obtained}{Number\ of\ total\ surveys\ sent\ out}$$

176 responses were received from the auditors from a population of 531, resulting in a response rate of 33%. 1,140 questionnaires were sent by post to companies and 155 responses were received, giving a response rate of 14%. The response rate of the questionnaires received is comparable to the norm, since as stated by Alfreck & Settle (1995, p. 35) "Mail surveys with response rates over 30% are rare. Response rates are often only about 5 or 10 percent". Nonetheless, the key is to recognise the possible implications of the interpretation of the response rates (Bryman, 2012) and in the case of audit clients / financial controllers one has to take into consideration the particular circumstances necessitating the selection of the population of companies / financial controllers. As previously described, questionnaires to financial controllers were sent to corresponding clients of the auditors who replied to the previously mentioned questionnaire. Therefore, the response rate of 14% was considered to be valid, because responses by financial controllers are directly relatable to the auditor providing the service.

#### 3.3.4 Ethical Considerations

As stated by Sieber (2001), the method of obtaining, collecting, storing and sharing data all have ethical implications. An initial, important ethical rule was to obtain informed consent, which was specifically stated in the introduction to the questionnaires. Based on the information provided participants collaborated, or refused to take part in the study.

The study was conducted in Malta, typified by a small population of about 400,000, close personal relationships and frequent exchange of information (Magri & Baldacchino, 2004). These characteristics might have presented difficulties in unintentional indirect identity disclosure when presenting the data for discussion, since participants in the small business community of Malta very often know each other through professional or social networks.

As described by Damianakis & Woodford (2012, p. 708); "The risk of breaching confidentiality standards increases when engaging small groups or networks in which individuals know one another or know of one another – for example, through a third party or through one's work and reputation."

Approaches to overcome this ethical tension involved:

- 1. Planning stage:- Before conducting the research, the risks arising from the small connected business community of Malta were considered.
- Data collection stage:- not collecting personal information, identifying participants only by codes and giving respondents the right to refuse to answer a question
- Analysis and writing stage:- Removing any reference to personal
  information when analysing the results and limiting as much as possible
  the degree of specificity to a particular situation.

The individual characteristics of the auditors or their respective clients were not relevant to the research. The privacy of participants was protected as much as possible. Confidentiality was secured by referring to the respondents using numbers. The name of the participant was not relevant to the study, and was eliminated once responses were received. The data was all inputted and coded by myself; no other research participants were involved. Measures were taken to ensure that data was stored in a secure place and accessible only by myself. Furthermore, files with data were password protected on a personal laptop, kept in a secure place.

Responses to the questionnaires were thereafter translated into numerical values and inputted into an excel sheet. This was also held to be of particular importance when matching the companies to the respective auditors, and therefore all reference to names was eliminated and replaced by numbers. The

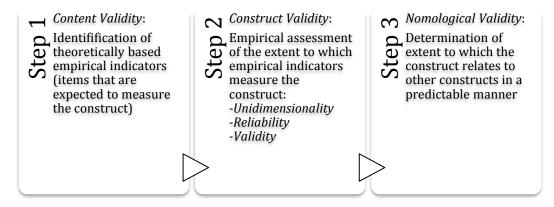
excel sheet was then imported into STATA 14.2 (Stata Corporation, College Station, Texas, USA).

#### 3.4 Research Analysis

#### 3.4.1 Ensuring validity and reliability of the questionnaire

A construct "is a concept with added meaning, deliberately and consciously invented or adopted for a special scientific purpose" (Kerlinger, 1986, p. 29). One of the key concerns of construct measurement in a questionnaire is validity (Schreisheim et al., 1993) and reliability. Muijs (2004) also includes generalizability as another key concept in quantitative research. The following section focuses on validity, which as described by O'Learly-Kelly & Vokurka (1998), consists of three main steps as detailed in Figure 3-1. This is then followed by a description of the procedures performed to test reliability.

Figure 3-1 Construct Validation Process



(Source: Adapted from O'Learly-Kelly & Vokurka, 1998, p. 389)

#### 3.4.2 Validity of the research instrument

The questionnaire was developed in three stages; "item development", "scale development" and "scale evaluation" (Duff, 2004, p. 71). These three stages initially involved the identification of a group of items with the intent of measuring a construct. The second stage involved measuring the degree to which the items chosen measure the construct. The last stage consisted of

hypothesis testing, or in other words, determining the extent a construct related to the other constructs in a predictable way (O'Leary-Kelly & Vokurka, 1998). This type of survey is referred to as psychometric, in other words it attempts to measure the 'unobservable'. Therefore the measurement values are a combination of a 'true value', namely the underlying concept, and a measurement error, extrapolated from different measures and their co-variation (Wikman, 2006). Information collected was of a sensitive nature and efforts were made so as to elicited it in a way that respondents felt comfortable to collaborate (Bork & Francis, 1985) therefore multiple items were required to ensure validity of the study.

Questions asking respondents for particular background details consisted of both nominal and ordinal data, namely asking details such as job title, age group, gender and work experience. The method used to cluster this data consisted of the following:

- Gender No specific clustering required.
- Age This was defined by taking into consideration the age at which
  accountants graduate and work for the first two to three years (18-25), the
  age at which considerable experience in the field is attained (26-35), the age
  when one becomes an expert in the field (36-45) and finally the senior
  management age (45 and above).
- Years of experience is largely a reflection of the age above.
- Type of audit firm (in the case of an audit firm) These have been categorised into 3 clusters - Big 4 audit firms, non-big 4 audit firms, and sole practitioners. These clusters are representative of the audit firms in Malta.
- Main client activity (in the case of auditors) As in the case above, the
  clusters chosen represent the major activities present in Malta
  (Manufacturing, Wholesale & Retail, Construction, Tourism & Finance and
  Banking). However, another category 'Other' was added to cater for other
  activities not included in the previous ones.
- Position in the company (in the case of clients) The respondents were asked about their position in the company. Respondents could give more

- than one reply, such as in the case of an owner manager who is a shareholder and a director.
- The applicable company financial characteristics (in the case of clients) – Questions were asked about the total assets, revenue and average number of employees to determine the company size.

This study uses deductive research methodology where themes have been drawn from literature review to formulate hypothesis and consequently, confirm or otherwise the arising hypothesis based on the data collected (Allan, 2003). The survey consisted of tailored questions using a combination of variables extracted from previously validated and published questionnaires and an extensive literature review. The former not only saved time and resources, but also offered the possibility of comparison to other similar studies already preformed (Boyton & Greenhalgh, 2004).

Dimensions addressing customer satisfaction and auditor's service quality were partly based on the SERVQUAL model, which defines quality as the difference between customer's expectation and the perception of the service delivered (Parasuraman et al., 1988). The SERVQUAL is based on five service quality dimensions of tangibles, reliability, responsiveness, assurance and empathy. Questions addressing ethical behaviour were partially based on the Ethical Position Questionnaire (EPQ) created by Forsyth (1980), also administered by Kung & Li Huang (2013), measuring idealism and relativism. The ethical considerations promulgated by the IESBA Code (IESBA, 2016), were taken into consideration. Dimensions addressing professional scepticism and increased audit usefulness were also based on literature review and a number of studies. The latter include the model by Nelson (2009), who advocated notions such as auditor knowledge and traits. The AUDITQUAL study by Duff (2004), focusing on service quality and technical effectiveness, and the scepticism scale measuring an individual's level of professional scepticism developed by Hurtt (2010), were also considered to be valid. Finally, a recent research tool created by Aschawer et al. (2011), analysing auditor competence, trust and professional scepticism was also used.

#### 3.4.3 The model

To confirm whether there is a relationship between the observed variables and the underlying latent variables, an *a priori* model was constructed. The methodology adopted was that if the model fits the data, then the factorial structure would have been determined as valid (Wang, 2012). Otherwise then a different model would need to be constructed. A path diagram consisting of a three-factor model was pre-constructed measuring trust in auditors and ultimately usefulness of the audit. Observed indicators as detailed in Table 3-1 were used to collect the data. The latent, unobservable variables consisting of 'Service Quality, 'Ethical Behaviour', 'Professional Scepticism' and 'Increased Audit Usefulness' acted as intermediate variables affecting trust as the dependable variable and ultimately audit usefulness.

As explained in further detail below, exploratory factor analysis (EFA) using structural equation modelling (SEM) in STATA 14.2 was used to test the model. Ultimately, the data was compared to the proposed model below to assess goodness of fit, as "an acceptable fit is a prerequisite for validity" (Levine, 2005, p. 336).

|     | Literature Review Source   | <u>Description</u>   |                              |
|-----|--|--|------------------------------|
| X1  | (SERVQUAL MODEL -<br>Parasuraman, Zeithaml &<br>Berry,1988), & (AUDITQUAL MODEL<br>– Duff, 2004) | It is realistic to expect prompt rescheduling of missed deadlines  |                              |
| X2  | (AUDITQUAL MODEL - Duff, 2004)   | The auditor should strive to create minimum disruption as practically possible during the audit                        |                              |
| Х3  | (Aschawer et al., 2011)  | Management should provide the auditor with the relevant information before asked for                                   | Question for client analysis |
| X4  | (AUDITQUAL MODEL- Duff, 2004)  | The audit partner should be actively involved in the engagement  |                              |
| X5  | (SERVQUAL MODEL –<br>Parasuraman, Zeithaml & Berry,<br>1988)                                     | Management should give adequate support to the audit team so that they do their job well                               | Question for client analysis |
| X6  | (AUDITQUAL MODEL – Duff, 2004)   | An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures |                              |
| X7  | (AUDITQUAL MODEL – Duff, 2004)   | It is important that the audit partner gives the client individual attention   |                              |
| X8  | (AUDITQUAL MODEL – Duff, 2004)   | The audit partner should have the client's best interests at heart   |                              |
| X9  | (Aschawer et al., 2011)  | Client management should contribute more than required during the audit  | Question for client analysis |
| X10 | (AUDITQUAL MODEL – Duff, 2004) & (Pandit - Firmstone & Morrison, 2000)                           | It is important that the regular meetings are held between the client & the audit partner                              |                              |
| X11 | (Aschawer et al., 2011)  | It is important that clients respond quickly to the auditor's queries  | Question for client analysis |
| X12 | (Borkowski et al., 2011)   | Auditors should offer other assurance services besides the audit of historical information                             |                              |

Table 3-1 The observable indicators used to collect the data

|     | Literature Review Source                                      | <u>Description</u>   |  |
|-----|---|--|--|
| X13 | (AUDITQUAL MODEL, - Duff, 2004 & Beattie & Fearnley, 1995)    | The audit firm operates to the highest standards of integrity  |  |
| X14 | (AUDITQUAL MODEL – Duff, 2004 & Kilgore <i>et al.</i> , 2011) | The expertise & competence of the audit firm is more important than the expertise of the audit team                      |  |
| X15 | (Aschawer et al., 2011)                                       | The auditor should be sceptical on whether the client will stick to his word   |  |
| X16 | (AUDITQUAL MODEL – Duff, 2004)                                | It is important that the audit partner has high ethical standards  |  |
| X17 | (Tomas, 2012)   | Ethical training should be mandatory for audit and accountancy students  |  |
| X18 | (SERVQUAL MODEL –<br>Parasuraman, Zeithaml & Berry,<br>1988)  | Clients should keep their records accurately   | Question for client analysis                 |
| X19 | (EPQ MODEL - Forsyth, 1980 &<br>Smith, 1790)                  | The auditor should never take risks, irrespective of how small the risk might be   |  |
| X20 | (IESBA Code, 2016)  | The auditor's responsibility is to act in the public interest  |  |
| X21 | (Ross et al., 2009)   | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities              |  |
| X22 | (EPQ MODEL – Forsyth, 1980 & IESBA, 2016)                     | The auditor's code of ethics gives guidance and a sense of direction   |  |
| X23 | (EPQ MODEL – Forsyth, 1980)                                   | The auditor's ethical decision making varies from one situation to another   | Inverted Scale                               |
| X24 | (EPQ MODEL – Forsyth, 1980)                                   | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action                     | Inverted Scale, Question for client analysis |
| X25 | (Aschawer et al., 2011)                                       | It is understandable that an auditor collects information about clients through their professional and personal networks |  |

Table 3-1 The Observable Indicators used to collect the data (continued)

|     | Literature Review Source                                 | <u>Description</u>  |                              |
|-----|--|---|------------------------------|
| X26 | (Aschawer et al., 2011)                                  | The audit firm is always objective in its judgements  |                              |
| X27 | (Kilgore et al., 2014)                                   | Larger audit firms can provide better service in terms of expertise   |                              |
| X28 | (Aschawer et al., 2011)                                  | The importance of the auditor's independence is overrated   | Inverted Scale               |
| X29 | (Johnson et al., 2002)                                   | A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity                          |                              |
| X30 | (Tahir et al., 2014)                                     | Client retention is a determining factor in the auditor's ultimate decisions  | Inverted Scale               |
| X31 | (HURTT'S SCALE- Hurtt, 2010)                             | The auditor usually notices inconsistencies in explanations   |                              |
| X32 | (HURTT'S SCALE- Hurtt, 2010)                             | The auditor does not like to decide until she/he has looked at all of the readily available information                                       |                              |
| X33 | (HURTT'S SCALE- Hurtt, 2010)                             | The auditor frequently questions things that he/she sees or hears   |                              |
| X34 | (Popova; 2013)   | Professional scepticism depends on past experiences   |                              |
| X35 | (Aschauer et al., 2011 & Nelson, 2009)                   | It is understandable that the auditor has doubts about the accuracy of the information received from clients                                  | Inverted Scale               |
| X36 | (Keller & Killough, 2009)                                | To be sceptical is the same as distrust   | Inverted Scale               |
| X37 | (Rousseau D.M., Sitkin S.B. Burt R.S. & Camerer C.,1998) | In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk                                  |                              |
| X38 | (Rousseau et al.; 1988)                                  | Increased control over the profession will increase trust in the auditor  |                              |
| X39 | (Neu, 1991 & Firmstone & Morrison, 2000)                 | Auditors have to trust management to be able to perform the audit   |                              |
| X40 | (Popova, 2013)   | The function of audited financial statements is to increase the creditworthiness of a company   | Question for client analysis |
| X41 | (ICAEW, 2005)  | The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results |                              |
| X42 | (ICAEW, 2005; Allee & Yohn, 2009)                        | Discovering a breach or a misstatement is a measure of usefulness of the audit  | Question for client analysis |

Table 3-1 The Observable Indicators used to collect the data (continued)

#### 3.4.4 External Validity

The preceding paragraphs described content and construct validity, which involved ensuring that the "test measures what it claims to measure" (Ravitch, 2007, p. 224) and ensuring that the test "measures the psychological constructs that it claims to measure" (Ravitch, 2007, p. 224), respectively. As described by Powers and Knapp (2010), validity within research design refers to internal validity as well as external validity. They describe a study as being internally valid "if the effect on the dependent variable can actually be attributed to the independent variable that has been manipulated" (Powers and Knapp, 2010, p.198). On the other hand, external validity ensures that the results of a study can be "generalised to persons and conditions other than those directly involved in the study" (Powers and Knapp, 2010, p. 198).

#### 3.4.4.1 Maximising external validity

Questionnaires to the auditors were sent out in batches between July 2015 and December 2015. Another group of 'recent accounting graduates' who did not yet hold a warrant, but were already practicing was subsequently identified. These consisted of 234 recent graduates. The questionnaire was sent to all 'recent accounting graduates' towards the end of September and 34 replies were received. Finally, when looking at the records of the Public Registry of Companies, another group of auditors was identified and 34 questionnaires were sent out between October 2015 and January 2016, to the latter group, out of which 5 were received. The questionnaires sent out were numbered therefore the last remitted questionnaires were clearly identifiable. Questionnaires to the financial controllers were sent out in batches between November 2015 and July 2016. The financial controllers were chosen at random, concurrently ensuring that the auditors who had already responded to the questionnaires serviced them. As mentioned previously, this was done to extract comparisons between the two parties of the same company. As in the auditors' case, the questionnaires that were sent out were numbered therefore the last remitted questionnaires were clearly identifiable.

#### 3.4.5 Internal Consistency

Another measure of quality in a quantitative study is reliability. Reliability refers to the consistency of the research instrument (Heale & Twycross; 2015). A test / measurement instrument is considered to be reliable if the same object is tested in the same way and gives the same results. Narender (2009) identifies five methods to measure reliability. These include the test-retest method, method of parallel form, split-half reliability, method of rational equivalence and Cronbach's alpha. In this study Cronbach's alpha was deemed to be the best initial measure of reliability / internal consistency of the research instrument. The scales and subscales in the survey were designed to measure the variable of trust and the intermediate variables respectively. Cronbach's alpha measures the correlations between the items in the scale and subscales. Wherein "the score on one item should be able, to some degree, to predict the score on another item...designed to measure the same attribute" (Connelly, 2011, p. 45). Cronbach's alpha was calculated by initially adding all the scores for the individual items, excluding the items measuring audit usefulness and the ultimate trust. Therefore if the Likert scale has 7 points, each point on the scale was given a scoring from 1 to 7. The variance of all individual scores for each item was calculated and thereafter the variances across all items were added. Cronbach's alpha was used to determine whether the data fits the model already established by other researchers, following the dimensions as determined from literature reviewed.

However as stated previously, ultimately the scope was to measure trust and Cronbach's alpha was only used as an initial measure. Finding Cronbach's alpha only confirmed reliability and was not the definitive criteria. The next step involved using principal component analysis to identify 'new' dimensions/ components, which capture the commonality between the original independent variables (VanPool & Leonard, 2010). This enabled the new components to summarise the data in a smaller number of components than the original independent variables, replacing linked variables with a single component. Consequently, the Kaiser-Guttman Eigenvalue greater than one test was applied to retain or discard components. This was followed by the commonly

used Varimax rotation to identify the factor components. As stated by Pohlmann (2004, p.18) "The Varimax rotated solution provides the simplest interpretation of the structure".

There are a number of procedures that can be used to construct a model using correlations of measured variables, these include the principal components model, SEM, multidimensional scaling, cluster analyses, amongst others (Fabrigar et al., 2011). In this study the scale was tested for validity through EFA using SEM in STATA 14.2. Factor analysis using SEM involves the identification of the number and nature of latent variables, resulting from the correlations among measured variables with no specific goal to test a specific hypothesis and therefore no specific direction. Factor analysis is frequently used in research when the constructs making up the structure of an area of interest have been determined through intuition or theoretical reasoning but not yet been definitively identified. Factor analysis is the instrument, which confirms the structure using statistical methodology. An exploratory approach is used when there are no specific expectations about the common factors and which variables will be affected by the same common factors. Whereas confirmatory factor analysis confirms or otherwise the precise factors and the observable factor influencing the factors (Ibid.) This study falls between these two extremes as the common factors have been determined, however the observable variables are influenced by the same factors are not yet known.

This stage therefore involved running SEM, by constructing a structure based on the new components, and calculating the *p*-value. SEM was chosen for hypothesis testing due to the fact that it allows for the detailed examination of indirect effects, it allows for measurement error and includes a method factor, thus controlling the common method variance. The latter is important because the explanatory variables and the dependent variable were measured using the same research instrument (Moro *et al.*, 2014). A SEM model was constructed ensuring that the *p*-values of the paths less than 0.10 were taken into consideration. The *p*-value is the probability that "*the observed difference is a simple chance finding (i.e. unreal)*" (Dick, 2015, p. 815). If the *p*-value is very small it is an indication that there is strong evidence against the null hypothesis.

Conventionally, scientific studies tend to set the *p*-value at 0.05. This means that a maximum of 5 out of 100 times the observed occurrence can occur by chance (Mohanty *et al.*, 2015). Therefore, if the *p*-value is more than the 0.05, then it is probable that the observed data is more of a chance finding than a true occurrence.

The *p*-value is a good first measure, however as stated by Dick (2015), it must be interpreted with caution. Factors such as selection of respondents, sample size, generalizability amongst others must also be taken into consideration. Caution in using the *p*-value was also iterated by the American Statistical Association (ASA) (Wasserstein & Lazar, 2016, p.131). They issued a statement, to clarify a number of agreed upon principles underlying the proper use and interpretation of the *p*-value. They stated that:

"1. P-values can indicate how incompatible the data are with a specified statistical model".

On the other hand;

- "2. P-values do not measure the probability that the studied hypothesis is true, or the probability that the data were produced by random chance alone";
- "3. Scientific conclusions and business or policy decisions should not be based only on whether a p-value passes a specific threshold";
- "4. Proper inference requires full reporting and transparency";
- "5. A p-value, or statistical significance, does not measure the size of an effect or the importance of a result"; and
- "6. By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis'.

However one should not eliminate or discredit the use of "frequentist statistical inference and deductive science" (Ionides et al., 2017, p. 88). The philosophy of scientific progress is that data serves to falsify scientific hypotheses not to demonstrate whether they are true. So much so that Ionides et al. (2017) argue that the second statement by ASA above, should have been supplemented by a further specification that, as in the case of the *p*-value no other statistical test can measure the probability that the studied hypothesis is true or that the probability that the data were produced by random chance alone.

Therefore, common sense should be used in the interpretation of the results,

together with scientific knowledge given by the data. All relevant factors and circumstances of the data have to be considered. Furthermore, the *p*-value should be evaluated in conjunction with the research design, size, the confidence interval and graphical summaries, when applying the research findings to the whole population (Althouse & Soman, 2017).

Following the *p*-value, the next step consisted of measuring the discriminant validity (Jinah & Jinah, 2013) using standardised regression analysis. These two measurements work together (Frost, 2017) since the former establishes whether the relationship is statistically significant, whereas the latter describes the mathematical relationship. Consequently the value and the sign of the regression coefficient between the independent variable and the dependent variable were measured. If a positive coefficient results then this signifies that when the value of the independent variable increases, then the mean value of the dependent variable also increases, and *vice versa* in the case of a negative coefficient. In this research standardized coefficients (beta weights) in SEM were used. Specifically the beta weights were used to evaluate the change in the latent variable, by one unit of the observable variable (Courville & Thompson, 2001). Therefore the independent variable/ original unit is changed into a variable, which is measured in standard deviation/ normalised units (Scott, 2011).

Standardised values were used since as argued by Kwan & Chan (2011, p. 741), "different variables are often measured in different units in behavioral research, comparing their standardised effects will lead to a more meaningful conclusion, because they are affected less by the units of measurement".

Nonetheless the use of standardized coefficients is criticised since although it enables easy comparison it is a somewhat abstract measure, where changes are expressed in standard deviation units. Furthermore as discussed by Grace & Bollen (2005) the use of standardised coefficients introduces an additional variable, namely that of sample variances. Nonetheless this method of research is still favoured as it enables the expression of coefficients permitting "direct comparisons across paths" (Grace & Bollen, 2005, p. 291) and "adjusts for the different scales of measurement of the variables" (Asher,1983, p. 49).

#### 3.5 Conclusion

The sections included in this chapter describe the research methodology adopted in this study. It started with an introduction given discussing the philosophical approach of the research undertaken. Whereby it was determined that a positivist approach is to be adopted also using interpretive quantitative analyses. A detailed discussion of the research design and research analysis was then delved into. The initial model was set out and the subsequent tests of validity and reliability were described. This sets the platform for the next chapter, which uses the previously described literature review and the selected research model to construct a framework.

## CHAPTER 4 – A DESCRIPTION OF THE OBSERVABLE INDICATORS

#### 4.1 Introduction

This chapter describes the first stage of the research, where items are identified to measure the latent constructs. As described in chapter 3, a deductive methodology has been used where themes have been drawn from previous literature to formulate the hypothesis. The themes will be used to formulate the observable factors, which will ultimately be used to measure the latent variables. The 'AUDITQUAL' study by Duff (2004), team attributes mentioned in the study by Kilgore *et al.* (2011), conclusions extracted by Hurtt's scale (2010), Nelson's (2009) model of professional scepticism are a few of the studies, amongst others which were used to develop the framework to identify the variables that determine trust. Using a positivist approach, the following sections describe the observable indicators extrapolated from observations and experiences of previous studies.

#### 4.2 Service Quality

#### 4.2.1 Responsiveness

Findings in a study carried out by Pandit (1999) demonstrated that when clients perceive that the auditor is responsive to their needs they are less likely to change the audit firm. This was taken as a cue to examine further the determinants of responsiveness by the auditor to clients' needs.

### 4.2.1.1 It is realistic to expect prompt rescheduling of missed deadlines (X1)

Kaufmann and Dant (1992) confirm that in a commercial exchange between parties they should expect and permit that within the relationship it is possible that the transactional specification is terminated and a new appropriate one created, thus demonstrating flexibility to a change in the environment. Fontaine

& Pilotti (2012, p. 8) argued that in an auditor-client relationship there should be flexibility so as "to reduce power asymmetry". The relationship entails that the client expects a more personalised service and the auditor more information. Results from Fontaine & Pilotti's (2012) study with financial directors from Canadian private corporations confirmed the hypothesis that there is a positive relationship between client flexibility and commitment.

### 4.2.1.2 The auditor should strive to create minimum disruption as practically possible during the audit (X2)

Cowperthwaite (2012) details a number of tips to ensure that the audit is of value to clients, including the importance that the auditor is efficient. He states that management wants the minimal disruption possible to their daily routine. Also specifying that the client perceives more value if the audit is efficient. ICAEW (2012a) puts the onus on the auditor stating that the audit senior and the project management should have good communication skills. They also include some tips to ensure that the working relationship between the client and the auditor is a positive one, such as the auditor chasing the client early for information that he/ she needs, encourage reviews to be performed on site and ensuring that the file is complete before leaving the client. The recommendations by ICAEW are in line with ISA 260 *Communication with those charged with governance* (IFAC, 2016), which advocates the importance of two-way communication.

### 4.2.1.3 Management should provide the auditor with the relevant information without being asked for it (X3)

"Members of client management have a great deal more specific knowledge about their organization than does the auditor. Thus, the auditor has no option but to bestow some degree of trust upon members of client management." (Rennie et al., 2010, p. 279). Fontaine & Pilotti (2012) also discussed this factor, whereupon he stresses on the importance of client cooperation during an audit of financial statements. Further stating that clients are privy to more information than their auditors and client cooperation is therefore of the essence.

#### 4.2.2 Reliability

The "a(A)bility to perform the promised service dependably and accurately" was labelled by Parasuraman et al. (1988, p. 23) as reliability. This attribute has been explored by taking into consideration the role of the auditor, management as well as regulators in ensuring that reliability is maintained if the auditors are to be trusted.

### 4.2.2.1 The audit partner should be actively involved in the engagement (X4)

A study was performed by Schroeder *et al.* (1986) to collect views on factors perceived to determine audit quality. When CPA firm partners were queried, results indicated that the highest rating was assigned to the level of partner/manager attention given to the audit. Their perception was that the level of partner/manager attention given to the audit has a very strong impact on audit quality. This is also supported in a recent publication by IFAC focusing on the key elements that create an environment for audit quality (IFAC, 2014, p. 10), where it was established that a key attribute of audit quality is that "the audit engagement partner is actively involved in risk assessment, planning, supervising, and reviewing the work performed."

### 4.2.2.2 Management should give adequate support to the audit team so that they do their job well (X5)

Rennie *et al.* (2010) and Fontaine & Pilotti (2012) stated that an audit cannot be performed without the support of management. This does not only entail that management responds to the queries posited by the auditor, but goes beyond, where management transfers its knowledge of the entity's operations and its environment (Meier, 2011). At the same time, the auditor should be cognisant of the importance of retaining his/her scepticism. One can also draw upon the concepts of relational versus transactional relationships propounded by marketing theory (Gronroos, 1997). Thus the relationship between the auditor and the client is more than just a one-off transactional exchange of the financial statements for the audit opinion. This implies that the relationship goes beyond,

where the clients' added value consists of trust in the auditor, and therefore based on relational intent.

### 4.2.2.3 An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures (X6)

Chairpersons, auditors, members of the audit committees ("the insiders"), of companies listed on the Australian Stock Exchange, as well as equity and debt providers and other external parties ("the outsiders") were all respondents chosen for a study by Kilgore *et al.* (2014). Both "insiders" and "outsiders" ranked the audit quality assurance review as the lowest attribute amongst a list of audit firm attributes that respondents perceived would increase audit quality. Kilgore *et al.*'s (2014) study concluded that auditors do not see the benefit of this review taking into consideration the time and cost it involves. Nevertheless, ISQC 1 (IAASB, 2016) requires an audit firm to review a selection of its files in specific circumstances.

#### 4.2.3 Empathy and Benevolence

Mayer et al. (1995, p. 719) describe benevolence as "the extent to which a trustee is believed to want to do good to the trustor, aside from an egocentric profit motive." This aspect of a trustworthy relationship between the auditor and the client will be explored, cognisant of the requirement that an auditor should perform an audit with a sceptical frame of mind.

### 4.2.3.1 It is important that the audit partner gives the client individual attention (X7)

Parasuraman *et al.* (1998) identified empathy, i.e. showing caring and individualised attention to customers as a prerequisite to service quality. The IAASB (2014) recognises that although management and auditors have different roles in the financial reporting process, an open and constructive relationship will ensure that the auditor identifies, assesses and responds adequately to risks of a material misstatement. On the other hand, as described by Nogler (2015, p. 38), "*t*(*T*)he nature of auditing requires that the auditor maintain a certain distance from the client". He further mentions that too much familiarity might endanger the auditor's scepticism and audit quality.

4.2.3.2 The audit partner should have the client's best interest at heart (X8) In their study, Frost *et al.* (1978) hypothesised that trust was the perception that a person expects the behaviour of the other to be altruistic as well as beneficial. Their research focused on three main contributories to trust namely: an ambiguous situation leading to a positive or negative personal outcome, the dependency of the trusting individual on another and finally an element of confidence in the altruism of the trusted person. The results of their study confirmed all three assumptions, including that trust is vested in others perceived to be altruistic in their motives.

### 4.2.3.3 Client management should contribute more than required during the audit (X9)

Alliances are a conduit for inter-organisational knowledge transfer (Meier, 2011). The alliance created between the auditor and the client is for the purpose of transferring existing knowledge from the client to the auditors in the form of information about the company and from the auditor to the client in the ultimate completed audit report. Wu & Cavusgil (2006) propose that when organisations are committed to building a mutually beneficial relationship, the relationship and the companies themselves stand to benefit. Their findings indicate that, "organizational commitment can serve as a key mediator and help to transform firm-idiosyncratic resources into higher rents for both the alliance and the firm" (Wu & Cavusgil, 2006, p. 88).

#### 4.2.4 Client Service

Duff (2004) sustained that the accountancy profession does not give the concept of client satisfaction its credit. On the other hand, the characteristics of the service offering, namely its intangibility, heterogeneity and the inseparability of its production and consumption necessitates that it is given its due importance. The sections below indicate that this attribute cannot be ignored but should be nurtured and expanded upon.

### 4.2.4.1 It is important that the regular meetings are held between the client & the audit partner (X10)

Sarapaivanich and Patterson (2015, p. 885) argue that an audit should not be held to be synonymous with the audit report, but an audit is a process as well as an outcome. Stating that "the real value of an audit unfolds over time (months and even years) as the true financial situation of the client becomes manifest". Sarapaivanich and Patterson (2015) also maintain that the relationship between the auditor and the client is a particular one, as it is continuous and involves an element of trust. Therefore, the auditor has to be able to instill confidence, build a rapport and reduce risk perceptions through effective communication.

ISA 260 (Revised) – *Communication with those charged with governance* (IAASB - ISA 260, 2016), also recognises the importance of an effective two-way communication in an audit of financial statements. This standard specifies that communication between the auditor and management assists in understanding matters related to the audit and in developing a working relationship. Effective communication also helps the auditor obtain relevant information and assists management in fulfilling their responsibility to monitor the financial reporting process.

### 4.2.4.2 It is important that clients respond quickly to the auditor's queries (X11)

Inferring from studies performed examining the relationship between the internal and external auditor, cooperation between the parties is imperative. Holt *et al.* (2012) argue that internal auditors should try their utmost to cooperate with external auditors. They state that internal auditors should include cooperation with external auditors in their planning, such as providing the external auditor with their planned activities at year end, possibly also offering to schedule the activities at a time when it is convenient to the external auditors. Holt *et al.* (2012) further state that other ways that they can work together include: assisting them in collecting information, taking into consideration their leave time, so that it does not coincide with the external auditors' visit, and using documentation formats and software used by the external auditors. This

relationship is also applicable between a client and the auditor in the case of small and medium entities, which not have an internal auditor, as cooperation between the parties is just as vital.

### 4.2.4.3 Auditors should offer other assurance services besides the audit of historical information (X12)

The Sarbanes Oxley Act in America and the new Audit Regulation in Europe, prohibit non-audit services in certain instances, arguing that the economic bonding that is created through increased income received from other services, jeopardises auditor's independence and audit quality. Respondents of the AUDITQUAL study by Duff (2004) rated the provision of non-audit services as the lowest attribute that increases audit quality. Although this finding was viewed by Duff (2004) as abnormal, particularly in view of the emphasis by firms to promote their range of non-audit services so as to differentiate themselves from competitors. A study by Kilgore et al. (2011) also supported the results by Duff (2004) as they identified that the provision of non-audit services was ranked low when compared to other attributes in determining audit quality. Knechel et al. (2012), also looked at the association between the provision of non-audit services and audit quality, however their studies gave contradictory results to the ones described above. Audit quality was measured by the amount of discretionary accruals and the subsequent restatement of financial statements, and the time taken to issue an audit report, respectively. Their findings "were consistent with the argument that knowledge spill-overs occur as a result of auditors providing non-audit services to a client without a loss in audit quality" (Knechel et al., 2012, p. 111).

#### 4.3 Ethical Behaviour

#### 4.3.1 Reputation

Morrison & Firmstone (2000, p. 611) affirm that reputation is the "willingness by others to trust them as an individual or an organisation in the absence of actual knowledge concerning their capacity not to disappoint expectations". The

variables below describe facets of the reputation within an audit firm, as well as the reputation of the client.

#### 4.3.1.1 The audit firm operates to the highest standards of integrity (X13)

Beattie and Fearnley (1995) set out to investigate the importance of audit firm characteristics and the drivers of audit change in UK listed companies. A sample of candidates selected from a list of companies operating in the UK and Ireland were requested to fill in a questionnaire, which included 29 closed form questions addressing audit firm characteristics. Results to the questionnaire revealed that one of the three most important characteristics concerned the integrity of the firm. Integrity is not only important for accountants, but for business in general. In April 2011, Accountancy Europe (previously referred to as 'the Federation of European Accountants') issued a press release stating that personal and professional integrity should be the "first and foremost ethical principle for behaviour in business" (FEE, 2011, p. 1). This is only one of many other studies highlighting that professional integrity should be at the core for accountants and auditors.

### 4.3.1.2 The expertise & competence of the audit firm is more important than the expertise of the audit team (X14)

In a study performed by Kilgore *et al.* (2011), data was collected from audit committee chairs/ members and financial analysts/ fund managers. One of the research objectives of the study was to determine whether the audit team or the audit firm attributes were considered more important in determining audit quality. Results indicated that audit team qualities, such as partner attention to audit, knowledgeable audit team and communication with client were largely perceived to be more important that audit firm attributes, except for audit firm size and audit firm experience. Kilgore *et al.* (2011) argue that this finding is not surprising since larger audit firms are perceived to be more competent and independent than smaller firms.

On the other hand, Williams (2001) stated that trust is extendible to interorganisational partnerships. Tomkins (2001) supported this argument and purported that an organisation is a group of people and as such trust can be placed in an organisation. Furthermore, Zaheer *et al.* (1998) argue that an individual in an organisation acts within accustomed practices and routine, thus creating a stable context nurturing trust.

### 4.3.1.3 The auditor should be sceptical of whether the client will stick to his word (X15)

An audit is performed on the premise that the client acknowledges and understands his/her responsibility to prepare the financial statements according to the applicable financial reporting framework, including the maintenance of internal controls to ensure that the financial statements are free from material error or fraud (IAASB - ISA 200, 2016). On the other hand, auditing standards state that the auditor should maintain a sceptical attitude. As described by Duska (2005), the auditor is required to review information and test for the risk of material misstatement and the adequacy of the internal control structure, considering matters such as:

- "Are there circumstances that may indicate a management predisposition to distort financial statements?
- Are there indications that management has failed to establish policies and procedures to assure reliable accounting estimates, by utilizing unqualified, careless or inexperienced personnel?
- Are there indications of lack of control, such as recurrent crisis conditions, disorganized work areas, excessive back orders, shortages, delays or lack of documentation for major transactions?
- Are there indications of a lack of control over computer processing?
- Are there inadequate policies and procedures for security of data or assets?"

Duska (2005, p. 420)

Contemporaneously, auditors presume that representations made by management can be relied upon, which reflects the traditional passive stance by auditors with respect to fraud detection (ACCA, 2017). This is also reminiscent of the landmark judgement delivered in 1896 in the Court of Appeal in England in the Kingston Cotton Mills case, were in a unanimous judgement Lord Justices stated as follows:

"It is the duty of an auditor to bring to bear on the work he has to perform that skill, care, and caution which a reasonably competent, careful, and cautious auditor would use.

An auditor is not bound to be a detective, or, as was said, to approach his work with suspicion, or with a foregone conclusion that there is something wrong. **He** is a watchdog, but not a bloodhound.

Auditors must not be made liable for not tracking out ingenious and carefully laid schemes of fraud, when there is nothing to arouse their suspicion ... So to hold would make the position of an auditor intolerable."

(The Law Times; 1896 found in Sarup, 2004)

#### 4.3.2 Capability and Integrity

Goldberg and Centers (2012), propound that, amongst others, one way to reduce bias in ethical decision-making is through informal organisational values. They specifically state that; "firm leaders should identify informal systems that exist and the underlying pressure they place on employees and then influence these systems to create ethical informal cultures" (Goldberg and Centers, 2012, p. 27). Another point they mention is that evidence indicates that ethics education and training aids in reasoned ethical decision-making. Likewise, an important element in the relationship between the auditor and the client is management integrity. Unfortunately, very often standards simply state that management's integrity must be taken into consideration when performing an audit. However, this entails a deeper assessment of the character, taking into consideration factors such as "the nature and business practices of the enterprise and the attitude of its principal owners, key management, and those charged with corporate governance toward matters such as aggressive interpretation of accounting standards and internal control over financial reporting" (Love & Manisero; 2011, p. 24). The factors below take into consideration these two facets of integrity.

### 4.3.2.1 It is important that the audit partner has high ethical standards (X16)

"The tone that the top managements of public accounting firms set is just as important in the firms as that set by top managements in public companies. Many public accounting firms are large organisations in which personnel face institutional and individual pressures not unlike those that personnel of public companies face. In public companies such pressures have the potential to contribute to fraudulent financial reporting. In both large and small public accounting firms, these pressures have the potential to compromise the scepticism and professional judgement that are critical to audit quality and the detection of fraudulent financial reporting".

The Treadway Commission (1987, p. 56)

Finn et al. (1988) carried out a research to identify the type of ethical problems that accountants face and also to find out the role of partners in reducing ethical problems. The research identified that partners believed that when they were clear that unethical behaviour was not accepted the incidence of unethical behaviour decreased. As also described by Douglas et al. (2001, p. 104), "Organisational ethical culture or more specifically, the ethical environment within the firm created through management practices and espoused values, may be the most important deterrent to unethical behaviour".

### 4.3.2.2 Ethical training should be mandatory for audit and accountancy students (X17)

The cognitive development perspective to ethical decision-making supports the view that a person's moral capacity increases over time (Thorne, 2000). A person goes through a process from the 'pre-conventional', to 'conventional', and finally the 'post-conventional'. As described by Shaub (1994) auditors very often think of ethics as rule based, therefore one can argue that auditors engage in ethical reasoning at the conventional level. This is supported further by a study performed by Thorne (2000, p.154), who identified as follows: "...accountants appear to apply conventional levels of prescriptive reasoning and pre-conventional levels of deliberate reasoning in the resolution of realistic ethical dilemmas."

On the other hand, Thomas (2012) argues that cognitive moral reasoning is very often measured in a context-free setting, whereas it should be measured in an accounting setting. He therefore set out to study the effect of a university education on a person's ethical decision-making. The scope of the research was to identify the ethical reasoning by an individual in a general context (i.e. cognitive moral capability/ prescriptive reasoning), as opposed to deliberate reasoning, within a particular context, after being exposed to an accounting university education. His research ultimately identified that a university accounting education, does have a beneficial influence on deliberative reasoning. "Senior accounting students were found to have a higher deliberative reasoning than first-year accounting students. Furthermore, they made more frequent use of post-conventional modes of deliberative reasoning and thus made more ethical decisions than first-year accounting students" (Tomas, 2012, p. 411).

#### 4.3.2.3 Clients should keep their records accurately (X18)

The responsibility of accurate financial statements rests with management. As stated in ISA 210 Agreeing the terms of audit engagements (IAASB, 2016), management has to ensure that there are adequate internal controls in place ensuring that financial statements are free from material misstatement before starting an audit. Roberts & O'Reilly (1974) state that within the context of an organisation, accurate information between a superior and his/ her subordinate has implications in decision-making and performance. This relationship is comparable to that between the auditor and management within the context of an audit of financial statements, where accurate financial statements prepared by management is vital when taking decisions about the truth and fairness of an entity's financial statements. Whitner et al. (1998) also state that accurate information in a principal-agency relationship is the strongest form of relationship when compared to other variables such as interaction, summarisation, gatekeeping and overload. Therefore, trust in management in terms of accurate financial reporting is essential when auditing a set of financial statements.

#### 4.3.3 Ethical Position – Idealistic vs Relativistic

Kung & Huang (2013, p. 480) state: "The real determinants in (un)ethical behaviour are the ethical beliefs held by individual auditors. Only when auditors are correctly positioned on the scale of ethics will their conduct be ethically appropriate." This statement is reminiscent of an idealistic stance towards ethics, however the Ethics Position Questionnaire (EPQ) model by Forsyth (1980) also recognises that a person can take ethical decisions depending on the situation at hand. These alternative attitudes towards ethics have been taken into consideration in the statements below:

### 4.3.3.1 The auditor should never take risks, irrespective of how small the risk might be (X19)

The scope of this statement was to evaluate the ethical ideology of the respondents. As described by Forsyth (1980), this statement describes an absolutist attitude towards ethics, combining high idealism and low relativism. Forsyth (1980, p. 176) defines the philosophical attitude of the absolutist as one who "assumes that the best possible outcome can always be achieved by following universal moral rules". However the purpose of an audit is to provide reasonable assurance that the financial statements are free from material misstatement, therefore giving a high level of assurance, but not an absolute assurance (Law, 2008). As stated by ISA 200 Overall objectives of the independent auditor and the conduct of an audit in accordance with international standards on auditing (IAASB, 2016), the cost incurred to pursue every matter exhaustively would be impracticable. As also highlighted by Epstein & Geiger (1994, p. 64) if auditors were to give absolute assurance "the audit liability inevitably will increase substantially".

#### 4.3.3.2 The auditor's responsibility is to act in the public interest (X20)

The opening paragraphs of the Code of Ethics for Professional Accountants, issued by the International Ethics Standards Board (2016, p. 9) state as follows: "A distinguishing mark of the accountancy profession is its acceptance of the responsibility to act in the public interest. Therefore, a professional accountant's responsibility is not exclusively to satisfy the needs of an individual client or

employer...". This is also reflected in Directive 2, the Code of Ethics for Warrant Holders (2016) for Maltese accountants and auditors. It is interesting to note that ISA 700 (Revised) Forming an opinion and reporting on financial statements (IAASB, 2016) states that the auditor's report is normally addressed to the shareholders or to those charged with governance of the entity. Whereas the Maltese Companies Act, Cap. 386, Article 179 (1) specifies that the company's auditors shall prepare a report to the company's members. On the other hand, one notes that companies in Malta are required to publish the financial statements, where upon paying a nominal fee, the financial

4.3.3.3 As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities (X21)

statements are then accessible to the general public. Therefore, as described

provided and its audit, beyond that of the shareholders". Consequently, other

stakeholders such as existing and prospective investors, creditors, employees,

and others claim a right to publicly available information, which is true and fair.

by ICAEW (2005, p. 11): "this generates public interest in the information

The IAASB developed a framework for audit quality based on input-, processand output- factors, that ensures high audit quality at engagement, audit firm and national level (IAASB, 2014). This framework is based on the concept of ensuring that audit work performed is of the highest level and stipulates that audit quality is achieved if the engagement team:

- Follows the appropriate values, ethics and attitudes;
- Has sufficient knowledge, skill, experience, and time allocated;
- Applies a rigorous audit process and quality control procedures, according to laws and regulations;
- Provides an adequate and timely audit opinion; and
- Engages with all stakeholders involved.

The ethical perspective of economic efficiency by Adam Smith advocates that output is maximised so that no other use can improve the situation. An audit is very often performed within limited time frames, pressured to keep the cost as low as possible, and auditors have to try as much as possible to avoid presenting an unfavourable picture about the company. Validating the

Economic Efficiency Model would involve "to balance a delicate set of potential ethical dilemmas: how they (auditors) service their client best without violating their duty to the public" (Satava et al., 2006, p. 278).

### 4.3.3.4 The auditor's code of ethics gives guidance and a sense of direction (X22)

In a study by Pflugrath et al. (2007), it was identified that not only does the presence of the Code of Ethics improve audit quality but training and exposure to codes of conduct and professional ethical principles improves the quality of professional judgement. The auditor's IESBA Code of Ethics (2016, p.10) maintains that adherence to the "Code establishes a conceptual framework that requires a professional accountant to identify, evaluate, and address threats to compliance with the fundamental principles". However, the Code also recognises that a professional accountant still needs to exercise a measure of professional judgement, weighing all the facts and circumstances of the particular case, due to the fact that engagements and work assignments differ. Therefore, although the Code gives direction, an auditor still needs to exercise professional judgement. On the other hand, in the development of the EPQ, Forsyth (1980, p.178) states that individuals of relativistic ideology are of the view that "There are no ethical principles that are so important that they should be a part of any code of ethics". This statement seeks to understand whether the Code of Ethics is viewed as giving direction to auditors who are involved in ethical issues, thus increasing audit quality and trust in the auditor.

### 4.3.3.5 The auditor's ethical decision making varies from one situation to another (X23)

As described above, Kohlberg developed the cognitive moral thinking theory and grouped moral reasoning into six stages divided into three major levels: the pre-conventional, conventional and post-conventional level. Within each level, the second stage is more advanced than the previous. Furthermore, an individual is expected to move forward in sequence through the stages, wherein each stage represents a different mode of thought (Trevino, 1992). The statement 'The auditor's ethical decision making varies from one situation to

another' represents the highest moral development, at the post-conventional level. At this level individuals take into consideration the interests of all parties, and ultimately develop universal moral principles so much so that it is justifiable to act in accordance with one's ethical principles, even if against the law (Reiter, 1996; Trevino, 1992).

"According to Kohlberg, less than 20% of American adults reach principles level thinking", where stage six has practically disappeared as a form of moral reasoning (Trevino, 1992, p. 447). A perspective exposed by Shaub (1994) is that several studies identified that accountants' moral reasoning falls short of the average of the general population. This was also supported in a study undertaken by Armstrong (1987) who identified that in 1984 and 1985 certified public accountants' moral score was significantly lower than that of college students. Armstrong's study uses Rest's (1979) Defining Issues Test, a theory which advocates that a person's moral judgement is developed and increases with formal education.

### 4.3.3.6 Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action (X24)

This statement reflects of a relativistic ethical perspective (Forsyth, 1980). Marshall *et al.* (2006) discussed the interplay and impact of audit risk, materiality and severity of tax law in dispute on decision making, in a study they performed with tax agents in Australia. Their study rejected the hypothesis in support of the probability of detection and the amount tax law violation in the tax agent's perceived ethical judgement. However, the severity of violation of the tax law was then found to be a determinant of a tax agent's ethical judgement.

#### 4.4 Professional Scepticism

#### 4.4.1 Reputation and Scepticism

Kramer (1999) states that research indicates that the development of trust between individuals is largely dependent on past experiences, i.e. history dependent. Initially formulated by the *a priori* expectations of the others' behaviour and subsequently changes following subsequent experiences. Noting

the role of past experiences or reputation of the parties involved in the auditor / client relationship, variables were constructed taking this into consideration.

### 4.4.1.1 It is understandable that an auditor collects information about clients through their professional and personal networks (X25)

A prospective auditor collects information before accepting a new client, to determine whether accepting the potential client would create an unnecessary risk (Liu *et al.*, 2017). When performing pre-acceptance procedures of an audit client it is understandable that inquiries are made of knowledgeable third parties within the business community, such as other clients within the same industry, bankers, or legal counsel (Craig; 1992, IAASB - ISQC 1, 2016). This will aid in assessing the reputation and integrity of the prospective client.

Client continuance decisions also have to be taken on whether to continue serving on-going clients. Continuance decisions involve retention and resignation decision-making. "The retention decision is the auditor's decision to continue the audit engagement with the client for the subsequent year. The resignation decision is the auditor's decision to discontinue the audit services relationship with the existing client". (Drira, 2013, p. 39)

As described by Cosserat and Rodda (2009), the purpose of client evaluation is ultimately to assess whether the entity's management can be trusted, i.e. their integrity. They also state that the sources of information may be through knowledgeable persons in the business community, such as bankers and legal advisors, as well as public information such as reported news in the press.

#### 4.4.1.2 The audit firm is always objective in its judgements (X26)

An article by Keyser (2016) describes the role of the auditor as an individual in a professional auditor organisation. He states that an organisation does not perform an audit, but it is the individuals comprising the engagement team that do it. It is the responsibility of the individual to be committed to maintain professionalism. This involves maintaining "the required level of expertise, exercise responsibilities with due care, exercise professional scepticism, and maintain objectivity at all times" Keyser (2016, p. 64). Furthermore, Pennington et al. (2017) discuss that an objective search by the auditor would involve

considering and evaluating all evidence to confirm or otherwise risks identified when planning an audit, with no bias. Therefore adopting the neutral approach towards scepticism.

### 4.4.1.3 Larger audit firms can provide better service in terms of expertise (X27)

Kilgore *et al.*'s study (2014) also referred to in the sections above, identified that although 'insiders' and 'outsiders' ranked auditor firm size differently, overall the interviewees ranked it as the most important attribute. One of the justifications given by the researchers was that large audit firms have more resources, which they can use to attract more competent employees, thus enabling them to give a better service. Furthermore, Francis (2004) argues that as evidenced in studies around the world, larger audit firms tend to charge higher audit fees. The higher audit fees contemporaneously reflect high audit quality in terms of the ability to allocate more resources and/or higher expertise on the job.

#### 4.4.2 Independence

#### 4.4.2.1 The importance of the auditor's independence is overrated (X28)

In the performance of their duties it is an acknowledged fact that auditors have a determining role in accounting choices and ultimately company survival. It is therefore important that auditors are perceived to act independently in relation to their clients (Ohman *et al.*, 2012). During the 36<sup>th</sup> Annual SEC and Financial Reporting Institute Conference, the SEC Chief Accountant Wesley Bricker emphasized the importance of effective financial reporting and auditor independence stating as follows: "Today's investors expect and demand the auditor to perform rigorous independent audits in which auditors obtain reasonable assurance about whether the financial statements are free from material misstatement..." (Mondaq.com, 2017). The IESBA Code of Ethics for Professional Accountants (2016) states that it is in the public interest that auditors are independent of their audit clients, emphasizing further that auditors must not only be independent in fact but must also appear to be independent. On 17 June 2016 new EU rules regulating statutory audits became applicable for all EU countries. One of the reasons for the introduction of this legislation

was due to the "excessive familiarity between the management of a company and its audit firm, risks of conflicts of interest, and threats to the independence of statutory auditors..." (Europa.eu, 2016).

As highlighted by Morales Olazabal & Dreike Almer (2001), auditors are held in high regard as professionals. As professionals, auditors are permitted to govern themselves, by establishing codes of conduct, reviewing and disciplining its peers. Morales Olazabal & Dreike Almer (2001) add that the profession's autonomy will be maintained only if auditors continue to uphold high ethical standards; concluding by stating that the potential loss of the privilege of self-regulation should motivate accounting professionals to ensure that the perception of independence is not impaired.

### 4.4.2.2 A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity (X29)

On 17 June 2016 new EU rules on statutory audit became applicable throughout the member states of the EU. One of the reforms of the new legislation was to introduce mandatory rotation of statutory auditors and audit firms. The new legislation was introduced to address the excessive familiarity between the client and the audit firm, amongst others. In view of the fact that such a relationship induces a risk of conflict of interest, a threat to independence and can challenge the ability to exercise professional scepticism (EU, 2016). A study by Johnson *et al.* (2002) found that short term auditor – client relationships (two to three years) were associated with lower audit quality when compared to medium – term relationships (four to eight years). Although no evidence of improved audit quality was found when comparing long-term relationships (after nine years) to medium term relationship. This finding was also supported by other studies performed supporting the view that a long - term relationship and excessive familiarity is negatively related to audit quality (Abedalqader Al-Thuneibat *et al.*; 2011, Wuchun & Huang; 2005)

### 4.4.2.3 Client retention is a determining factor in the auditor's ultimate decisions (X30)

"Auditors are paid by the companies whose financial statements they audit. Economically important clients carry greater weight in an auditor's portfolio. Therefore, an auditor may have a higher incentive to yield to pressure from larger clients, thereby compromising independence." (Tepalagul & Lin, 2015, p. 103)

Findings by Sciriha (2016) resulting from a study amongst Maltese auditors identified that auditors perceive that economic dependence on an audit client is one of the most threatening factors to auditors' independence, thus affecting an auditor's decision-making bias. Cote (2002) and Beattie *et al.* (1999), also support this finding, stating that the most significant factor determining independence is the importance of a client. These studies indicate that auditors are aware of the threat that important clients can have on their decision-making. Simultaneously, Krishan & Krishan (1996) also identified that the importance of a client affects the audit opinion decision. However, they recognise that their research and findings do not address other factors that may influence the audit reporting decision-making, such as other services rendered to the same client, the share of the partner's compensation, management integrity and the strength of the company's internal controls.

#### 4.4.3 Scepticism as a trait vs acquired

In response to the recent major business collapses such as Enron, Rezaee (2004, p. 140) maintains that "more sc(k)eptical, alert, tough-minded, ethical, objective, and tougher stands could have spared auditors from some of the recent audit failures." The following sections will evaluate scepticism as an individual's level of professional scepticism as a trait (Hurtt, 2010) or a measure of adopted scepticism in the light of the specific circumstances of the particular audit.

# **4.4.3.1** The auditor usually notices inconsistencies in explanations (X31) Hurtt (2010) discusses the fact that self-esteem is positively correlated with scepticism and further specifies that self-esteem aids the auditor to resist

attempts by management to influence their judgments and to challenge assumptions.

However as stated by ISA 240 – *The auditor's responsibilities relating to fraud in an audit of financial statements* (IAASB – ISA 240, 2016), the risk of not detecting fraud is higher than the risk of not detecting an error. This is due to a number of circumstances leading to fraud, such as sophisticated schemes to conceal it, the frequency and amount of fraud, the degree of collusion and management involvement, amongst others. ISA 240 (IAASB, 2016, p. 158), further recognises that "*Owing to the inherent limitations of an audit, there is an unavoidable risk that some material misstatements of the financial statements may not be detected, even though the audit is properly planned and performed in accordance with the ISAs."* 

# 4.4.3.2 The auditor does not like to decide until she/he has looked at all of the readily available information (X32)

ISA 200 Overall objectives of the independent auditor and the conduct of an audit in accordance with international standards on auditing (IAASB, 2016) specifies that when conducting an audit of financial statements, one of the overall objectives of the auditor should be to obtain reasonable assurance that the financial statements are free from material misstatement. As also described by ISA 200, reasonable assurance is a high but not absolute level of assurance, because there are inherent limitations in an audit. Inherent limitations are due to the fact that the preparation of financial statements involves judgement, subjectivity and uncertainty. The limitations on the auditor's ability to obtain audit evidence, are also due to the possibility that management may not give the full information, whether intentional or unintentionally. Zuca (2015) and the IAASB in ISA 200 (IAASB, 2016), further argue that the auditor cannot collect unlimited amounts of audit evidence, but is limited by time and cost. Although as stated by Zuca (2015, p. 703), "the difficulty or cost of performing an audit procedures is not a valid reason for omitting the procedure if there is no appropriate alternative".

# 4.4.3.3 The auditor frequently questions things that he/she sees or hears (X33)

Nelson (2009) describes scepticism as either a neutral or presumptive perspective. The neutral perspective involves looking at audit evidence in a critical way, with no previous bias. Whereas the presumptive doubt stance critically examines audit evidence, however it also assumes some level of dishonesty until proved otherwise.

In a study by Cohen *et al.* (2017), they measure the effect of the two different perspectives of professional scepticism on job outcomes within the profession. Their research identified that a neutral attitude towards professional scepticism was positively associated with organisational support and organisational citizenship behaviour and negatively affected staff turnover, as a result of partner support for neutral scepticism. On the other hand, the presumptive doubt had a negative impact on organisational support and organisational citizenship behaviour, but a positive effect on staff turnover. One could conclude therefore that their research identified that a neutral stance to professional scepticism was preferred in terms of 'fitting in' within the organisation's ideology.

## 4.4.3.4 Professional scepticism depends on past experiences (X34)

Nelson (2009) also constructed a model of professional scepticism describing how audit evidence combined with the individual auditor's knowledge, traits and incentives affects professional scepticism. A study by Popova (2012) focusing on the dispositional scepticism (trait scepticism) and situational scepticism (client specific scepticism) identified that both parts influence judgement and decision-making. The level of trust by the auditor in the client therefore influences scepticism. As described by Kramer (1999), trust is influenced by a number of psychological, social and organisational factors. Traits of the individual, history-based information, third- party information, client type, the role of the individual, rules-based environment are all antecedents of trust.

# 4.4.3.5 It is understandable that the auditor has doubts about the accuracy of the information received (X35)

ACCA (2017, p. 8) advocates that cognitive bias influences not only the auditor, but also other stakeholders including preparers. "Cognitive biases account for aspects of apparently non-rational ways in which people reach decisions". Cognitive bias in the audit process can take different forms, which include hindsight bias, outcome bias, confirmation bias, anchoring bias, selective perception, amongst others. Therefore, the auditor cannot disregard this possibility and should respond to these cognitive biases.

Contemporaneously this statement is also reminiscent of two differing schools of thought (Ashauer *et al.*, 2007). The presumptive doubt attitude advocated by Nelson (2009), where auditors assume an *a priori* level of dishonesty by the client. On the other hand, the neutral concept of professional scepticism as argued by Hurtt (2010). The latter propounding that professional scepticism is the result of six auditor traits<sup>1</sup>, and not directly linked to the state of mind with respect to the particular client.

## 4.4.3.6 To be sceptical is the same as distrust (X36)

Auditors are very often criticized that they are too ready to accept management's position and that they do not exercise enough professional scepticism (Malley, 2016). Nonetheless as explained by Harding *et al.* (2016), professional scepticism in auditing is about exercising an adequate level of trust or distrust. Although they also argue that in situations of high risk, distrust may be more informative than trust. Glover and Prawitt (2013) support the latter argument, expressing the opinion that the application of scepticism should vary depending on the situation. "We suggest rather than focus on any one particular perspective, it may be more productive to think of the application of professional sc(k)epticism as a continuum related to the risk of material misstatement and other factors" (Glover and Prawitt, 2013, p. 3).

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<sup>&</sup>lt;sup>1</sup> Refer to page 70

#### 4.5 Trust

Mayer *et al.* (1995) describe trust as the willingness of a party to be vulnerable to another party, further stating that vulnerability involves willfully taking a risk in trusting the other party. It is imperative therefore that trust is not confused with cooperation, confidence and predictability, which are different constructs altogether. This study looks at the concept of trust and vulnerability in the trusting relationship as a result of service quality, ethical behaviour and professional scepticism.

# 4.5.1 In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk (X37)

The statement has been derived from writings by Rousseau *et al.* (1998, p.395), who define trust as "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another." They further state that there are a number of conditions for trust to exist, and these include risk. They posit that the connection between trust and risk is dependent on a reciprocal relationship, also concluding that if there exists complete certainty and no risk then trust would not be needed.

# 4.5.2 Increased control over the profession will increase trust in the auditor (X38)

The recently enacted Audit Directive (*Regulation 537/2014*) within the EU was the result of a long progress of consultation triggered off by the financial crisis and the urgent need felt by the EU to stabilise the financial system (European Commission, 2010). Holm & Zaman (2011) refer to this as a crisis in confidence, whereby the profession is moving away from 'self-regulation' to 'independent regulation' of the auditing profession. On the other hand, as described by Apostolou & Thibadous (2003) a profession has three characteristics: a practitioner-client relationship, expertise in the field and trust. Trust is gained through informal or formal mediums. Belief by the client in the integrity of the practice and the profession constitute the informal aspect. Whereas having a code of ethics, a licensure legislation and laws and regulations, on the other hand make up the formal approach.

# 4.5.3 Auditors have to trust management to be able to perform the audit (X39)

Rennie et al. (1995) argue that the audit of financial statements is not possible if the auditor does not trust management. Since management is more knowledgeable about the business than the auditor, the auditor has no option, but to trust management. Nonetheless, they also state that this trust should not be too strong, as professional scepticism can be impaired. Furthermore, International Auditing Standards (IAASB, ISA 200, p. 77) require that an auditor should adopt "an attitude that includes a questioning mind, being alert to conditions which may indicate possible misstatement due to error or fraud, and a critical assessment of audit evidence". On the other hand, the presumptive doubt perspective is representative of a theory, which states that an auditor always assumes some level of dishonesty or bias in management, unless proven otherwise (Quadackers et al., 2014). This is further supported by a study by Aschauer et al. (2015, p. 339) who identified that trust in the client was not perceived to be an agent that enhances qualitative change, perceivable in increase in knowledge and/ or improvement of the company's internal control systems. So much so that their findings rejected the hypothesis that "the more trust the auditor feels towards the client, the higher is the client's perception of the performance of the auditor as a change agent".

#### 4.6 Audit Usefulness

Increased audit usefulness measures the importance of the auditor's report to clients, investors, lenders and other stakeholders. It addresses the second part of the conceptual framework in this research, focusing on the explanation of post-adoption behaviour (Oliver, 1980, Mou *et al.*, 2017), in other words the determining factors that induce clients to continue trusting the auditor. The following subsections focus on the usefulness of the audit report by looking at three important functionalities namely: an increase in creditworthiness, deterrent of management bias and identification of fraud or error.

# 4.6.1 The function of audited financial statements is to increase the creditworthiness of a company (X40)

Libby (1979, p. 35) describes financial statement information as having "a major role in the credit evaluation phase of the commercial loan decision". ICAEW (2009) describe how information is used by credit rating agencies (CRAs). They state that if more information is available then there is greater confidence that an accurate credit risk assessment is possible. This is stated within the context that CRAs largely rely on publicly available information to come up with their assessments. A study conducted by Dedman and Kausar (2012) on a sample of firms in the UK, further identified that firms that voluntarily opt to audit their financial statements, even if not legally required, lead to a positive rating score. A study performed by Duréndez Gómez-Guillamón (2003) in Spain corroborates these findings, concluding that the type of audit report influences their decisions when granting credit. Identifying further, that although to a lesser extent the type of opinion also affects the amount of loan granted.

# 4.6.2 The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results (X41)

The preparation of financial statements necessitates the application of professional judgement by the directors, particularly in instances of accounting estimates. Accounting estimates include the decision of the estimation of the useful life of an asset, the estimation of the value of a derivative, the determination of the ability of an entity to operate as a going concern, amongst others. ISA 540 *Auditing accounting estimates, including fair value accounting estimates, and related disclosures,* (IFAC, 2016) describes accounting estimates as imprecise and susceptible to intentional or unintentional management bias. Consequently, as reported by ICAEW (2005) an audit of financial statements aids in resolving unconscious bias involved in these situations.

# 4.6.3 Discovering a breach or a misstatement is a measure of usefulness of the audit (X42)

The statutory requirement and the principal-agent divide in the stewardship of the company are the major drivers of the audit. However, as discussed by ICAEW (2005), directors also require an audit either because they do not have the necessary expertise in certain areas, or as check on errors in the financial statements, amongst others. The latter argument is supported by a report by Swedish National Audit Office (2017), which discusses the consequences of the removal of the requirement of the statutory audit for small entities in Sweden in 2010. The report specifies that an impact assessment of the removal of the small audit showed that competitiveness and growth did not increase, but on the other hand resulted in: slower growth, smaller savings, lack of transparency and control, increased risk of economic crime including tax evasion and more mistakes in accounting (Accountancy Europe, 2018). The latter finding resulting in "the number of errors in the formalities of the companies' annual reports increased after the reform" Swedish National Audit Office (2017, p. 4). Examples of errors in the financial statements included errors in the notes or income statement.

#### 4.7 Conclusion

This chapter gives a detailed description of each factor used in the construction of the framework. These factors were used in drafting the framework outlined in the previous research methodology chapter, and will also be used to evaluate the findings in the following chapter. Accordingly the next chapter will present the findings and the detailed analysis of the responses to the questionnaires.

# CHAPTER 5 – THE DEVELOPMENT OF A FRAMEWORK

## 5.1 Introduction – The importance of formulating a conceptual framework

"Conceptual frameworks are like lighthouses and lenses; hence the illumination and magnification analogies. Whereas the lighthouse illuminates certain parts of the ocean at any given time, other parts are left in the dark. Each framework highlights or emphasis different aspects of a problem or research question...".

(Bordage, 2009, p. 313)

As described above a conceptual framework presents a partial view but also a focused view of certain elements of an issue. Bordage (2009) explains that it is important to critically review previous literature, which includes other conceptual frameworks, before formulating a framework. The ultimate scope of a conceptual framework is to clarify an issue and identify a possible solution. This short chapter gives a brief outline of the framework under study.

# **5.2 The conceptual Framework**

The scope of this research is to understand the perceptions of trust in the audit, by the auditors and their clients, ultimately leading to increased audit usefulness. As described in the previous chapters various studies and opinions were considered to identify the observable indicators and link them to the intermediate variables. It transpired that a number of factors contribute towards trust, however the three most cited were: ability, benevolence and integrity (Mayer et al., 1995; Ridings et al., 2002). This research consequently addresses these concepts by examining the relationship between an auditor and the client. It involved measuring the observable indicators for the latent, unobservable, intermediate variables of service quality, ethical behaviour, and professional scepticism, linking them to trust and increased audit usefulness. These intermediate factors correspond to the factors cited in previous literature, as described in Figure 5-1:

Figure 5-1 The corresponding factors to previous literature

| <u>Previous Literature</u><br>(Mayer <i>et al.,</i> 1995; Ridings <i>et al.,</i> 2002) | This Research           |
|--|-------------------------|
|  |                         |
| Benevolence  | Service Quality         |
| Integrity  | Ethical Behaviour       |
| Ability  | Professional Scepticism |

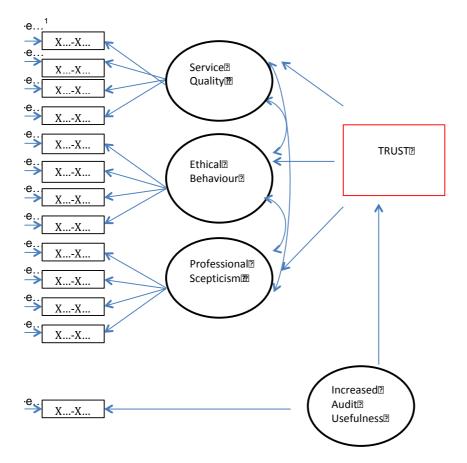
Another important perspective that was taken into consideration is the perception of **increased audit usefulness** as a result of a relationship of trust in the auditor. The aspects considered were the perceived increase in creditworthiness of the company, and the deterrent of management bias and identification of possible fraud or error in the preparation of financial statements. The format of the questionnaire in this research largely consisted of statements, mainly addressed towards measuring observable indicators in relation to the auditor. However client attributes were also taken into consideration to investigate the necessary components to trust to enable a useful audit. A study by Carcello *et al.* (1992) identified that auditors and preparers of financial statements evaluate audit quality differently. This concept has therefore been applied in the development of a framework and opinions were collected from both parties. Figure 5-2 is a schematic representation of the trust – based auditing framework under study.

# 5.3 A trust- based auditing framework

Figure 5-2 A conceptual framework for trust-based auditing

OBSERVABLE UNOBSERVABLE LATENT DEPENDENT VARIABLE VARIABLES VARIABLES/INTERMEDIATE VARIABLES

(Indicators)



¹ e... to e....are random errors, due to uncontrollable sources of variability which include measurement error, sampling error and other unknown disturbances (Burnham et al., 1999)

## **5.4 Conclusion**

This brief chapter provided a basic outline of framework that will be tested in the following chapter. The next chapters will bring together the findings from the literature review, research methodology and the framework, and use them to collect the views of the population.

# CHAPTER 6 – SAMPLE COMPOSITION AND THE INITIAL DESCRIPTIVE STATISTICS

#### **6.1 Introduction**

The scope of this chapter is to introduce the research findings of this study by addressing the validity and reliability of the research design and methodology. The first section includes the demographic details of the respondents confirming the external validity of the research performed. This is then followed by the results of the statistical tests performed to evaluate the research findings, determining the internal validity and reliability of this research. The chapter concludes by briefly discussing the differences in the means of the observable variables. The initial evaluations in this chapter therefore introduce the in-depth analysis of the model, which will follow in chapters 7 and 8.

## 6.2 Some demographic information of the respondents

External validity attempts to measure whether the findings can be generalised to the rest of the population. The information detailed below clearly indicates that the research findings can be generalised from the sample to the larger population (Lucas, 2003).

#### 6.2.1 The auditors

177 replies were received from the auditors, of which a majority were male respondents (65%). The average age of the respondents exceeded 26, with most respondents aged 36 years or more (Table 6-1). 41% of the total sample were directors or partners of audit firms (Table 6-2). 49% of the respondents had more 10 years of experience, 21% had between 5 and 10 years of experience and the rest between 1 and 5 years of experience. Most of the respondents worked in an audit firm (85%), whereas the minority were sole practitioners (Table 6-3).

| <u>Age</u> | Total<br>Respondents | % of total sample |
|------------|----------------------|-------------------|
| 18-25      | 24                   | 14                |
| 26-35      | 69                   | 39                |
| 36-45      | 40                   | 23                |
| And above  | 44                   | 24                |
| TOTAL      | 177                  | 100               |

**Table 6-1 Auditors** 

| <u>Position</u> | Total<br>Respondents | % of total sample |
|-----------------|----------------------|-------------------|
| Director or     | 72                   | 41                |
| partner         |                      |                   |
| Manager         | 55                   | 31                |
| Audit Senior    | 38                   | 21                |
| Other           | 12                   | 7                 |
| TOTAL           | 177                  | 100               |

Table 6-2 Position occupied by respondents

| Type of audit firm | Total<br>Respondents | % of total sample |
|--------------------|----------------------|-------------------|
| Big 4              | 88                   | 50                |
| Non Big 4          | 64                   | 36                |
| Sole practitioner  | 25                   | 14                |
| TOTAL              | 177                  | 100               |

Table 6-3 Type of audit firm by respondents

Finally, respondents were asked to specify the activity sector of their main client, and were given the option to include more than one sector. Replies were largely equal, except for wholesale/ retail and tourism. The former sector is the biggest, whereas the latter is the smallest (Table 6-4). This finding reflects the composition of the Maltese economy consisting largely of small and medium sized traders, whereas the tourism market consists of a few large operators (Table 6-5).

| Type of audit firm | Total Respondents |
|--------------------|-------------------|
| Manufacturing      | 69                |
| Wholesale/ retail  | 102               |
| Construction       | 65                |
| Tourism            | 41                |
| Finance/ Banking   | 66                |
| Other sector       | 68                |

**Table 6-4 Main client activity sector** 

|  | € million |       |       |       |       |         |             |
|--|-----------|-------|-------|-------|-------|---------|-------------|
|  | 2011      | 2012  | 2013  | 2014  | 2015  | 2015    | 2016        |
|  |           |       |       |       |       | Jan-Jun | Jan-<br>Jun |
| Agriculture, forestry and fishing  | 95        | 94    | 91    | 94    | 106   | 45      | 48          |
| Mining and quarrying;<br>manufacturing; and utilies  | 870       | 816   | 841   | 832   | 877   | 440     | 463         |
| of which manufacturing   | 787       | 791   | 727   | 719   | 726   | 366     | 376         |
| Construction   | 282       | 275   | 294   | 294   | 334   | 161     | 154         |
| Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accomodation and food service activities | 1,290     | 1,398 | 1,530 | 1,599 | 1,739 | 805     | 838         |
| Information and Communication  | 371       | 381   | 379   | 419   | 453   | 217     | 240         |
| Financial services   | 450       | 525   | 524   | 504   | 547   | 269     | 286         |
| Real estate activities   | 372       | 369   | 378   | 384   | 422   | 204     | 222         |
| Professional, scieintic and technical activites; administrative and support service activities   | 570       | 652   | 732   | 821   | 941   | 442     | 492         |
| Public administration and defence; compulsory social security; education; human health and social work activities                          | 1,112     | 1,179 | 1,258 | 1,351 | 1,445 | 722     | 762         |
| Arts, entertainment and recreation, repair of household goods and other services   | 582       | 633   | 719   | 760   | 804   | 400     | 409         |
| Gross Value Added  | 5,993     | 6,322 | 6,746 | 7,058 | 7,667 | 3,705   | 3,915       |

(Source: Ministry for Finance (2016))

# Table 6-5 Sector gross value added (at basic prices)

The scope of the anlaysis above was to ensure that the replies were received from auditors who had the necessary qualifications, experience, position and

knowledge to answer the questionnaire. It is also positive that the mix of clients serviced by the respondents is reflective of the current economy.

#### 6.2.2 The financial controllers

155 replied to 1,140 questionnaires sent to financial controllers, 78% of which were male. The questionnaires were only sent out to clients serviced by auditors who responded to the questionnaire. The big four audit firms serviced 36% of the respondents, whilst the rest were audited by mid-tier firms, small firms or sole practitioners. Therefore perceptions were obtained from a good mix of respondents.

Most of the respondents' age was above 45 (Table 6-6), probably due to the fact the position of financial controllers is often occupied by senior members of staff. This is supplemented by the information that most of the respondents, specifically 90 out of 155, have been working with the company in question over 10 years.

| <u>Age</u> | Total<br>Respondents | % of total population |
|------------|----------------------|-----------------------|
| 18-25      | 5                    | 3                     |
| 26-35      | 34                   | 22                    |
| 36-45      | 35                   | 23                    |
| And above  | 81                   | 52                    |
| TOTAL      | 155                  | 100                   |

Table 6-6 Clients' age

Since the questionnaires were addressed to financial controllers, 50 replies were received from financial controllers and most of the replies were answered by the directors (Table 6-7). The latter finding is due to the fact that most companies in Malta are small, owned and managed by the same person. In fact, the question was addressed as follows "What is your position in the company? (You can tick more than one box – e.g. in the case of an ownermanager business you can tick shareholder & director)". Respondents could therefore tick more than one box, collectively the replies were as follows:

|                             | Total |
|-----------------------------|-------|
| Shareholder                 | 35    |
| Director                    | 60    |
| Financial Controller        | 50    |
| Financial Manager/ Accounts |       |
| executive                   | 26    |
| Accountant                  | 25    |
| Other                       | 19    |

Table 6-7 Clients' position within the company

When the respondents were asked about the size of the companies they work with; 8% of the replies received were from large companies, 22% from mediumsized companies and 70% from small companies. The measures applied in this categorization were as dictated by Maltese legislation and the EU Accounting Directive (Accountancy Profession Act, Cap.281, L.N. 289; EC, 2013). The Accountancy Profession Act, Cap.281, L.N. 289 classifies a small company as being one which satisfies two out of three of the following criteria, namely having assets of less than 4 million euros, revenue of less than 8 million euros and employing less than 50 employees. In the case when a company satisifies two of three of the following, i.e. owns assets valued between 4 million euros and 20 million euros, earns a yearly revenue between 8 million euros and 40 million euros and employs between 50 and 250 employees, then it is considered to be a medium-sized company. Companies not falling within these two categories and therefore owning assets of more than 20 million euros, earning revenue of more than 40 million euros and employing 250 employees are classified as large companies, as long as they also fall within the two out of three rule.

Statistics indicate that in Malta (National Statistics Office, 2017) and within the EU (EC, 2017) most of the companies are classified as small or medium-sized companies. They are classified as such by identifying companies employing less than 50 as small, companies employing between 50 and 250 employees as medium and more than 250 employees as large. Statistics reveal that less than 1% of registered companies are large companies, whereas 8% of the respondents in this study are employed by large companies. However, this is

not expected to alter the findings since the majority of the respondents are employed or own, in the case of an owner/ manger business, a small company thus reflective of the local economy.

#### 6.3 Model Assessment

The sections below describe the mode of analysis adopted in this research. As described in the previous chapters the suitability of the factors was initially evaluated using prior studies performed by other researchers. The following paragraphs and the following chapters follow up on the factors identified by assessing in detail the reliability and validity of the measurement scales. The results are then used to set up a SEM, and the relationship between the variables was thereafter examined.

## 6.3.1 Unidimensionality

In this study an EFA on all items using Cronbach's alpha was deemed to be the best initial measure of internal consistency of the research instrument. "Cronbach alpha is the most commonly used test to determine the internal consistency of an instrument" (Hael & Twycross, 2015, p. 67). The focus is to ensure that the items ultimately measure the same dependent variable, namely trust in the auditor. Cronbach's alpha was therefore used to measure the initial correlation/ dependency between all the items (questions) in the scale (Ashauer et al., 2015; Tang et al., 2017).

The statistical calculation is expressed in a range between 0 and 1, wherein the range between 0.70 and 0.80 is considered to be satisfactory (Connelly, 2011, Nunnally, 1994). One can argue that the length of the test can affect the value of the alpha (Tavakol & Dennick, 2011). As stated by Steiner (2003), if the average correlation among items is kept constant, then the higher the number of items the higher the value of alpha. On the other hand Cronbach's alpha is not the ultimate measure of unidimensionality, the subscales can have a high alpha but still be multidimensional, such as when the separate subscales have a high intercorrelation (Vaske *et al.*, 2016). Consequently further tests were performed as detailed below.

The results from the initial calculation of Cronbach's alpha for all the items in the questionnaire were scrutinised and items with a low correlation were eliminated (refer to Table 6-8 and Table 6-9) (Ashauer *et al.*, 2015; Tang *et al.*, 2017). The auditor's test identified the following items in the questionnaire with a low correlation: *X2*, *X13*, *X22*, *X27*, *X29* and *X34*, whereas when the client's replies to the questionnaire were subject to the Cronbach's alpha test the following items were identified as having a low correlation: *X3*, *X12*, *X13*, *X16*, *X19*, *X21 X25*, and *X27*.

| AUDITORS   |              |                        |                  |
|------------|--------------|------------------------|------------------|
| Item       | <u>Alpha</u> | Eliminating items with | <u>Variables</u> |
| X1         | 0.6939       | FALSE                  |                  |
| X2         | 0.7009       | TRUE                   | Eliminated       |
| X3         | 0.6945       | FALSE                  |                  |
| X4         | 0.6997       | FALSE                  |                  |
| X5         | 0.6981       | FALSE                  |                  |
| X6         | 0.6988       | FALSE                  |                  |
| X7         | 0.6983       | FALSE                  |                  |
| X8         | 0.6854       | FALSE                  |                  |
| X9         | 0.6744       | FALSE                  |                  |
| X10        | 0.6837       | FALSE                  |                  |
| X11        | 0.6975       | FALSE                  |                  |
| X12        | 0.6971       | FALSE                  |                  |
| X13        | 0.7054       | TRUE                   | Eliminated       |
| X14        | 0.6943       | FALSE                  |                  |
| X15        | 0.6911       | FALSE                  |                  |
| X16        | 0.6999       | FALSE                  |                  |
| X17        | 0.6991       | FALSE                  |                  |
| X18        | 0.6982       | FALSE                  |                  |
| X19        | 0.6964       | FALSE                  |                  |
| X20        | 0.6909       | FALSE                  |                  |
| X21        | 0.6983       | FALSE                  |                  |
| X22        | 0.7033       | TRUE                   | Eliminated       |
| X23        | 0.6866       | FALSE                  |                  |
| X24        | 0.6793       | FALSE                  |                  |
| X25        | 0.6924       | FALSE                  |                  |
| X26        | 0.6984       | FALSE                  |                  |
| X27        | 0.7055       | TRUE                   | Eliminated       |
| X28        | 0.6964       | FALSE                  |                  |
| X29        | 0.7043       | TRUE                   | Eliminated       |
| X30        | 0.6954       | FALSE                  |                  |
| X31        | 0.6907       | FALSE                  |                  |
| X32        | 0.6979       | FALSE                  |                  |
| X33        | 0.7006       | FALSE                  |                  |
| X34        | 0.7026       | TRUE                   | Eliminated       |
| X35        | 0.686        | FALSE                  |                  |
| X36        | 0.6914       | FALSE                  |                  |
| X37        | 0.6911       | FALSE                  |                  |
| X38        | 0.6942       | FALSE                  |                  |
| Test scale | 0.7009       |                        |                  |

**Table 6-8 Overall Cronbach's alpha test for the auditors** 

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| COMPANIES  |              |                        |                  |
|------------|--------------|------------------------|------------------|
| Item       | <u>Alpha</u> | Eliminating items with | <u>Variables</u> |
|            |              | low correlation        | eliminated       |
| X1         | 0.7764       | FALSE                  |                  |
| X2         | 0.7727       | FALSE                  |                  |
| X3         | 0.7818       | TRUE                   | Eliminated       |
| X4         | 0.7764       | FALSE                  |                  |
| X5         | 0.7768       | FALSE                  |                  |
| X6         | 0.7735       | FALSE                  |                  |
| X7         | 0.7716       | FALSE                  |                  |
| X8         | 0.7685       | FALSE                  |                  |
| X9         | 0.7626       | FALSE                  |                  |
| X10        | 0.7693       | FALSE                  |                  |
| X11        | 0.7734       | FALSE                  |                  |
| X12        | 0.7793       | TRUE                   | Eliminated       |
| X13        | 0.7782       | TRUE                   | Eliminated       |
| X14        | 0.7757       | FALSE                  |                  |
| X15        | 0.7635       | FALSE                  |                  |
| X16        | 0.7787       | TRUE                   | Eliminated       |
| X17        | 0.7761       | FALSE                  |                  |
| X18        | 0.7774       | FALSE                  |                  |
| X19        | 0.782        | TRUE                   | Eliminated       |
| X20        | 0.7741       | FALSE                  |                  |
| X21        | 0.7789       | TRUE                   | Eliminated       |
| X22        | 0.7737       | FALSE                  |                  |
| X23        | 0.7704       | FALSE                  |                  |
| X24        | 0.7665       | FALSE                  |                  |
| X25        | 0.7789       | TRUE                   | Eliminated       |
| X26        | 0.7752       | FALSE                  |                  |
| X27        | 0.7783       | TRUE                   | Eliminated       |
| X28        | 0.7656       | FALSE                  |                  |
| X29        | 0.7737       | FALSE                  |                  |
| X30        | 0.7651       | FALSE                  |                  |
| X31        | 0.7723       | FALSE                  |                  |
| X32        | 0.7749       | FALSE                  |                  |
| X33        | 0.772        | FALSE                  |                  |
| X34        | 0.7771       | FALSE                  |                  |
| X35        | 0.7639       | FALSE                  |                  |
| X36        | 0.7721       | FALSE                  |                  |
| X37        | 0.7691       | FALSE                  |                  |
| X38        | 0.7718       | FALSE                  |                  |
| Test scale | 0.7781       |                        |                  |

Table 6-9 Overall Cronbach's alpha test for the clients

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However as stated previously, ultimately the scope was to measure trust and the Cronbach's alpha was only used as an initial measure. Following the elimination of items with a low correlation the internal consistency of the reduced 32-item scale for the auditors yielded a Cronbach's alpha of 0.7183 (refer to Appendix B.1.2 Removing items with low correlation in auditors' questionnaire) whereas the reduced 30-item scale for companies yielded a Cronbach alpha of 0.7941 (refer to Appendix B.2.2 Removing items with low correlation in clients' questionnaire) (Cheng & Lai, 2010).

The next step was to use principal component analysis to identify components with commonalities between the original independent variables (VanPool & Leonard, 2010) summarising data in a smaller number of components. The Kaiser-Guttman Eigenvalue greater than one test was then applied to retain or discard components, followed by the Varimax rotation to identify the factor components. This method initially identified 12 components for auditors (refer to Appendix B.1.4 Varimax Rotation - auditors test 1) and 10 components (refer to Appendix B.2.4 Varimax Rotation - clients test 1) for companies.

The scale was also tested for validity through EFA using SEM, whereby a model was constructed ensuring that only the *p*-values of the paths less than 0.10 were taken into consideration. The initial 12 components for auditors and 10 components for companies resulting from the statistical test above were revaluated using SEM to improve their interpretability. Wanous *et al.* (1997) state that single-item measures can measure self-reported facts, such as age, education, experience and this is an accepted practice. Single-item measures can also be used to measure psychological factors, however this is usually discouraged. The latter practice is discouraged "*primarily because they are presumed to have unacceptably low reliability*" (Wanous *et al.*, 1997, p. 247). So much so that in cases involving complex psychological constructs, it is normally recommended that scales with multiple items should be used. This is further supported by Leung & Xu (2013, p. 512), who stated that although single item measures are simpler and easier to use, multiple-item measures are better suited for "*measuring latent characteristics with many facets*". Consequently

components with only one factor loading were removed (refer to Appendix B.1.6 Overall Cronbach Alpha for the auditors - amended test 2) and a principal component factor analysis was conducted on the remaining data, followed by a Varimax rotation. *P*-values greater than 0.10 were eliminated and the principal component factor analysis and Varimax rotation was conducted again on the remaining data until the final SEM was attained (refer to Appendix B.1.7 Principal Component Analysis for the auditors - amended test 2 and Appendix B.1.8 Varimax Rotation for the auditors - amended test 2).

#### 6.3.2 Stability

The statistical tests performed and discussed above, give an indication of the internal consistency of the results, however it is also important to assess the consistency of the results when the instrument is repeated (Haele & Twycross, 2015). As stated by Lucas (2013) replication of a test increases confidence in a theory. The *t*-test can be used as a statistical tool to test consistency, where it compares scores when the test is repeated. When there is a low probability associated with the *t* statistic, i.e. *p* is less than 0.05 then there is a significant finding. If on the other hand the *p* value is greater than 0.05 there is no significant difference between the two groups (Etchegaray *et al.*, 2012). The questionnaires were sent out to the samples between July 2015 and July 2016. Therefore the sample was split into two subgroups and a two sample *t*-test run to compare the means between the group receiving the questionnaire in the initial months and the other group who received the questionnaire in the latter months (Etchegaray *et al.*, 2012). The following paragraphs describe the detailed tests performed.

#### 6.3.2.1 Accountants

Group (1) consisted of the first 100 questionnaires sent out in the initial months and subsequently received, whilst Group (2) consisted of 73 questionnaires from questionnaires sent out in the latter months and received.

#### 6.3.2.2 Financial Controllers

Group (1) consisted of the first 100 questionnaires sent out in the initial months and subsequently received, whilst Group (2) consisted of the last 53 questionnaires sent out and received in the latter months.

### **6.3.2.3** The two sample *t*-test

The two-sample *t*-test was performed between Groups (1) and Groups (2) of the auditors and the financial controllers, to test the external validity of the data. The scope of the t-test was to test the null hypothesis:

Ho: "The difference in the mean results between Group (1) and Group (2) used in the study is zero".

Table 6-10 and Table 6-11below give the results the t-tests performed comparing the earlier questionnaires sent out to the questionnaires sent at a later date for both auditors and clients respectively. The differences in the mean results of both the auditors and the financial controllers indicated that the p-values of the mean of each independent variable were high. Since the p-values are greater than 0.05, then the differences between Group (1) and Group (2), are not statistically different from zero. Consequently concluding that there are no statistically differences in the mean values over time.

| AUDITO | PRS   | t-statistic <sup>2</sup> | <i>p</i> -value <sup>3</sup> |
|--------|---|--------------------------|------------------------------|
| Item   |   |                          |                              |
| X1     | It is realistic to expect prompt rescheduling of missed deadlines.  | -2.02                    | 0.05                         |
| Х3     | Management should provide the auditor with the relevant information without being asked for it.             | -0.86                    | 0.39                         |
| X4     | The audit partner should be actively involved in the engagement.  | -0.43                    | 0.67                         |
| X5     | Management should give adequate support to the audit team so that they do their job well.                   | -0.20                    | 0.84                         |
| X6     | An internal review on a selection of audit files ensures that the audit firm maintains high quality control |                          |                              |
|        | procedures.   | -2.67                    | 0.01                         |
| X7     | It is important that the audit partner gives the client individual attention.                               | 0.62                     | 0.54                         |
| X8     | The audit partner should have the client's best interests at heart.   | 0.04                     | 0.97                         |
| X9     | The client should contribute more than required during the audit.   | -0.79                    | 0.43                         |
| X10    | It is important that the regular meetings are held between the client & the audit partner.                  | -0.52                    | 0.60                         |
| X11    | It is important that clients respond quickly to the auditor's queries.                                      | -0.46                    | 0.65                         |
| X12    | Auditors should offer other assurance services besides the audit of historical information.                 | 0.18                     | 0.86                         |
| X14    | The expertise & competence of the audit firm is more important than the expertise of the audit team.        | 0.63                     | 0.53                         |
| X15    | The auditor should be sceptical on whether the client will stick to his word.                               | -0.17                    | 0.87                         |
| X16    | It is important that the audit partner has high ethical standards.  | 1.83                     | 0.07                         |
| X17    | Ethical training should be mandatory for audit and accountancy students.                                    | 0.01                     | 0.99                         |
| X18    | Clients should keep their records accurately.   | -1.82                    | 0.07                         |
| X19    | The auditor should never take risks, irrespective of how small the risk might be.                           | 0.17                     | 0.87                         |
| X20    | The auditor's responsibility is to act in the public interest.  | -0.81                    | 0.42                         |
| X21    | As a professional the auditor should ensure that he/she performs his work to the best of his/ her           |                          |                              |
|        | abilities.  | -0.63                    | 0.53                         |
| X23    | The auditor's ethical decision making varies from one situation to another.                                 | 0.80                     | 0.42                         |
| X24    | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the               |                          |                              |
|        | action.   | 0.48                     | 0.63                         |
| X25    | It is understandable that an auditor collects information about clients through their professional and      |                          |                              |
|        | personal networks.  | 0.14                     | 0.89                         |
| X26    | The audit firm is always objective in its judgements.   | -0.08                    | 0.93                         |
| X28    | The importance of the auditor's independence is overrated.  | -0.13                    | 0.90                         |
| X30    | Client retention is a determining factor in the auditor's ultimate decisions                                | -0.80                    | 0.42                         |
| X31    | The auditor usually notices inconsistencies in explanations.  | 0.21                     | 0.83                         |
| X32    | The auditor does not like to decide until she/he has looked at all of the readily available information.    | -1.42                    | 0.16                         |
| X33    | The auditor frequently questions things that he/she sees or hears.  | -0.62                    | 0.54                         |
| X35    | It is understandable that the auditor has doubts about the accuracy of the information received from        |                          |                              |
|        | clients.  | 2.66                     | 0.01                         |
| X36    | To be sceptical is the same as distrust.  | 0.57                     | 0.57                         |
| X38    | Increased control over the profession will increase trust in the auditor.                                   | -0.93                    | 0.36                         |
| X39    | Auditors have to trust management to be able to perform the audit.  | -0.09                    | 0.93                         |

# Table 6-10 *t*-tests for auditors

<sup>&</sup>lt;sup>2</sup> The t-statistic is the ratio of the mean of the difference to the standard error of the difference

<sup>&</sup>lt;sup>3</sup> The p-value is computed using the t distribution and is the probability of observing a greater absolute value of t under the null hypothesis. If the p-value is less the pre-specified alpha level of 0.05, then one can conclude that the mean is statistically different from zero. (*T-test, Stata Annotated Output, n.d.*)

| Compa       | nies  | t-statistic | <i>p</i> -value |
|-------------|---|-------------|-----------------|
| <u>Item</u> |   |             |                 |
| X1          | It is realistic to expect prompt rescheduling of missed deadlines.                                  | 1.96        | 0.05            |
| X2          | The auditor should strive to create minimum disruption as practically possible during the audit.    | -0.93       | 0.36            |
| X4          | The audit partner should be actively involved in the engagement.                                    | 0.82        | 0.41            |
| X5          | Management should give adequate support to the audit team so that they do their job well.           | -1.69       | 0.09            |
| X6          | An internal review on a selection of audit files ensures that the audit firm maintains high quality |             |                 |
|             | control procedures.   | -0.17       | 0.86            |
| X7          | It is important that the audit partner gives the client individual attention.                       | -0.26       | 0.80            |
| X8          | The audit partner should have the client's best interests at heart.                                 | 0.69        | 0.49            |
| X9          | The client should contribute more than required during the audit.                                   | -0.04       | 0.97            |
| X10         | It is important that the regular meetings are held between the client & the audit partner.          | 0.66        | 0.51            |
| X11         | It is important that clients respond quickly to the auditor's queries.                              | -1.31       | 0.19            |
| X14         | The expertise & competence of the audit firm is more important than the expertise of the audit      |             |                 |
|             | team.   | -0.02       | 0.98            |
| X15         | The auditor should be sceptical on whether the client will stick to his word.                       | -0.53       | 0.60            |
| X17         | Ethical training should be mandatory for audit and accountancy students.                            | -1.64       | 0.10            |
| X18         | Clients should keep their records accurately.   | -0.84       | 0.40            |
| X20         | The auditor's responsibility is to act in the public interest.                                      | 0.04        | 0.97            |
| X22         | The auditor's code of ethics gives guidance and a sense of direction.                               | -0.59       | 0.56            |
| X23         | The auditor's ethical decision making varies from one situation to another.                         | 0.50        | 0.62            |
| X24         | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the       |             |                 |
|             | action.   | 1.64        | 0.10            |
| X26         | The audit firm is always objective in its judgements.   | 0.11        | 0.91            |
| X28         | The importance of the auditor's independence is overrated.  | -0.17       | 0.86            |
| X29         | A long-term relationship between the client and the auditor will decrease the auditor's             |             |                 |
|             | independence and objectivity.   | 0.19        | 0.85            |
| X30         | Client retention is a determining factor in the auditor's ultimate decisions                        | 0.33        | 0.74            |
| X31         | The auditor usually notices inconsistencies in explanations.  | 0.90        | 0.37            |
| X32         | The auditor does not like to decide until she/he has looked at all of the readily available         |             |                 |
|             | information.  | -1.83       | 0.07            |
| X33         | The auditor frequently questions things that he/she sees or hears.                                  | 0.63        | 0.51            |
| X34         | Professional scepticism depends on past experiences.  | -0.09       | 0.93            |
| X35         | It is understandable that the auditor has doubts about the accuracy of the information received     |             |                 |
|             | from clients.   | -0.19       | 0.85            |
| X36         | To be sceptical is the same as distrust.  | -0.13       | 0.90            |
| X38         | Increased control over the profession will increase trust in the auditor.                           | -1.13       | 0.26            |
| X39         | Auditors have to trust management to be able to perform the audit                                   | -0.32       | 0.75            |

Table 6-11 *t*-tests for companies

## 6.4 Comparing the means

The statistical tests that have been performed and will be discussed in the following chapters will analyse the individual models for the auditors and the clients, and will also look at the differences and similarities between the models. However before delving into the details of the resultant models it is also useful to compare the opinions between the two groups about the individual statements presented to the auditors and their clients. The *t*-test was again used to compare scores between two groups, where a *p*-value of less than 0.05 was indicative of a significant difference. If on the other hand the *p*-value was greater than 0.05, therefore differences between the two groups were not significant (Etchegaray *et al.*, 2012). The two-sample *t*-test was performed comparing auditors' (Group 1) perceptions to their clients' (Group 2) perceptions. The scope of the *t*-test was to confirm or otherwise the null hypothesis that is:

Ho: "The difference in the mean results between Group (1) and Group (2) used in the study is zero".

Table 6-12 summarises the total differences in the means between the auditors' and the clients' replies. The following sections subsequently discuss the similarities and differences by classifying the comparisons as either (i) similar opinions (no statistical difference as per *t*-test) or (ii) conflicting viewpoints (with statistical difference as per *t*-test). Furthermore divergent opinions in the models are discussed in detail in section 9.2.4 A divergence of opinions, when comparing the models.

|     |  | <u>Auditor</u> |                   |                    |             | Client            |                    |             | i               | Significant                        |
|-----|--|----------------|-------------------|--------------------|-------------|-------------------|--------------------|-------------|-----------------|------------------------------------|
|     |  | Mean           |                   | Standard Deviation | <u>Mean</u> |                   | Standard Deviation | t-statistic | <i>p</i> -value | difference as per<br><u>t-test</u> |
| X1  | It is realistic to expect prompt rescheduling of missed deadlines  | n/a            |                   | n/a                | 2.32        | Agree             | 0.11               | n/a         | n/a             | Divergent opinions                 |
| X4  | The audit partner should be actively involved in the engagement  | 1.8            | Agree             | 0.07               | 2.25        | Agree             | 0.09               | -3.68       | 0.00            | Difference                         |
| X5  | Management should give adequate support to the audit team so that they do their job well (Question for client analysis)  | 1.35           | Strongly agree    | 0.42               | 1.51        | Strongly agree    | 0.06               | -2.29       | 0.02            | Difference                         |
| X6  | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures. | 1.62           | Agree             | 0.06               | 1.98        | Agree             | 0.07               | -3.83       | 0.00            | Difference                         |
| X7  | It is important that the audit partner gives the client individual attention   | 1.83           | Agree             | 0.07               | 1.91        | Agree             | 0.07               | -0.81       | 0.42            | No difference                      |
| X8  | The audit partner should have the client's best interests at heart.  | 2.64           | Agree somewhat    | 0.12               | 2.05        | Agree             | 0.11               | 3.50        | 0.00            | Difference                         |
| X9  | Client management should contribute more than required during the audit. (Question for client analysis)                  | 3.38           | Agree somewhat    | 0.12               | 3.25        | Agree somewhat    | 0.12               | 0.74        | 0.46            | No difference                      |
| X10 | It is important that the regular meetings are held between the client & the audit partner                                | 2.3            | Agree             | 0.09               | 2.39        | Agree             | 0.09               | -0.69       | 0.49            | No difference                      |
| X11 | It is important that clients respond quickly to the auditor's queries (Question for client analysis)                     | 1.62           | Agree             | 0.05               | 2.01        | Agree             | 0.06               | -4.99       | 0.00            | Difference                         |
| X12 | Auditors should offer other assurance services besides the audit of historical information                               | 2.62           | Agree somewhat    | 0.11               | n/a         |                   | n/a                | n/a         | n/a             | Divergent opinions                 |
| X14 | The expertise & competence of the audit firm is more important than the expertise of the audit team.                     | 4.15           | Undecided         | 0.13               | 3.6         | Undecided         | 0.14               | 2.89        | 0.00            | Difference                         |
| X15 | The auditor should be sceptical on whether the client will stick to his word.  | 2.71           | Agree somewhat    | 0.11               | 3.91        | Undecided         | 0.15               | -6.59       | 0.00            | Difference                         |
| X16 | It is important that the audit partner has high ethical standards.   | 1.18           | Strongly agree    | 0.04               | n/a         |                   | n/a                | n/a         | n/a             | n/a                                |
| X17 | Ethical training should be mandatory for audit and accountancy students.   | 1.52           | Strongly agree    | 0.06               | 1.55        | Strongly agree    | 0.05               | -1.74       | 0.08            | No difference                      |
| X18 | Clients should keep their records accurately (Question for client analysis)  | 1.3            | Strongly agree    | 0.04               | 1.38        | Strongly agree    | 0.04               | -1.82       | 0.07            | No difference                      |
| X19 | The auditor should never take risks, irrespective of how small the risk might be.  | 2.74           | Agree somewhat    | 0.12               | n/a         |                   | n/a                | n/a         | n/a             | Divergent opinions                 |
| X20 | The auditor's responsibility is to act in the public interest.   | 2.18           | Agree             | 0.11               | 2.77        | Agree somewhat    | 0.13               | -3.58       | 0.00            | Difference                         |
| X21 | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities              | 1.3            | Strongly agree    | 0.04               | n/a         |                   | n/a                | n/a         | n/a             | Divergent opinions                 |
| X22 | The auditor's code of ethics gives guidance and a sense of direction.  | n/a            |                   | n/a                | 1.94        | Agree             | 0.07               | 0.00        | 1.00            | No difference                      |
| X23 | The auditor's ethical decision making varies from one situation to another   | 4.8            | Disagree somewhat | 0.14               | 5.11        | Disagree somewhat | 0.15               | -1.45       | 0.15            | No difference                      |

(n/a refers to instances where the factor was eliminated from the model by either the auditor or the client)

**Table 6-12 Comparison of means** 

|               |   | Auditor Client |                   |                    |             |                |                    |             |                | Significant                 |
|---------------|---|----------------|-------------------|--------------------|-------------|----------------|--------------------|-------------|----------------|-----------------------------|
|               |   | Mean           |                   | Standard Deviation | <u>Mean</u> | <del></del>    | Standard Deviation | t-statistic | <u>p-value</u> | difference<br>as per t-test |
| X24           | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action. (Question for client analysis)          | 3.7            | Undecided         | 0.15               | 4.08        | Undecided      | 0.15               | -1.78       | 0.08           | No difference               |
| X25           | It is understandable that an auditor collects information about clients through their professional and personal networks                      | 2.47           | Agree             | 0.1                | n/a         |                | n/a                | n/a         | n/a            | Divergent opinions          |
| X26           | The audit firm is always objective in its judgements.   | 2.13           | Agree             | 0.08               | n/a         |                | n/a                | n/a         | n/a            | Divergent opinions          |
| X28           | The importance of the auditor's independence is overrated.  | 3              | Agree somewhat    | 0.13               | 3.68        | Undecided      | 0.14               | -3.57       | 0.00           | Difference                  |
| X30           | Client retention is a determining factor in the auditor's ultimate decisions.   | 4.6            | Disagree somewhat | 0.14               | 2.89        | Agree somewhat | 0.13               | 3.78        | 0.00           | Difference                  |
| X31           | The auditor usually notices inconsistencies in explanations   | 4.6            | Disagree somewhat | 0.09               | 3.32        | Agree somewhat | 0.12               | -4.07       | 0.00           | Difference                  |
| X32           | The auditor does not like to decide until she/he has looked at all of the readily available information.                                      | 1.99           | Agree             | 0.06               | 2.27        | Agree          | 0.08               | -2.83       | 0.00           | Difference                  |
|               | The auditor frequently questions things that he/she sees or hears   | 2.25           | Agree             | 0.08               | 2.75        | Agree somewhat | 0.1                | -3.83       | 0.00           | Difference                  |
| X35           | It is understandable that the auditor has doubts about the accuracy of the information received from clients                                  | n/a            |                   | n/a                | 4.35        | Undecided      | 0.13               | n/a         | n/a            | Divergent opinions          |
| X36           | To be sceptical is the same as distrust   | n/a            |                   | n/a                | 3.24        | Agree somewhat | 0.13               | n/a         | n/a            | Divergent opinions          |
| X37           | In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk                                  | 2.87           | Agree somewhat    | 0.1                | 2.78        | Agree somewhat | 0.12               | 0.73        | 0.46           | No difference               |
| X38           | Increased control over the profession will increase trust in the auditor  | n/a            |                   | n/a                | 2.78        | Agree somewhat | 0.12               | n/a         | n/a            | Divergent opinions          |
| X39           | Auditors have to trust management to be able to perform the audit   | 3.61           | Undecided         | 0.12               | 2.62        | Agree somewhat | 0.11               | 6.21        | 0.00           | Difference                  |
| 1 <b>74</b> 0 | The function of audited financial statements is to increase the creditworthiness of a company   | 3.86           | Undecided         | 0.15               | 2.76        | Agree somewhat | 0.12               | 5.84        | 0.00           | Difference                  |
| X41           | The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results | 3.31           | Agree somewhat    | 0.13               | 3.13        | Agree somewhat | 0.14               | 0.98        | 0.33           | No difference               |
| X42           | Discovering a breach or a misstatement is a measure of usefulness of the audit  | 3.49           | Agree somewhat    | 0.13               | 2.94        | Agree somewhat | 0.13               | 3.04        | 0.00           | Difference                  |

Table 6-12 Comparison of means (continued)

## 6.4.1 Similar opinions (no statistical difference as per t-test)

As outlined in Table 6-12 above, auditors and clients are in agreement with respect to some of the observable factors. Commencing with 'X7' 'It is important that the audit partner gives the client individual attention' and 'X10' 'It is important that the regular meetings are held between the client and the audit partner', these are two variables associated with communication and scepticism. Both groups are of the opinion that communication is important, although the audit partner is to maintain his/ her professional scepticism without getting heavily involved with clients. The importance of ethical training is prevalent in the replies of all respondents, rating the variable 'X17' 'Ethical training should be mandatory for audit and accountancy students', as 'strongly agree'. Although this result should be interpreted with caution, since it is possibly indicative that Maltese auditors feel that education will help them in their ethical decision-making. On the other hand clients might feel that auditor's capabilities are lacking and that increased ethical training for auditors is needed. Auditors and clients somewhat disagree that 'The auditor's ethical decision making varies from one situation to another' 'X23'. They are therefore in agreement that auditors should not vary their ethical disposition but it is perhaps better to conform to society's rules. This indicates that both groups are in agreement with a 'conventional level' of moral reasoning.

#### 6.4.2 Conflicting viewpoints (with statistical difference as per t-test)

### 6.4.2.1 Statistically different results with the same average mean

As described above the *t*-test was used to compare the mean values between the auditors and the clients. These are independent groups and the tests were used to compare the scores on the scales presented to the auditors and clients (Bower, 2013). The results of some variables gave the same mean value, although the replies revealed some statistical differences. The following is a brief analysis discussing the root cause analysis of these minor differences. Both groups agree that 'The audit partner should be actively involved in the engagement' 'X4', albeit the auditors have stronger positive views. As discussed in Chapter 4, this indicates that auditors feel that ideally the audit

partner is heavily involved in an audit, however in practice this depends on time, resources and riskiness of the client. Whereas the client is more practical and recognises that due to limited time the audit partner cannot always be actively involved in the engagement.

In 'X6', 'An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures', auditors and clients are both strongly in favour of this statement. Nonetheless, underlying this seemingly equivalent result there are differences in the underlying viewpoints. Maltese auditors feel that this variable is an important procedure if audit quality is to be maintained. Whereas clients' perceptions, link this variable to more control.

Both groups are undecided with respect to 'X14' The expertise & competence of the audit firm is more important than the expertise of the audit team'. The auditors' replies evidence a stronger undecided response validating previous theories advocating the importance that an ethical organisation is held at par with an individual's ethical attributes (Lloyd & Mey, 2012; Douglas *et al.*, 2015). Likewise clients responses do not distinguish between audit firm's and audit team's attributes, however they rate it closer to somewhat agree, showing a tendency to rely on the competence and expertise of the firm.

'X32' refers to the sceptical stance adopted by the auditor stating that 'The auditor does not like to decide until she/he has looked at all of the readily available information'. Auditors and clients agree that the auditor tries to collect all the information possible, although time and cost might also be a restricting factor (Zuca, 2015). The slight difference indicates a gap in perceptions where auditors are surer of themselves than their clients in the performance of their work.

## 6.4.2.2 Statistically different results and different average means

Auditors' response to 'X8' 'The audit partner should have the client's best interests at heart' was that they 'agree somewhat', indicating that although they perceive that having the client's interest at heart is important in a relationship, the auditor should keep some distance. On the other hand clients are in favour with replies averaging 'agree' to the statement.

The different replies to 'X15 'The auditor should be sceptical on whether the client will stick to his word' reflect that auditors should be somewhat sceptical about the client, however they are cognisant of the fact that the client has responsibilities and is aware of them. On the other hand, clients are unsure of whether an auditor should be sceptical about their truthfulness, implying that they feel that it is the auditor's duty not to fully trust the client.

Replies to statement 'The auditor's responsibility is to act in the public interest' 'X20', reflect that auditors agree that primarily the financial statements have been prepared for publication, therefore in the public interest. Whereas clients somewhat agree signifying that although the Code of Ethics for Professional Accountants (2016) specifies that an auditor should act in the public interest, they primarily perceive the audit to be for their benefit.

The inverted scale of 'X28' 'The importance of the auditor's independence is overrated', gave one of the most unexpected results. In the main auditors answered they 'agree somewhat' to the statement, contemporaneously clients are undecided. Causes of these results could be mainly due to the increase in regulation in recent years, therefore auditors might feel that they are being inadequately labelled and monitored. Whereas with respect to clients, this could possibly be due to the lack of knowledge on their part.

Previous studies identified that client dependence might be one of the most threatening factors to auditors' independence (Sciriha, 2016; Cote, 2002, Bettie *et al.*, 1999), contemporaneously it is also a determining factor to ensure that an auditor is not biased in his/ her decision-making. Therefore, the mean rating of the replies to the statement 'Client retention is a determining factor in the auditor's ultimate decisions' 'X30' is an interesting finding. Auditors' response is a non-convincing 'somewhat disagree' and clients' rating of 'somewhat agree', signifying an expectations gap between the groups as well as a disconcerting fact since maintaining independence is of the essence.

An audit has inherent limitations and an auditor can only give reasonable assurance (IAASB – ISA 240, 2016). Auditors are cognisant of this fact, therefore when asked whether 'The auditor usually notices inconsistencies in explanations' 'X31', they somewhat disagreed to the statement. On the other

hand, clients replied that they 'somewhat agree', implying that they have faith in the auditor's ability, although with some reservations recognising that the act of concealing information might make it difficult for the auditor to identify all cases. Auditors agree that 'The auditor frequently questions things that he/ she sees or hears' 'X33', but they did not commit themselves to strongly agree. This implies an attitude of neutral scepticism by the auditors (Nelson, 2009). On the other hand, clients are not convinced since they replied that they somewhat agreed, possible feeling that perhaps the auditor is too neutral and is keeping back from asking the necessary questions. This finding is rather worrying since there is an expectations gap between the two groups.

Results of the findings to 'X39' 'Auditors have to trust management to be able to perform the audit', revealed that auditors are undecided as to whether increased trust in management will ultimately result in a better audit. This indicates that they are of the opinion that management's responses include some level of dishonesty or bias in certain cases (Quadackers *et al.*, 2014). Clients somewhat agreed to this statement, feeling that the role of the auditor requires an element of scepticism.

## 6.4.3 Similarities and differences in the perception of audit usefulness

Observable factors for audit usefulness are labelled as 'X40' X41' and 'X42'. Similarities and differences in audit usefulness as perceived by the two groups will be discussed in detail in Chapter 8. Nonetheless as evidenced in the Table 6-12 above, the *t*-tests support the identified differences in the mean discussed in more detail in chapter 8, except for 'X42' 'Discovering a breach or a misstatement is a measure of usefulness of the audit'. Results reveal that although auditors and clients both agree somewhat that this is a measure of audit usefulness, the perception of clients is stronger than that of the auditor. This result ties with previous findings that auditor's point of view reflects the reality of reasonable assurance, whereas clients are not so clear on this bounded rationality.

### 6.4.4 Discussing the mean values of the client attributes

As summarised in Table 6-12 above, the replies to 'X5' 'Management should give adequate support to the audit team so that they do their job well' and 'X18' 'Clients should keep their records accurately', reveal that auditors and their clients strongly agree that management should give all the support needed and that their records are as accurate as possible. The t-tests performed indicate that in the case of management support, auditors feel more strongly about it. This result is understandable in view of the fact that auditors are totally dependent on the client's support to be able to perform the audit, whereas although the financial controllers recognise that this is important, one can discern a minor reluctance on their part. This attitude is also apparent in 'X11', which states that 'It is important that clients respond quickly to the auditor's queries'. Both groups agree however with a minimal difference, where auditors have stronger views in this respect. Both auditors and clients somewhat agree that the client should contribute more than required. The interpretation of the replies to 'X9' 'Client management should contribute more than required during the audit' is that the two groups recognise that communication is important, however auditors are wary of whether the client will contribute more and the finanical controllers might not trust the auditors completely. Replies to 'X24' Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action' indicate that auditors and clients are undecided about the morality of lying. This could imply that both parties are in favour of bending the rules occasionally.

#### 6.5 Conclusion

This chapter reports some initial descriptive statistics. Research findings discussed above verified the constructs' validity, relevance and consistency of the model under study. The latter part of the chapter then focused on evaluating the similarities or differences in the means of the observable factors between the two groups. In certain instances, areas for further research and notable findings were also highlighted and will be discussed further in the conclusions.

These results set the scene of the in-depth analysis described in the next chapters wherein the research findings outlined above are elaborated further giving an in-depth analysis of the results.

# CHAPTER 7 – THE PREREQUISITES OF TRUST IN THE AUDIT AS PERCEIVED BY AUDITORS AND CLIENTS

#### 7.1 Introduction

The scope of this study was to develop a framework for auditing by focusing on the factors of ability, benevolence and integrity, cited by Mayer et al. (1995) as determinants of a relationship of trust. Consequently, a framework of trustbased auditing was conceptualised based on the factors of professional scepticism, service quality and ethical behaviour (as described in Chapter 5 -The Development of a Framework 4). This chapter gives an in-depth analysis of the data collected and the resulting model, establishing whether the a priori model is applicable in the local context and in the current environment. As suggested by Churchill and Sanders (2008), arguments were developed through the process of shifting between data, its interpretation and search for evidence or counter evidence. All data obtained was critically evaluated, previous studies were consulted and interpretations were developed. Findings are described in this chapter by initially analyzing the views collected by the auditors, followed by an evaluation of the responses collected from clients. However before delving into the detailed results, in summary findings reveal that the models largely support the hypothesis, although with some dissimilarities.

Auditors' replies indicate that they are of the opinion that service quality, ethical behaviour and professional scepticism equally contribute positively to an increase in trust. Although results also disclosed that the observable indicators influence service quality, professional scepticism and ethical behaviour by a higher amount than the ultimate increase of the latter in trust. The SEM<sup>5</sup> identified that service quality is the most extensive pillar of the model, since respondents linked the highest number of observable indicators to this latent variable. The attributes grouped under service quality and perceived to increase

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<sup>&</sup>lt;sup>4</sup> Refer to Figure 5-2 A conceptual framework for trust-based auditing

<sup>&</sup>lt;sup>5</sup> Refer to Figure 7-1 Path diagram for auditors

trust included: empathy towards the client, offering other services, trust in management, reliability, capability, and an element of interpersonal trust.

Contemporaneously observable factors that directly influenced ethical behavior included the importance of the competence of the auditor as an individual, aversion to risk taking and the responsibility to act in the public interest. Factors relating to a relativistic attitude towards ethics have been linked to ethical behavior and ultimately trust, although an element of conventional ethical thinking was noted. This was substantiated further in the relationship emanating between the importance of auditor's independence and a non-relativistic ethical stance. Finally, the link between professional scepticism and trust also gave interesting results where it transpired that auditors perceived that reputation is an important prerequisite for professional scepticism and ultimately trust. Results identified that clients' reputation as well as an auditor's reputation of objectivity is linked to scepticism.

Clients' perceptions also support the preconceived model, albeit somewhat differently. One of the major findings involved the pillar of service quality, where findings resulted in a different relationship in terms of service quality vis-à-vis trust. It transpired that clients perceive service quality as an intermediate variable inversely related to reputation, which is also inversely related to trust. Therefore the perception is that service quality substitutes reputation and reputation is relied upon in the absence of trust<sup>6</sup>. Similar to the intermediate service quality pillar in the auditors' model described above, this is the most extensive pillar in terms of observable variables, where most of the statements presented were ultimately linked to the latent variable of service quality. The distinction between the firm's and the team's abilities, as well as the concept of distrust were directly linked to reputation and ultimately trust. All the other attributes were then directly or indirectly linked to service quality, where clients' responses indicated that they value efforts by the auditor to maintain quality in terms of internal reviews, monitoring and training and adherence to ethical standards. Concurrently clients are also in favour of their own commitment towards the auditors. The results with respect to the observable factors

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<sup>&</sup>lt;sup>6</sup> Refer to Figure 7-5 Clients' path diagram

influencing ethical behaviour, revealed the attributes that are not favoured by clients, where it resulted that they do not favour unethical behaviour, which was inversely related to trust. A conventional level of integrity by the auditor was preferred. Simultaneously an increase in the importance of the role of the auditor in the public interest was perceived to decrease the perception of unethical behaviour. However clients' replies resulted in an unexpected finding where an increase in the overall independence granted to the auditor was found to lead to an increase in unethical behaviour. Lastly clients perceive that noting inconsistencies, looking at all the available information and questioning things they hear or see increases professional scepticism. Although they are also of the opinion that doubting their ability to provide accurate information leads to a decrease in auditors' perceived scepticism.

The following paragraphs explore the empirical findings in detail. The focus of this chapter is on the first part of the model describing the relationship between the three pillars of scepticism, service quality and ethical behaviour with trust. The next chapter follows with a description of the findings for the second part of the model, evaluating the effect of trust on audit usefulness.

### 7.2 A theory of trust – The auditor's perspective

#### 7.2.1 The basis of the path diagram

As described in the previous chapter the statistical tests resulted in a value for Cronbach's alpha of 0.7183. This was followed by a calculation of the principal component analysis resulting in twelve factors with a Kaiser-Guttman Eigenvalue greater than one. Varimax rotation was thereafter used, and the items 'X1', (It is realistic to expect prompt rescheduling of missed deadlines) and 'X3' (Management should provide the auditor with the relevant information before asked for) were statistically identified to a single factor (refer to Appendix B.1.6 Overall Cronbach Alpha for the auditors - amended test 2). Consequently items 'X1' and 'X3' were eliminated.

A principal component factor analysis was conducted on the remaining data, followed by a Varimax rotation. This resulted in a model with 11 factors (refer to Appendix B.1.8 Varimax Rotation for the auditors - amended test 2). The next

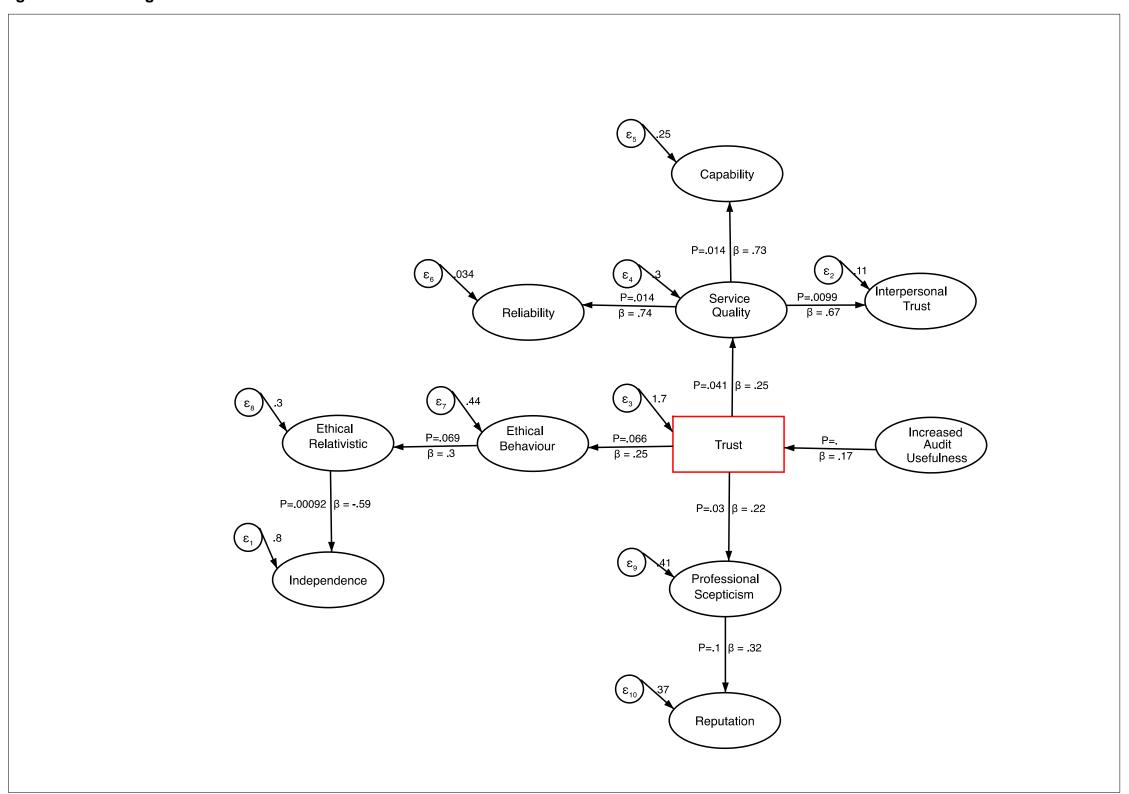
step involved estimating the structural model using maximum likelihood estimation (Moro *et al.*, 2014). One of the factors included items 'X35 (It is understandable that the auditor has doubts about the accuracy of the information received from clients), 'X36' (To be sceptical is the same as distrust), and 'X38' (Increased control over the profession will increase trust in the auditor). This factor resulted in a path coefficient greater than 0.10, therefore not statistically significant. Following which, these three items were removed, and the principal component analysis was rerun (refer to Appendix B.1.11 Principal Component Analysis for the auditors - amended test 3). Nine factors with a Kaiser-Guttman Eigenvalue greater than one were identified and the results rotated thus identifying the following factors:

| Variable | 2  | Factor1                 | Factor2                | Factor3           | Factor4     | Factor5    | Factor6    | Factor7                | Factor8           | Factor9             |
|----------|--|-------------------------|------------------------|-------------------|-------------|------------|------------|------------------------|-------------------|---------------------|
|          |  | Ethical<br>relativistic | Interpersonal<br>trust | <u>Scepticism</u> | Reliability | Reputation | Capability | Ethical responsibility | Client<br>service | <u>Independence</u> |
| X4       | The audit partner should be actively involved in the engagement  | 0.0793                  | 0.5785                 | -0.0354           | 0.2         | -0.1592    | 0.1663     | -0.3381                | 0.11              | 0.0666              |
| X5       | Management should give adequate support to the audit team so that they do their job well                                 | 0.045                   | 0.0336                 | -0.1728           | 0.5885      | 0.1261     | 0.2998     | -0.0763                | 0.2088            | 0.1105              |
| X6       | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures  | 0.0034                  | 0.155                  | 0.2722            | 0.421       | -0.0369    | -0.1672    | 0.2093                 | 0.0359            | 0.1277              |
| X7       | It is important that the audit partner gives the client individual attention   | -0.1808                 | 0.7175                 | 0.0154            | 0.0952      | 0.0665     | -0.1148    | 0.224                  | 0.0487            | -0.0146             |
| X8       | The audit partner should have the client's best interests at heart   | 0.0268                  | 0.1865                 | -0.0651           | 0.1251      | 0.3932     | -0.0408    | 0.3359                 | 0.4724            | -0.2366             |
| X9       | Client management should contribute more than required during the audit  | 0.383                   | 0.2792                 | -0.0957           | -0.0374     | 0.2539     | 0.4085     | 0.2882                 | 0.2654            | -0.1195             |
| X10      | It is important that the regular meetings are held between the client & the audit partner                                | 0.1609                  | 0.7383                 | 0.2857            | -0.0531     | -0.0275    | 0.2575     | -0.0061                | 0.0984            | -0.0637             |
| X11      | It is important that clients respond quickly to the auditor's queries  | 0.0024                  | 0.112                  | -0.047            | 0.1645      | 0.0186     | 0.7946     | 0.0376                 | 0.0507            | 0.0403              |
| X12      | Auditors should offer other assurance services besides the audit of historical information                               | 0.243                   | 0.1092                 | -0.1067           | 0.4094      | 0.2513     | -0.3071    | -0.2345                | 0.4154            | 0.2928              |
| X14      | The expertise & competence of the audit firm is more important than the expertise of the audit team                      | 0.3649                  | -0.0009                | -0.0841           | -0.0261     | 0.0131     | 0.0028     | 0.4098                 | 0.2249            | 0.3957              |
| X15      | The auditor should be sceptical on whether the client will stick to his word   | 0.6432                  | 0.2859                 | 0.084             | -0.0644     | 0.0782     | -0.1326    | 0.0106                 | -0.2277           | 0.0581              |
| X16      | It is important that the audit partner has high ethical standards  | -0.1646                 | 0.5879                 | -0.1372           | 0.2481      | 0.2281     | 0.1183     | 0.0691                 | -0.1063           | 0.0738              |
| X17      | Ethical training should be mandatory for audit and accountancy students  | -0.0548                 | 0.1399                 | 0.1443            | 0.1754      | -0.0733    | 0.5266     | 0.0841                 | -0.0408           | 0.2671              |
| X18      | Clients should keep their records accurately   | -0.1732                 | 0.1536                 | 0.2575            | 0.5768      | 0.1725     | 0.3139     | 0.0025                 | -0.0434           | -0.1331             |
| X19      | The auditor should never take risks, irrespective of how small the risk might be   | 0.0092                  | -0.0167                | 0.0369            | 0.1928      | 0.0704     | 0.018      | 0.7038                 | 0.0191            | -0.1016             |
| X20      | The auditor's responsibility is to act in the public interest  | 0.1421                  | 0.2482                 | -0.1274           | -0.0466     | -0.1028    | 0.2864     | 0.579                  | 0.0209            | 0.1461              |
| X21      | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities              | 0.0023                  | 0.0677                 | 0.1528            | 0.741       | -0.0878    | 0.0794     | 0.1609                 | -0.0742           | 0.0581              |
| X23      | The auditor's ethical decision making varies from one situation to another   | -0.7879                 | 0.1121                 | 0.0524            | -0.0492     | -0.0165    | -0.0893    | -0.0298                | 0.0925            | 0.0594              |
| X24      | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action                     | -0.7582                 | 0.0609                 | -0.0749           | 0.028       | -0.1019    | 0.0265     | -0.03                  | -0.1109           | 0.2257              |
| X25      | It is understandable that an auditor collects information about clients through their professional and personal networks | 0.1449                  | -0.0267                | 0.0895            | 0.0335      | 0.7655     | 0.0308     | 0.1276                 | -0.0366           | -0.1138             |
| X26      | The audit firm is always objective in its judgements   | 0.0169                  | 0.0537                 | 0.1344            | 0.0072      | 0.7177     | -0.003     | -0.1358                | 0.046             | 0.2356              |
| X28      | The importance of the auditor's independence is overrated  | -0.3538                 | 0.1074                 | 0.0522            | 0.1066      | 0.274      | -0.018     | -0.2457                | -0.2694           | 0.516               |
| X30      | Client retention is a determining factor in the auditor's ultimate decisions   | 0.2195                  | 0.0673                 | -0.0315           | -0.0597     | 0.0264     | -0.1125    | -0.0374                | -0.035            | -0.7246             |
| X31      | The auditor usually notices inconsistencies in explanations  | 0.2746                  | 0.2611                 | 0.6519            | 0.0023      | 0.0459     | -0.0742    | -0.1815                | 0.0492            | -0.1742             |
| X32      | The auditor does not like to decide until she/he has looked at all of the readily available information                  | -0.098                  | 0.0336                 | 0.7699            | 0.239       | 0.0774     | -0.014     | 0.0731                 | 0.0371            | 0.0755              |
| X33      | The auditor frequently questions things that he/she sees or hears  | -0.008                  | -0.0374                | 0.7299            | -0.0678     | 0.0972     | 0.0433     | -0.022                 | 0.1144            | 0.0692              |
| X39      | Auditors have to trust management to be able to perform the audit  | -0.0986                 | 0.0482                 | 0.1778            | -0.0242     | -0.0513    | 0.0843     | 0.02                   | 0.8144            | 0.0083              |

Table 7-1 List of factors of the SEM for auditors' perceptions

### 7.2.2 The path coefficients

Figure 7-1 Path diagram for auditors



The scale was further tested for validity using SEM in STATA 14.2. This stage involved rerunning SEM, by constructing a structure based on the new components, and calculating the p-value and the beta value ( $\beta$  value). As illustrated in the Figure 7-1, research findings indicate that the intermediate variables of 'Service Quality', 'Professional Scepticism' and 'Ethical Behaviour', have p-values of 0.041, 0.03 and 0.066 respectively. These values are an indication of how well the sample data dismiss the null hypothesis of no relationship. Furthermore it is also notable that all the standardised coefficients, revealed a positive influence on trust. In other words the expected change in one unit of 'Service Quality', 'Professional Scepticism' and 'Ethical Behaviour' will lead to a change of 0.25, 0.22 and 0.25 of a unit on 'Trust' respectively. Individually contributing almost equally to trust. This is an important finding since it proves that benevolence, ability and integrity affect trust in the auditor. Although it is notable that as detailed further in the paragraphs below, the beta values between the observable variables and the latent variables are of a relatively higher value. Therefore the observable factors increase service quality, professional scepticism and ethical behaviour by a higher amount the ultimate increase in trust.

The intermediate variables of 'Reliability', 'Capability' and 'Interpersonal Trust', affecting the relationship between the other intermediate variable 'Service Quality' and the dependent variable of 'Trust', all have low *p*-values at 0.014, 0.014 and 0.0099 respectively. This is further accentuated with beta values at 0.64, 0.73 and 0.67 respectively. This finding highlights that these variables represent important issues, which positively affect the importance of service quality. These results combined with the *p*-value of the intermediate variable of 'Service Quality' at 0.041, support the argument that the null hypothesis can be rejected.

The other path outlining the relationship between 'Trust' and 'Professional Scepticism', gives different results. Although the secondary intermediate variable 'Professional Scepticism', has a low *p*-value, the related intermediate variable of 'Reputation' has a relatively higher *p*-value of 0.10. Therefore there is a 10% possibility that reputation is correlated with scepticism due to chance.

The relationship between the intermediate variable 'Ethical Behaviour' and 'Trust', as well as the second intermediate variables of 'Ethical Relativistic' and 'Ethical Behaviour' both have higher *p*-values, at 0.066 and 0.069 respectively, than the previous paths linking to 'Trust'. This contrasts with the result exhibited in the relationship between the third intermediate variable of 'Independence' and 'Ethical Relativistic', where a low *p*-value is evident accompanied by a higher beta value at -0.59 in absolute terms, compared to 0.30 and 0.25 of the other two intermediate variables of 'Ethical Relativistic' and 'Ethical Behaviour'. Nonetheless, all values are within the acceptable range and therefore indicate that it is unlikely that the variables are entirely uncorrelated (Althouse & Soman, 2017).

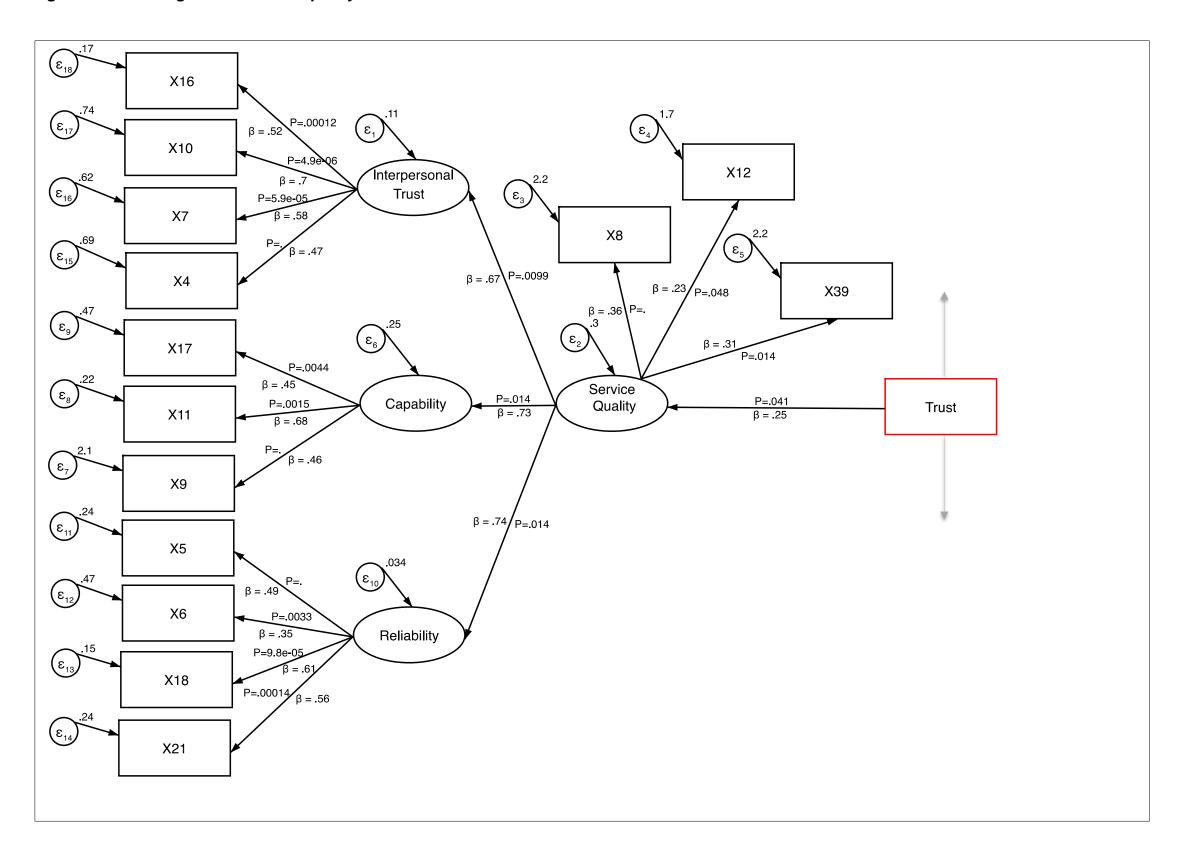
The following sub-sections take into consideration the above relationships, also briefly discussing the average mean values of the responses received. The results are analysed in detail, by referring to previously issued literature, the current economic environment and current practice.

### 7.3 Analysis of results – the auditors' perspective

### 7.3.1 Service Quality

The path analysis below outlining the relationship of service quality to trust is the most extensive pillar of the model as respondents linked the highest number of the observable factors indicators to giving a better service. All *p*-values are less than the conventional 0.05 therefore it is highly likely that this is not a chance relationship (Mohanty *et al.*, 2015). Furthermore beta values between the observable variables and the intermediate latent variables are all positive.

Figure 7-2 Path diagram for service quality



In view of the commonality of all the independent variables, as well as the moderator variables to ultimately give a better service to the client, all factors adequately address the latent variable of 'Service Quality'. As described in Table 7-2 and in further detail in the subsequent sections, a pattern is immediately discernable. When service quality affected the relationship between the auditor and the client, posing a risk to independence and scepticism, the auditor is of the opinion that caution should be exercised. This is evident in the beta values, for factors 'X8', 'X12' and 'X13' directly linked to service quality. When respondents were asked for their opinion addressing reliability, capability and interpersonal trust the influence over service quality was found to be more significant . Further details follow in the sections below.

|     |                                  |   |      | <u>Auditor</u> |                       |                |  |  |  |  |
|-----|----------------------------------|---|------|----------------|-----------------------|----------------|--|--|--|--|
|     | <u>Latent</u><br><u>variable</u> |   | Mean |                | Standard<br>Deviation | <u>β value</u> |  |  |  |  |
| X8  | Service Quality                  | The audit partner should have the client's best interests at heart.   | 2.64 | Agree somewhat | 0.12                  | 0.23***        |  |  |  |  |
| X12 | Service Quality                  | Auditors should offer other assurance services besides the audit of historical information                              | 2.62 | Agree somewhat | 0.11                  | 0.36**         |  |  |  |  |
| X39 | Service Quality                  | Auditors have to trust management to be able to perform the audit   | 3.61 | Undecided      | 0.12                  | 0.31***        |  |  |  |  |
| X5  | Reliability                      | Management should give adequate support to the audit team so that they do their job well (Question for client analysis) | 1.35 | Strongly Agree | 0.42                  | 0.49***        |  |  |  |  |
| X6  | Reliability                      | An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures. | 1.62 | Agree          | 0.06                  | 0.35***        |  |  |  |  |
| X18 | Reliability                      | Clients should keep their records accurately (Question for client analysis)   |      | Strongly Agree | 0.04                  | 0.61***        |  |  |  |  |
| X21 | Reliability                      | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities             |      | Strongly Agree | 0.04                  | 0.56***        |  |  |  |  |
| X9  | Capability                       | Client management should contribute more than required during the audit. (Question for client analysis)                 | 3.38 | Agree somewhat | 0.12                  | 0.46***        |  |  |  |  |
| X11 | Capability                       | It is important that clients respond quickly to the auditor's queries (Question for client analysis)                    | 1.62 | Agree          | 0.05                  | 0.68***        |  |  |  |  |
| X17 | Capability                       | Ethical training should be mandatory for audit and accountancy students.  | 1.52 | Strongly Agree | 0.06                  | 0.45***        |  |  |  |  |
| X4  | Interpersonal trust              | The audit partner should be actively involved in the engagement   | 1.8  | Agree          | 0.07                  | 0.47***        |  |  |  |  |
| X7  | Interpersonal trust              | It is important that the audit partner gives the client individual attention  | 1.83 | Agree          | 0.07                  | 0.58***        |  |  |  |  |
| X10 | Interpersonal trust              | It is important that the regular meetings are held between the client & the audit partner                               | 2.3  | Agree          | 0.09                  | 0.70***        |  |  |  |  |
| X16 | Interpersonal trust              | It is important that the audit partner has high ethical standards.  | 1.18 | Strongly Agree | 0.04                  | 0.52***        |  |  |  |  |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

Table 7-2 Observable factors of service quality and groupings of latent variables for auditors

## 7.3.1.1 The audit partner should have the client's best interest at heart ('X8')

The beta value is of 0.23 and the *p*-value between this variable and 'Trust' is strong, confirming that the results are statistically significant. This finding can be interpreted in two steps, indicating that although auditors perceive that having the client's interest at heart is important in a relationship, it is also essential to keep some distance. These results highlight that a detached relationship is preferred to avoid the risk of overfamiliarity with audit clients, which might impair the valued ethical stance of independence of the auditor (Accountancy Board, 2016). Furthermore auditors mainly responded that they somewhat agree with the statement that the partner should have the best interests of the client at heart with an average score of 2.64 and a standard error of 0.12.

### 7.3.1.2 Offering other services besides financial statement audit ('X12')

The relationship between this variable and 'Service Quality' is a strong one, in terms of *p*-value. This is accompanied by a positive beta value of 0.36. This indicates that Maltese auditors answering the questionnaire are in favour of other services being offered by the auditor, although it is not the main determinant of service quality. The mean value is of 2.62, with a standard error of 0.11 therefore respondents answered that they 'agree somewhat'.

Studies by Duff (2004) and Kilgore *et al.* (2011) support the view that auditors and users do not perceive that the provision of non-audit services determines audit quality. Whereas Knechel *et al.* (2012) found that the provision of non-audit services resulted in a positive knowledge spillover. Findings, therefore, reflect the contrasting views by previously conducted studies, which could be interpreted as indicating that auditors would like to offer non-audit service as it increases their income, however the beta value indicates their turmoil with respect to independence and its consequence on trust.

### 7.3.1.3 Auditors have to trust management to be able to perform the audit ('X39')

Findings indicate that, as perceived by the auditors, the *p*-values between trust in management and service quality, and ultimately trust are strong. The

standardised coefficient between this observable indicator and the intermediate latent variable of service quality is of 0.31. Therefore trust in management is perceived to be necessary to increase service quality although Maltese auditors believe trust should be placed but with an element of presumptive doubt, assuming that management's responses includes some level of dishonesty or bias in certain cases (Quadackers *et al.*, 2014).

Another finding in relation to this factor is that responses resulted in a mean value of 3.61 (with a standard error at 0.12, and a 95% confidence interval at 3.38 – 3.85). In other words, auditors are undecided as to whether they should trust in management to perform the audit.

### 7.3.1.4 Empathy, other services, trust in management and service quality

These initial findings in relation to elements of service quality indicate that auditors have client's interest at heart. However, they are also of the view that overfamiliarity might impair independence. This is also apparent when queried about offering other services besides financial statement audit. Respondents are positive about offering other services, however with caution. Finally respondents are of the view that trusting management increases service quality, although on evaluation of the relationship between this factor and service quality, it transpires that they believe this should be done with caution. These findings all indicate that auditors are aware that all these factors increase service quality however they are also cognisant of the importance of independence and believe that they should be sceptical when they approach an audit if they want to increase trust by the client.

#### 7.3.1.5 Reliability

## 7.3.1.5.1 Management should give adequate support to the audit team so that they do their job well ('X5')

The value of beta between this factor and reliability is 0.49, therefore auditors are of the opinion that it is important that management transfers its knowledge to the audit team (Meier, 2011), if the relationship is to lead to increased reliability and service quality. The mean value of the replies is of 1.35, with a standard deviation of 0.42, indicating that auditors feel strongly that the support

of management is vital when conducting an audit. This is in agreement with Rennie *et al.* (2010) and Fontaine & Pilotti (2012) who stated that an audit could not be performed without the support of management.

# 7.3.1.5.2 An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures ('X6')

The resultant beta value between this factor and reliability was positive at 0.35. Furthermore, the *p*-value at 0.0033, confirms that results are statistically significant. This is an interesting finding as it indicates that although Maltese auditors are bound by extensive regulations, nonetheless they feel that this is a necessary if audit service quality is to be maintained. These conclusions contrast substantially to the findings of Kilgore *et al.*'s (2014) study, where results revealed that auditors do not see any benefit arising from this review, when one considers the time and cost it involves. When respondents were asked about their views on the statement above, the responses were very positive. So much so that the mean value of the responses was 1.6, with a standard error of 0.06, attesting their agreement.

### 7.3.1.5.3 Clients should keep their records accurately ('X18')

Whitner *et al.* (1998) state that accurate information in a principal-agency relationship is the strongest form of relationship. Findings confirm this with a beta value of 0.61 between this factor and reliability, confirming that auditors believe that clients should keep their records accurately to ensure reliability of the audit. This is substantiated further as the *p*-value is negligible indicating that the possibility that the results were random is minimal. This result is attributed to the fact that auditors are conscious of the fact that a trustworthy audit is one dependent on management's responsibility to ensure that the financial statements are free from material misstatement (IAASB – ISA 210, 2016). Auditors responding to the questionnaire of this study strongly agree to this statement with a mean value is of 1.3 and a standard error of 0.04.

## 7.3.1.5.4 As a professional the auditor should ensure that he/ she performs his work to the best of his/ her abilities ('X21')

Findings corroborate the framework for audit quality developed by the IAASB based on the concept of ensuring that audit work performed is of the highest level (IAASB, 2014), since the beta value of this factor with reliability is of 0.56. Therefore auditors' perception is that they believe that they should perform their work to the best of their ability if the audit is to be perceived as reliable. Consequently, findings also hold true to the Economic Efficiency Model as propounded by Satava *et al.* (2006), that auditors should balance their clients' interest to perform the audit efficiently without violating their public duty of performing audit work of high quality. The average value of the construct resulted in a mean value of 1.3, with a minimal standard error allowance of 0.04, consequently auditors strongly agree that they should perform their work to the best of their ability.

### 7.3.1.5.5 Reliability and service quality

Reliability, i.e., performing a service dependably and accurately (Parasuraman et al., 1988) is important since it ensures faithful representation and audit firm reliability (ICAEW, 2013). This is immediately evident in the overall positive beta value of reliability with service quality at 0.74. This depends on a number of factors, including the support from management when conducting an audit. Respondents were of the view that collaboration from management is important, testifying that the relationship between the auditor and the client is more than just a one-off transactional exchange of the financial statements for the audit opinion. Quality control procedures also ensure that audited financial statements are reliable and although Maltese auditors are bound by regulations, nonetheless they feel that this is a necessary if audit quality is to be maintained. Trust in management, in terms of accurate financial reporting resulted in one of the strongest influencers of reliability, when auditing a set of financial statements. Finally, when queried about their work performance auditors felt that they should perform their work to the best of their ability. All findings therefore indicate that reliability is high on the agenda of Maltese auditors to ensure that service quality is maintained to uphold trust in the auditor.

### 7.3.1.6 Capability

### 7.3.1.6.1 Ethical training should be mandatory for audit and accountancy students ('X17')

Thomas' (2012) findings identified that a university degree positively influences deliberative reasoning. Maltese auditors are also of the view that ethical training is important, since when this statement was posed to them the resultant beta value was of 0.45 in terms of influence over the latent variable of capability. Furthermore the *p*-value of the correlation between this variable and the moderator variables of 'Capability' and 'Service Quality' are very low, indicating that there is a strong statistical relationship. The mean value of the auditors' replies is of 1.42 (with a standard error at 0.06 and a very low *p*-value), therefore they are strongly in favour of mandating ethical training to students.

# 7.3.1.6.2 It is important that clients respond quickly to the auditor's queries ('X11')

Responses to this statement resulted in a beta value of 0.68 and a statistically significant *p*-value with capability, consequently supporting the study performed by Holt *et al.* (2012) who argued that cooperation is key. A statistical mean result of 1.62, and a standard deviation of 0.05 indicated that respondents agree that it is important that clients respond quickly to auditor's queries. Therefore, cooperation and support by client is vital, enabling the auditor increase its service quality and ultimately be trusted by the client.

# 7.3.1.6.3 Client management should contribute more than required during the audit ('X9')

As described by Franzel (2013) scepticism is comprised of three elements: auditor attributes, mind-set and actions. These elements permeate an auditor's frame of mind so much so that, as also required by the standards, the auditor constantly questions actions by client management, including the possibility that they would willingly contribute more than required. Responses resulted in a beta value of 0.46 in relation to capability. Concluding, therefore that auditors although cognisant of the fact that if client management were to contribute more than required it would increase the ability to increase service quality.

Another element that affects an auditor's frame of mind is the tendency to stereotype. ACCA (2017, p.13) describes 'stereotyping' as the "the tendency to put people into groups and to assign the group's qualities to individuals in the group" and is one of the main cognitive biases that affects judgement made by auditors. Therefore, it comes as no surprise that respondents were not so sure when asked whether client management should contribute more than required during the audit. Responses resulted in a statistical mean of 3.38 with a standard deviation of 0.12, indicating that auditors somewhat agreed to the statement, but not a definite agreement.

### 7.3.1.6.4 Capability and service quality

Capability can be measured in a number of ways; this study focused on ethical education for auditors, client promptness in their replies and management's ability to contribute more than required during an audit. Auditors queried are in favour of mandating ethical training on students and think it has a positive influence on service quality. When discussing the financial controller's capabilities, auditors believe that it is important that clients respond quickly to auditor's queries. One can possibly extend this cooperation to companies scheduling their activities at a time when it is convenient to the external auditors (Holt et al.: 2012). Respondents were also of the view that if client management contributes more than required during the audit, then this increases service quality however to a lesser extent that the cooperation discussed previously. This could possibly be attributable to scepticism by the auditor with respect to client management. These findings and the beta value of the overall latent variable of capability in relation to service quality at 0.76 confirm that ethical capability, prompt cooperation from clients, and spontaneous contribution, were all deemed necessary to increase service quality and ultimately trust.

### 7.3.1.7 Interpersonal Trust

## 7.3.1.7.1 The audit partner should be actively involved in the engagement ('X4')

The question posited in this study was modeled on similar questions asked by Schroeder *et al.* (1986) who collected views about audit quality. Their study

identified that partner/ manager involvement in an audit has a strong impact on audit quality. The standardised coefficient between this observable variable and the latent variable of interpersonal trust is of 0.47. This perhaps can be attributed to the fact that in a perfect scenario it would be ideal if the audit partner is heavily involved in an audit, however in practice audit partner involvement depends on time, resources and riskiness of the client. The mean value of the responses was 1.8, with a standard error of 0.07, therefore Maltese auditors agree that the audit partner should be actively involved in the engagement. Although one notes that although auditors agreed they still shied away from 'strongly agree' implying that they are cognisant of the difficulty for the audit partner to be very actively involved.

## 7.3.1.7.2 It is important that the audit partner gives the client individual attention ('X7')

Auditors' replies reflect the fact that although auditing requires an element of familiarity to understand the client better and as identified by Parasuraman *et al.* (1998) showing caring and individualised attention increases service quality and ultimately trust, a certain distance should be maintained due to possible independence issues. Increased attention was therefore perceived to influence interpersonal trust with a beta value of 0.58. The mean value of the responses was 1.83, with a standard error of 0.07 one therefore notes that respondents mainly agreed but not entirely to the statement.

# 7.3.1.7.3 It is important that the regular meetings are held between the client and the audit partner ('X10')

A beta value of 0.70 indicates a very high influence over interpersonal trust. Therefore Maltese auditors feel that they should nurture a relationship with their clients and maintain regular communication as required by international standards of auditing, requiring that communication should be two-way and continuous (IAASB - ISA 260, 2016).

When this question was posed to Maltese auditors the result of the responses was a mean value of 2.3, with a standard error of 0.09. Therefore, Maltese auditors agree that it is important that regular meetings are held between the

client and the audit partner to increase interpersonal trust. On the other hand, the mean rating given was not as high, since respondents answered that they 'agree', but not 'strongly agree'. The Maltese economy has in recent years experienced a significant increase in financial services, requiring increased audit services. Hopefully the marginal acceptance of less than optimal behaviour is not a reaction to time budget pressures resulting in dysfunctional acts and a reduction in audit quality (Svanberg & Ohman, 2013).

## 7.3.1.7.4 It is important that the audit partner has high ethical standards ('X16')

The beta value at 0.52 reveals that a partner's ethical standard affects interpersonal trust, although the beta value is less than the factors discussing regular meetings and giving the client individual attention. This confirms the assertions of The Treadway Commission (1987), that if ethical behaviour is not advocated by top management then the accounting firms/ auditors risk compromising their scepticism and professional judgement. However auditors deemed that giving personal attention increases interpersonal trust and service quality more than the partner's individual ethical stance. Respondents felt very strongly with respect to ethical standards. The mean value of the responses was 1.18, with a standard error of 0.04, in other words they strongly agree that the 'tone at top' is essential and that therefore the partner should maintain high ethical standards.

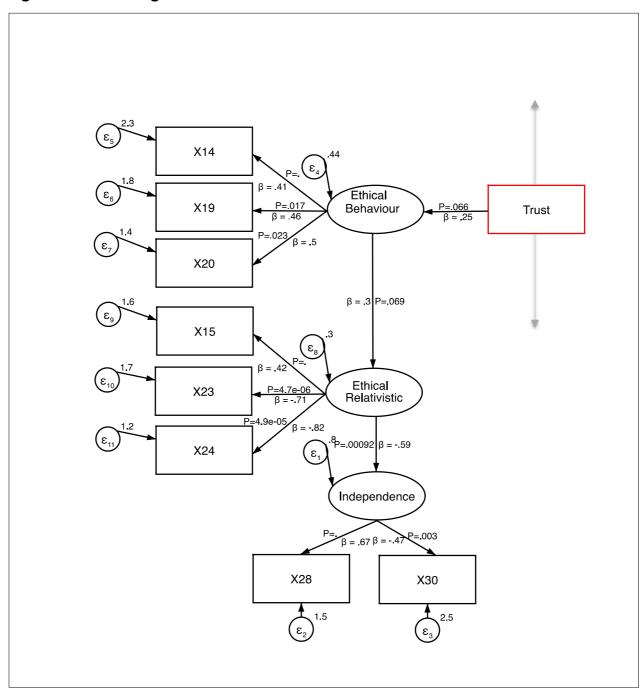
### 7.3.1.7.5 Interpersonal trust and service quality

This section looked at the personal element that affects trust. The standardised coefficient of this latent intermediate variable with service quality is of 0.67, indicating that this is an important prerequisite of service quality. Generally, Maltese auditors perceive that the audit partner should be actively involved in the engagement. This supports the principles propounded by IFAC (2014), whereupon it established that it is important that the audit engagement partner is actively involved in all stages of the audit engagement. Although results revealed that in a perfect scenario it would be ideal if the audit partner were heavily involved in an audit, however in practice audit partner involvement

depends on time, resources and riskiness of the client. When Maltese auditors were asked whether the audit partner should give the client individual attention, results corroborated those described by Nogler (2015), since Maltese auditors feel that too much familiarity might endanger their scepticism and ultimately audit quality. Respondents recognise that constant two-way communication and the development of a working relationship is vital in an audit as it increases interpersonal trust and service quality this emerged also in view of the fact that relatively this variable had the highest beta value with interpersonal trust. Finally auditors were of the opinion that audit partners should set the 'tone at top' and maintain high ethical standards. Concluding however that giving personal attention to the audit client increases interpersonal trust and service quality more than the partner's individual ethical stance.

### 7.3.2 Ethical Behaviour

Figure 7-3 Path diagram or ethical behaviour



The results of the path diagram above give some interesting results about the relationship between ethical behaviour and trust. A number of observable factors have been linked directly to ethical behaviour; these include factors 'X14', 'X19' and 'X20'. All the relationships have strong *p*-values, thus safely rejecting the null hypothesis. Furthermore, factors contributing to adopting a

relativistic attitude towards ethics have been linked to trust, although an element of conventional ethical thinking was noted, where the observable factors with a relativistic stance were inversely linked to ethical behaviour. This was substantiated further in the relationship emanating between the importance of auditor's independence and a non-relativistic ethical stance, and ultimately ethical behaviour and trust. Therefore the precise labeling of this intermediate variable is 'non-relativistic' rather than 'relativistic'. The analysis in the following paragraphs analyse these preliminary deliberations into more depth.

|     |                                  |  | <u>Auditor</u> |                      |                       |                |
|-----|----------------------------------|--|----------------|----------------------|-----------------------|----------------|
|     | <u>Latent</u><br><u>variable</u> |  | <u>Mean</u>    |                      | Standard<br>Deviation | <u>β value</u> |
| X14 | Ethical<br>Behaviour             | The expertise & competence of the audit firm is more important than the expertise of the audit team.                                 | 4.15           | Undecided            | 0.13                  | 0.41***        |
| X19 | Ethical<br>Behaviour             | The auditor should never take risks, irrespective of how small the risk might be.  | 2.74           | Agree<br>somewhat    | 0.12                  | 0.46***        |
| X20 | Ethical<br>Behaviour             | The auditor's responsibility is to act in the public interest.   | 2.18           | Agree                | 0.11                  | 0.50**         |
| X15 | Ethical<br>Relativistic          | The auditor should be sceptical on whether the client will stick to his word.  | 2.71           | Agree<br>somewhat    | 0.11                  | 0.42***        |
| X23 | Ethical<br>Relativistic          | The auditor's ethical decision making varies from one situation to another   | 4.8            | Disagree<br>somewhat | 0.14                  | -0.71***       |
| X24 | Ethical<br>Relativistic          | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action. (Question for client analysis) | 3.7            | Undecided            | 0.15                  | -0.82***       |
| X28 | Independence                     | The importance of the auditor's independence is overrated.   | 3              | Agree somewhat       | 0.13                  | 0.67***        |
| X30 | Independence                     | Client retention is a determining factor in the auditor's ultimate decisions.  | 4.6            | Disagree<br>somewhat | 0.14                  | -0.47***       |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

Table 7-3 Observable factors of ethical behaviour and groupings of latent variables for auditors

## 7.3.2.1 The expertise & competence of the audit firm is more important than the expertise of the audit team ('X14')

When respondents were asked to evaluate whether the expertise and competence of the audit firm is more important than the expertise of the audit team, responses resulted in a positive beta value of 0.41. The relationship of this variable with ethical behaviour and trust indicates that acting in an ethical manner is perceived to be a personal trait, which nevertheless requires the support of the organisation. The latter evaluation supports theories, which advocate the importance of an ethical organisation, which is increasingly held at par with an individual's ethical attributes (Lloyd & Mey, 2012; Douglas *et al.*, 2015). The mean value estimation of the responses was 4.15, coupled with a low *p*-value and a positive beta value of 0.41. This indicates that respondents were undecided as to whether the audit firm attributes were more important than audit team qualities.

# 7.3.2.2 The auditor should never take risks, irrespective of how small the risk might be ('X19')

It seems that respondents approached this statement in a practical manner with a resultant beta value of 0.46 with ethical behaviour. This indicates that respondents are aware of the fact that they can never give full assurance, and were cautious in ascertaining that they should never take risk, as it is practically impossible. Nonetheless, the perception of the auditor is that the client still believes that a practical attitude is a precursor of ethical behaviour, ultimately affecting trust in the auditor even if full assurance cannot be given. Auditors mainly responded that they 'agree somewhat' to this statement with an average score of 2.74, supported by a standard error of 0.12.

### 7.3.2.3 The auditor's responsibility is to act in the public interest ('X20')

A beta value of 0.50 is indicative of the fact that auditors believe that primarily the financial statements have been prepared for the shareholders 'their principals', acting as 'agents' on their behalf. However, this does not preclude the fact that ultimately a set of financial statements are to be of high quality regardless of whether they have been prepared for the shareholders or the

general public, particularly if trust is to be ascertained. Respondents 'agree' that it is the auditor's responsibility to act in the public interest with an average score of 2.18 supported by a beta value of 0.50, although one notes that the replies did not average the 'strongly agree'.

### 7.3.2.4 Ethical behaviour and practicality

When respondents were asked to evaluate whether the expertise and competence of the audit firm is more important than the expertise of the audit team the beta value with ethical behaviour indicates that acting in an ethical manner is perceived to be a personal trait, which nevertheless requires the support of the organization. Contemporaneously respondents were cautious in ascertaining that they should never take risks, as it is practicably impossible. Therefore, they were not in agreement with Forsyth's (1980) absolutist attitude, combining high idealism and low relativism, towards ethics. Finally, auditors were asked whether, as mandated by the Code of Ethics (2016), their responsibility is to act in the public interest. Respondents agree that this positively influences ethical behaviour however with reservations, this was interpreted as due to the fact that primarily the audit report is addressed to the shareholders. Holistically the results indicate that Maltese auditors do not hold idealistic notions of ethics but value ethics in a more practical way.

#### 7.3.2.5 Ethical Relativistic

## 7.3.2.5.1 The auditor should be sceptical on whether the client will stick to his word ('X15')

When Maltese auditors were asked whether the auditor should be sceptical on whether the client would stick to his word, replies revealed a positive beta value of 0.42, in relation to the latent intermediate variable of relativistic ethics. As mentioned previously the precise labeling of this intermediate variable is non-relativistic. Therefore increased scepticism increases a non-relativistic stance by the auditor. This is indicative of the stance taken by Duska (2005), who mandated that the auditor should review information before accepting its veracity and ask a number of pertinent questions. The mean value of the

responses was that they 'agree somewhat' to this statement with an average score of 2.71 and a standard error of 0.11.

## 7.3.2.5.2 The auditor's ethical decision making varies from one situation to another ('X23')

The beta value is of -0.71, signifying that an increase in ethical volatility would decrease the perceived non-relativistic attitude considerably. This statement is an inverted scale statement posed to the auditors, and their replies indicate that they are not complacent in respect of volatility in ethical decision-making. These results relate to stage three, the conventional level, where at this stage an individual values interpersonal trust and social approval and at stage four an individual takes into consideration society's rules of what is right or wrong. This is in line with previously conducted studies, which identified auditors' moral reasoning at conventional levels (Shaub, 1994 & Armstrong, 1987). This result also indicates that the auditors questioned are of the opinion that to gain trust they should not vary their ethical predisposition but it is perhaps better to conform to society's rules. Respondents mainly answered that they 'disagree somewhat' to this statement with an average score of 4.8 and a standard error of 0.14.

# 7.3.2.5.3 Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action ('X24')

This statement refers to the fact that one cannot categorically classify a lie as it depends of a number of factors, such as the severity of the case or the consequences of the actions, as propounded upon by Marshall *et al.* (2006) in their study. However results revealed a beta value in relation to ethical relativistic at -0.82, indicating that the an increase in adaptability would lead to a decrease in non-relativistic ethical behaviour.

When the average score of the responses was extracted it resulted that respondents were unsure as to how this statement should be scored and in fact answered that they are 'undecided', with an average score of 3.7 and a standard error of 0.15. This could be due to the fact that respondents feel that in

certain circumstances, not involving material issues, bending the rules is allowable.

#### 7.3.2.5.4 Non - relativistic attitude towards ethics

This part of the study focuses on the ethical stance of both the client and the auditor. The underlying responses reveal that auditors do not favour a relativistic stance, but are 'non-relativistic' in their ethical beliefs. The beta value of this intermediate variable with the latent variable of ethical behaviour is of 0.30, which holistically indicates that a moderately non-relativistic attitude towards ethics increases the perception of ethical behaviour. The interpretation of the results, indicate that Maltese auditors believe that the clients know their responsibility but they should still be cautious. When evaluating their own ethical decision-making, auditors are of the opinion that varying their decision-making from one situation to another decreases a non-relativistic ethical stance. Likewise, respondents also inversely linked the statement about whether a lie is judged to be moral or immoral depending upon the circumstances to ethical relativistic. This could be interpreted that they value interpersonal trust and social approval, and consideration of society's rules of what is right or wrong (Trevino, 1992).

### 7.3.2.6 Independence

### 7.3.2.6.1 The importance of the auditor's independence is overrated ('X28')

Auditors' independence is a matter held to be of utmost importance to regulators and standard setters, since this is the crux of the audit process. Its importance has therefore been propounded upon repeatedly over the years particularly in the post financial crisis period. Consequently the strong beta value with independence of 0.67 reveals that overrating independence still leads to a substantial increase in independence.

It is surprising that respondents on average answered that they 'agree somewhat' to the statement that auditor's independence is overrated, with an average score of 3 and a standard error of 0.13. This could be interpreted as resulting from the increase in regulations, such as the EU Audit Directive and

Regulations (Europa.eu, 2016) that have been imposed on auditors, bringing about an increase in costs and possibly loss in business.

## 7.3.2.6.2 Client retention is a determining factor in the auditor's ultimate decisions ('X30')

The beta of this variable is inversely related to independence at -0.47, therefore an increase in this factor decreases independence. This confirms another study performed by Sciriha (2016) in Malta, who identified that economic dependence on an audit client is one of the most threatening factors to auditors' independence. Although the results can be interpreted that the importance of maintaining independence is of the essence if trust is to be maintained although economic dependence is a fact. Respondents mainly answered that they 'disagree somewhat' to the statement that client retention is a determining factor in an auditor's ultimate decisions, with an average score of 4.6 and a standard error of 0.14, although on average they did not respond with a definite 'strongly disagree'. As explained by Krishan & Krishan (1996), other factors could also influence the decisions such as client importance, management integrity and company integrity.

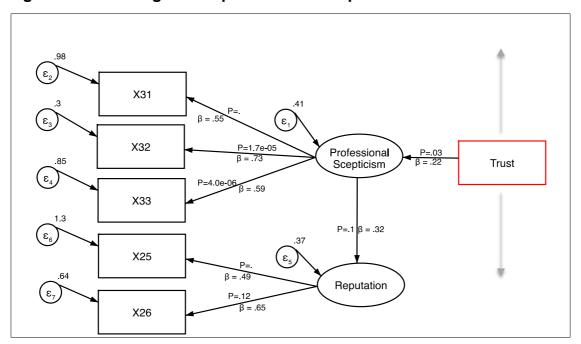
### 7.3.2.6.3 Independence and ethics

Replies by the auditors resulted in an inverse link between independence and a non-relativistic attitude towards ethics, with a beta value of -0.59. Consequently an increase in independence leads to a decrease in non-relativistic ethics. Thus confirming the conventional view held by auditors of ethical behaviour. Respondents' answers revealed that an increase in the perception of the overrating of an auditor's independence is supported with a positive beta value with independence, therefore overrating independence, still leads to a substantial increase in independence. A prerequisite of an auditor's ethical conduct is independence. The Code of Ethics (2016) mandates that it is in the public interest that auditors are independent of their audit clients. Loeb states (1972:2) that "i(I)t is however his obligations to the public which make the professional accountant unique. As an independent auditor, the certified public accountant is, in essence serving in a quasi-judicial capacity". Therefore

auditors' replies are an attestation to his statement. Additionally if client retention is a determining factor in the auditor's ultimate decisions then this leads to a decrease in independence. Independence is one of the most vital elements of the profession and these results confirm that auditors understand that if they do not uphold high ethical standards (Morales Olazabal & Dreike Almer, 2001) autonomy of the profession could be lost.

### 7.3.3 Professional Scepticism





The findings of the *p*-value in this particular path give contrasting results. On the one hand the traits exhibited by 'X31', 'X32', and'X33' are clearly indicative of a high statistical significance and therefore that there is a relationship between these variables and professional scepticism. On the other hand, the relationship between scepticism and reputation as an intermediate variable is not as strong. However the results above still contrast the conclusions of Hurtt (2010) who identified that reputation was not a determining factor of scepticism. Hurtt's findings were also supported by research undertaken by Nelson (2009), who presented a model of professional scepticism, which is dependent on audit evidence, auditor's traits, auditor incentives, prior experience and training. The

latter research by Nelson (2009) did not however identify reputation as being a determining factor.

|     |                                  |  | <u>Auditor</u> |                   |                    |                |  |
|-----|----------------------------------|--|----------------|-------------------|--------------------|----------------|--|
|     | <u>Latent</u><br><u>variable</u> |  | <u>Mean</u>    |                   | Standard Deviation | <u>β value</u> |  |
| X31 | Professional scepticism          | The auditor usually notices inconsistencies in explanations  | 4.6            | Disagree somewhat | 0.09               | 0.55***        |  |
| X32 | Professional scepticism          | The auditor does not like to decide until she/he has looked at all of the readily available information                  | 1.99           | Agree             | 0.06               | 0.73***        |  |
| X33 | Professional scepticism          | The auditor frequently questions things that he/she sees or hears  | 2.25           | Agree             | 0.08               | 0.59***        |  |
| X25 | Reputation                       | It is understandable that an auditor collects information about clients through their professional and personal networks | 2.47           | Agree             | 0.1                | 0.49***        |  |
| X26 | Reputation                       | The audit firm is always objective in its judgements   | 2.13           | Agree             | 0.08               | 0.65*          |  |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

Table 7-4 Observable factors of professional scepticism and groupings of latent variables for auditors

Table 7-4 above and the analysis below identify the bounded rationality of the auditors, since the beta values reflect that auditors perceive that they apply professional scepticism when performing an audit however there are limitations, which they cannot control. Furthermore, respondents were of the opinion that reputation of the client as well as the auditor has a bearing on scepticism. The following sections include the detailed research findings of these factors.

### 7.3.3.1 The auditor usually notices inconsistencies in explanations ('X31')

The relationship between this factor and professional scepticism exhibits a positive beta value of 0.55. Thus reflecting that experienced auditors know of the limitation described by ISA 240 'The auditor's responsibilities relating to fraud in an audit of financial statements' (IFAC, 2016) and therefore the ability of an audit to give reasonable but not absolute assurance. Auditors mainly responded that they 'agree somewhat' to this statement with an average score of 2.71 and a standard error of 0.09. This response might initially be interpreted, as reflective of low self-esteem, which is unfortunately at times linked to

scepticism (Hurtt, 2010), however it confirms that an auditor can give reasonable assurance.

## 7.3.3.2 The auditor does not like to decide until she/he has looked at all of the readily available information ('X32')

The auditors are of the opinion that this an important prerequisite of professional scepticism as reflected in the beta value of 0.73 between this variable and professional scepticism. This result substantiates the statement by Zuca (2015, p. 703) that, "the difficulty or cost of performing an audit procedure is not a valid reason for omitting the procedure if there is no appropriate alternative". Consequently they should make use of all the readily available information.

Auditors mainly responded that they 'agree' to this statement with an average score of 1.99 and a standard error of 0.06, therefore they do not like to decide until they looked at all of the readily available information. Notably they did not completely agree with the statement recognising that an auditor could only obtain reasonable assurance, and that when performing an audit there are inherent limitations beyond their control (IAASB- ISA200, 2016). Furthermore time and cost might also be a restricting factor (Zuca, 2015), limiting the auditor in his/ her ability to obtain information

## 7.3.3.3 The auditor frequently questions things that he/she sees or hears ('X33')

The beta value of 0.59 is representative of the fact that respondents seem to favour the neutral stance to scepticism, rather than a presumptive attitude (Nelson, 2009). The replies therefore are indicative of a certain element of trust by the auditor in the client, also inferring from the findings that this is felt to be important for the auditor to gain the client's trust. This result links to the study by Cohen *et al.* (2017), whereupon they concluded that a neutral attitude towards professional scepticism was positively associated with organisational support and organisational citizenship behaviour. The auditors' response to this statement in the questionnaire was that they 'agree', with an average score of 2.25, a standard error of 0.08.

### 7.3.3.4 Character traits and scepticism

Hurtt developed a scale measuring an individual's level of professional scepticism as a trait using characteristics "derived from audit standards, psychology, philosophy, and consumer behaviour research" (Hurtt 2010, p.150). The measures used above were mainly derived from this study. The overall beta values indicate that the auditors feel that they usually notice inconsistencies in explanations, but are also aware that an auditor can give reasonable but not absolute assurance, contemporaneously positively affecting professional scepticism. Auditors were of the view that they should not decide until they have looked at all of the readily available information as a predecessor of professional scepticism. In line with the previous replies auditors are of the opinion that they frequently question things that they see or hear. Although on evaluation this was linked to the neutral perspective i.e. looking at audit evidence in a critical way, with no previous bias, rather than the presumptive approach. The latter finding was found to positively influence professional scepticism.

### 7.3.3.5 Reputation

## 7.3.3.5.1 It is understandable that an auditor collects information about clients through their professional and personal networks ('X25')

It is notable that this factor has been linked to professional scepticism at a beta value of 0.49. Therefore revealing that information about the client collected through the networks influences scepticism. This finding is probably linked to the closely-knit business community in Malta, where personal relationships are strong. Sources of information may be through knowledgeable persons in the business community, as well as public information such as reported news in the press (Cosserat & Rodda, 2009). Although caution should be exercised since verbal information is not as strong as other procedures such as analytical procedures, observation and inspection.

Responses were mainly in agreement with collecting information about clients through professional and personal networks, with an average score of 2.47 and a standard error of 0.10. This is in line with views expressed by other

researchers who stated that it is understandable that information is collected prior to accepting a client and as part of the retention or resignation decision-making (Craig; 1992, IAASB - ISQC 1, 2016). However one notes a certain hesitance since responses were mainly in agreement, but they did not 'strongly agree'. This is probably due to the fact that collecting information about a client also includes other sources. As described by ISA 315 'Identifying and assessing the risks of material misstatement through understanding the entity and its environment', (IAASB – ISA 315, 2016) audit evidence can be collected through inquiries of management and others within the entity, analytical procedures, observation and inspection, amongst others.

### 7.3.3.5.2 The audit firm is always objective in its judgements ('X26')

The beta value of 0.65 and the *p*-value reflect that auditors recognise that objectivity is of the essence in relation to professional scepticism. Keyser (2016) states that an auditor should maintain objectivity at all times. Further confirmed by Pennington *et al.* (2017) who are of the opinion that an objective search by the auditor involves considering and evaluating all evidence to confirm or otherwise risks identified when planning an audit, with no bias. Therefore adopting the neutral approach towards scepticism.

The auditors' response to this statement in the questionnaire was that they 'agree', with an average score of 2.13, a standard error of 0.08. This result also signifies a neutral perspective (Nelson, 2009) of professional judgement. On the other hand, although the replies of the respondents were positive, they were not completely in agreement. This is an interesting finding as it might indicate that the auditor feels that he/she should also be practical and perhaps be ready to bend the rules occasionally. However this admission can be risky if the auditor's independence is put into doubt. One could possibly question the hesitance by the respondents to give a more forceful answer.

### 7.3.3.5.3 Reputation and scepticism

This part of the study looked at reputation from both sides of the relationship. Respondents agree that an auditor collects information about clients through their professional and personal networks, as a prerequisite of professional scepticism. Therefore revealing that information about the client collected through the networks influences scepticism, probably due to the closely-knit business community in Malta, where personal relationships are strong, although with caution. When asked whether the audit firm is always objective in its judgements, replies were indicative that auditors recognise that objectivity is of the essence in relation to professional scepticism. These interpretations combined with an overall beta value of 0.32 between reputation and professional scepticism reveal that collecting information about the client through networks and applying objectivity in professional judgement positively influence the perception of professional scepticism and trust in the audit.

#### 7.4 Does the client trust the auditor?

### 7.4.1 The basis of the path diagram

An exploratory factor analysis was performed to measure the correlation/ dependency between all the items in the scale (Ashauer et al., 2015; Tang et al., 2017), resulting in a value for Cronbach's alpha of 0.7941 for the companies (refer to Appendix B.2.2 Removing items with low correlation in clients' questionnaire). This resulted in a model with ten factors explaining 64% of the overall variance (Tang et al., 2017). The factors were thereafter transformed by performing a Varimax factor rotation (refer to Appendix B.2.4 Varimax Rotation clients test 1) resulting in a simpler structure (Everitt, 2002). Consequently, SEM was conducted using STATA. The next step involved estimating the structural model using maximum likelihood estimation (Moro et al., 2014). However, one of the paths, which included factors 'X2' (The auditor should strive to create minimum disruption as practically possible during the audit), and 'X29' (A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity) indicated that the model was unidentified, as it resulted in the SEM iterating over and over again the message "not concave". The iteration log then had to be stalled. The model was changed a number of times, however the parameters were still unidentified. Since the iterative estimation failed to converge, and it was determined that the variables were not key to the model, then they were excluded.

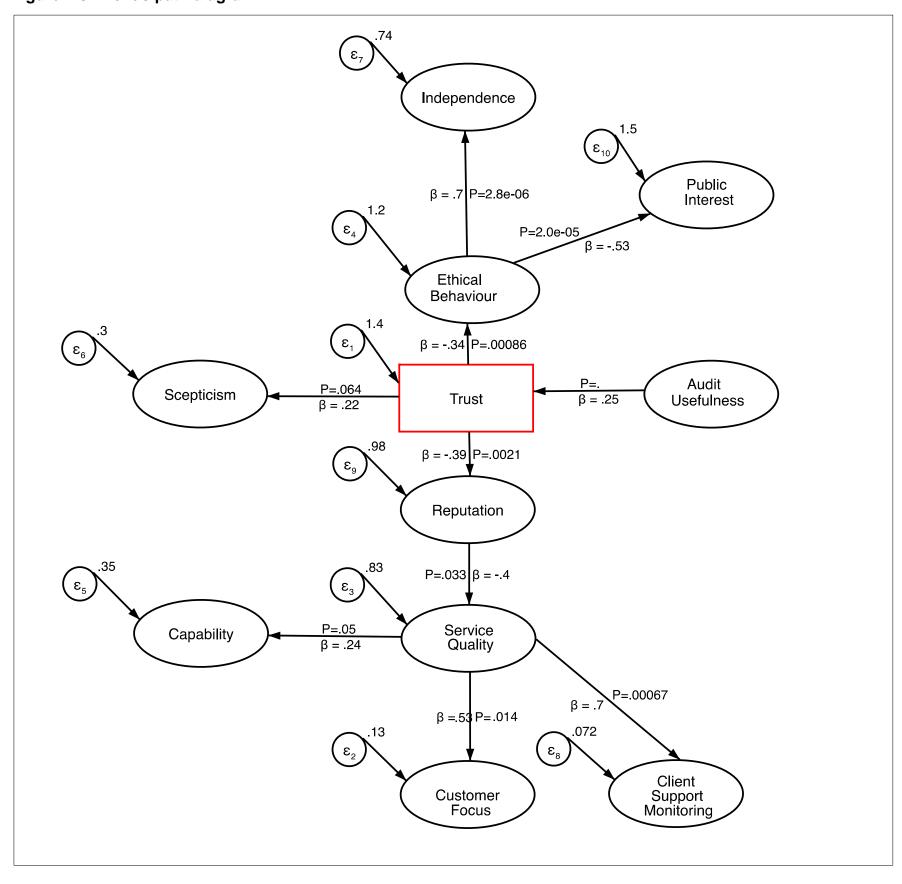
A principal component factor analysis was again re-ran on the remaining factors (refer to Appendix B.2.6 Principal Component Analysis - clients amended test 2). Nine factors with a Kaiser-Guttaman Eigenvalue of greater than one were identified and a Varimax rotation was performed (refer to Appendix B.2.7 Varimax Rotation - clients amended test 2). Two factors 'X26' (The audit firm is always objective in its judgements) and 'X34' (Professional scepticism depends on past experiences) resulted in a path coefficient much greater than 0.10, therefore not statistically significant. These items were removed, and the principal component analysis was rerun (refer to Appendix B.2.10 Principal Component Analysis - clients amended test 3). Nine factors with a Kaiser-Guttman Eigenvalue greater than one were identified and the results rotated (refer to Appendix B.2.11 Varimax Rotation - clients amended test 3). The rotated solution identified the following factors:

| Variable |  | Factor1      | Factor2            | Factor3                       | Factor4           | Factor5        | Factor6    | Factor7    | Factor8                             | Factor9    |
|----------|--|--------------|--------------------|-------------------------------|-------------------|----------------|------------|------------|-------------------------------------|------------|
|          |  | Independence | Public<br>Interest | Relative Ethical<br>Behaviour | Customer<br>Focus | Responsiveness | Scepticism | Capability | Client<br>support and<br>monitoring | Reputation |
| X1       | It is realistic to expect prompt rescheduling of missed deadlines  | 0.0571       | -0.0328            | 0.1232                        | 0.083             | 0.6165         | -0.0648    | -0.0605    | 0.1988                              | 0.192      |
| X4       | The audit partner should be actively involved in the engagement  | -0.0811      | -0.1222            | -0.0798                       | 0.7255            | -0.1255        | -0.1328    | 0.1823     | 0.1605                              | 0.0981     |
| X5       | Management should give adequate support to the audit team so that they do their job well                               | 0.0873       | -0.0411            | -0.0096                       | 0.0605            | 0.2707         | -0.0078    | 0.1729     | 0.6954                              | -0.0276    |
| X6       | An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures | -0.0866      | 0.0666             | -0.1274                       | 0.2169            | 0.3681         | 0.2044     | 0.3481     | 0.3839                              | -0.1224    |
| X7       | It is important that the audit partner gives the client individual attention   | 0.1931       | 0.0557             | 0.0357                        | 0.7794            | 0.277          | 0.0932     | 0.1084     | 0.0071                              | -0.0937    |
| X8       | The audit partner should have the client's best interests at heart   | 0.2012       | -0.0682            | -0.1526                       | 0.1095            | 0.7424         | 0.1082     | 0.0873     | 0.1386                              | 0.082      |
| X9       | Client management should contribute more than required during the audit  | -0.0554      | 0.3013             | -0.3583                       | 0.2766            | 0.4586         | 0.0892     | -0.0158    | -0.0622                             | 0.2697     |
| X10      | It is important that the regular meetings are held between the client & the audit partner                              | 0.0575       | 0.4074             | 0.0661                        | 0.5898            | 0.1017         | 0.2369     | -0.1173    | 0.0982                              | -0.0452    |
| X11      | It is important that clients respond quickly to the auditor's queries  | -0.035       | 0.2507             | -0.0449                       | 0.317             | -0.0248        | 0.2172     | -0.0238    | 0.5778                              | 0.0246     |
| X14      | The expertise & competence of the audit firm is more important than the expertise of the audit team                    | 0.0459       | 0.0286             | -0.0597                       | -0.0285           | 0.1515         | -0.0564    | -0.0468    | -0.0857                             | 0.8369     |
| X15      | The auditor should be sceptical on whether the client will stick to his word   | 0.3979       | 0.4712             | -0.2923                       | 0.0672            | -0.008         | 0.1192     | 0.0016     | -0.2204                             | 0.145      |
| X17      | Ethical training should be mandatory for audit and accountancy students  | 0.1991       | -0.009             | 0.219                         | 0.1078            | 0.0374         | 0.0972     | 0.7663     | 0.0877                              | -0.073     |
| X18      | Clients should keep their records accurately   | -0.0381      | -0.0761            | -0.0027                       | 0.0951            | 0.0248         | 0.0187     | 0.6194     | 0.3094                              | -0.2199    |
| X20      | The auditor's responsibility is to act in the public interest  | -0.0264      | 0.7308             | -0.0813                       | 0.1598            | -0.0217        | -0.0588    | 0.0942     | 0.0236                              | -0.1943    |
| X22      | The auditor's code of ethics gives guidance and a sense of direction   | -0.2231      | 0.3549             | -0.241                        | 0.0411            | 0.0188         | 0.019      | 0.6508     | -0.1593                             | 0.1851     |
| X23      | The auditor's ethical decision making varies from one situation to another   | 0.0003       | -0.107             | 0.8786                        | 0.0822            | -0.1125        | -0.085     | 0.0208     | -0.0588                             | -0.0084    |
| X24      | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action                   | -0.3549      | 0.0369             | 0.7702                        | -0.098            | 0.0688         | -0.0071    | 0.0169     | 0.0055                              | -0.1191    |
| X28      | The importance of the auditor's independence is overrated  | -0.5167      | -0.075             | 0.3846                        | -0.1784           | -0.3139        | 0.1029     | 0.0642     | 0.2651                              | -0.1909    |
| X30      | Client retention is a determining factor in the auditor's ultimate decisions   | 0.7719       | 0.0193             | -0.1661                       | 0.1044            | 0.1051         | 0.0993     | 0.0696     | 0.0259                              | -0.0043    |
| X31      | The auditor usually notices inconsistencies in explanations  | 0.2139       | -0.0772            | 0.0274                        | -0.0615           | 0.3861         | 0.6031     | 0.137      | -0.2408                             | 0.1002     |
| X32      | The auditor does not like to decide until she/he has looked at all of the readily available information                | -0.0433      | 0.0084             | -0.113                        | 0.0421            | 0.0287         | 0.8089     | 0.0153     | 0.1443                              | -0.1477    |
| X33      | The auditor frequently questions things that he/she sees or hears  | -0.1928      | 0.476              | 0.0423                        | 0.0617            | -0.0088        | 0.4987     | 0.0155     | 0.1822                              | 0.1967     |
| X35      | It is understandable that the auditor has doubts about the accuracy of the information received from clients           | -0.214       | -0.2679            | 0.1121                        | -0.2171           | 0.2753         | -0.4953    | -0.2284    | 0.0426                              | -0.2514    |
| X36      | To be sceptical is the same as distrust  | -0.2896      | 0.2245             | 0.2246                        | 0.0116            | 0.0019         | -0.1257    | 0.0317     | -0.3008                             | -0.5516    |
| X38      | Increased control over the profession will increase trust in the auditor   | 0.4151       | 0.6264             | -0.0547                       | -0.2196           | -0.0557        | 0.0757     | 0.0875     | 0.0855                              | 0.1047     |
| X39      | Auditors have to trust management to be able to perform the audit  | 0.5517       | 0.1609             | -0.0748                       | -0.0019           | 0.1807         | -0.182     | -0.071     | 0.2754                              | 0.2505     |

Table 7-5 List of factors of the SEM for clients' perceptions

### 7.4.2 The path coefficients

Figure 7-5 Client's path diagram



As detailed in the previous sections, the scope of the study is to measure the trust held by management in auditors by looking at observable indicators for the latent, unobservable, intermediate variables of service quality, ethical behaviour and professional scepticism. Perceptions were collected from auditors, as well as financial controllers.

The path diagram in Figure 7-5 illustrates that the intermediate variables of 'Ethical Behaviour', 'Professional Scepticism' and 'Reputation' have *p*-values of 0.0009, 0.064 and 0.0021 respectively, indicating that there is a relationship between these latent variables and the dependent variable of 'Trust'. These *p*-values are accompanied by beta values, which give interesting results where their influence over 'Trust' resulted in a negative value of -0.39 for 'Reputation', another negative value of -0.34 for 'Ethical Behaviour' and a value of 0.22 for 'Scepticism'. These results clearly reveal that there is a relationship of these variables with trust, which will be evaluated in greater detail in the sections below.

The path in the model describing client service resulted in an unexpected relationship, where 'Service Quality' has a negative link to the intermediate latent variable of 'Reputation' with a beta value of -0.40. Contemporaneously the other intermediate relationships all have positive beta values with service quality, where results revealed the link of capability at 0.24, customer focus at 0.53 and client support and monitoring at 0.70.

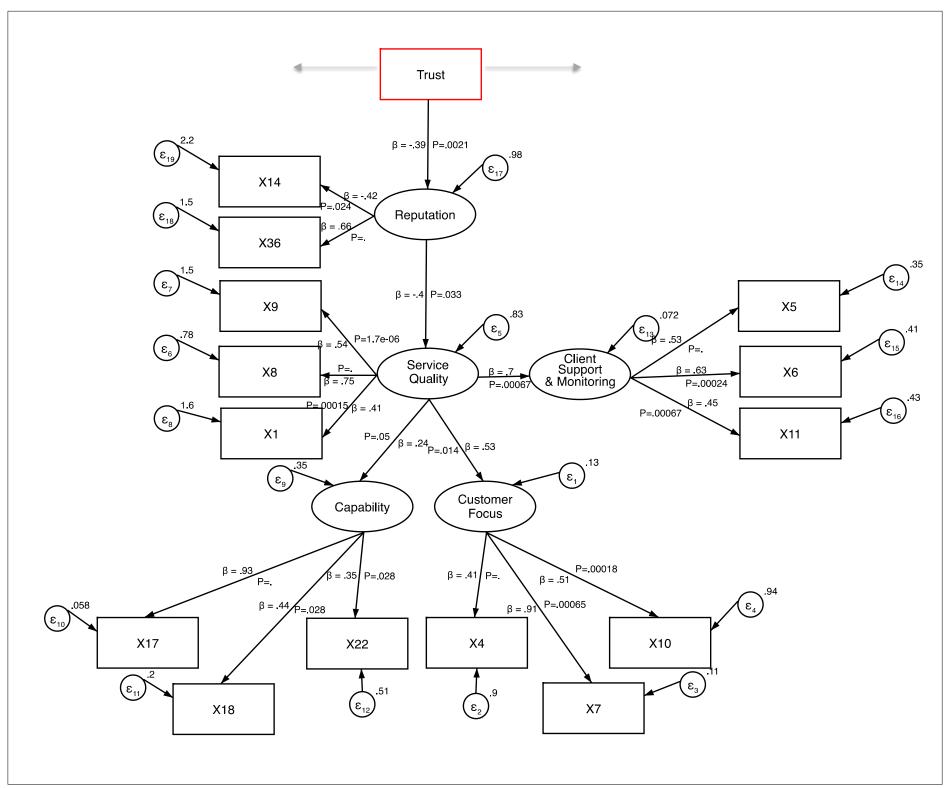
The value of the standardised coefficient between the intermediate variables of 'Independence' and 'Public Interest' are of 0.70 and -0.53 respectively, therefore a change in the observable factors will affect the latent moderator variable 'Ethical Behaviour'. The *p*-values of the relationships of this path are all negligible indicating that there is strong evidence against the null hypothesis and in support of the alternative hypothesis, that there is a relationship between the variables describing ethical behaviour and trust.

The least complex path is of 'Professional Scepticism', which is linked to 'Trust', although at a *p*-value of 0.064. Nonetheless, one cannot dismiss the results since they are still within the acceptable range between 0.05 and 0.10. One must also take into consideration that this result is accompanied by a beta value

with trust of 0.22. Therefore further evaluation needs to be made and a reasoned approach, rather than an inflexible one, is to be adopted towards interpreting results (Browner, 2003). As described by Verdam *et al.* (2014, p. 7) "null hypothesis significance testing and p-values should not lead us to think that inductive inference can be reduced to a simple, objective, dichotomous decision (i.e., 'reject' versus 'not reject')".

All paths linking the independent variables as well as the intermediate variables consistently resulted in low *p*-values supporting the argument that the null hypothesis can be rejected. The paragraphs below will discuss the interpretation of these results and relationships, together with the mean values into more detail.

Figure 7-6 Path diagram for reputation



#### 7.5.1 Reputation

As discussed by Swift (2002), there is a fine line distinguishing good reputation from trust. She discusses that a company with a good reputation can be trusted to act in a way expected of that reputation. However, it does not signify that it can be trusted to act ethically in all situations. On the other hand, she also argues that reputation results from trustworthy behaviour. Morrison & Firmstone (2000) further state that reputation is a willingness by a party to trust the other in the absence of actual knowledge concerning their capacity. Drawing upon these arguments, results identify a link between the importance of reputation on trust by the client, substantiated by a beta value between reputation and trust of -0.39. This inverse result supports the findings by Swift (2002) and Morrison & Firmstone (2000), since it signifies that more reliance on reputation by clients makes up for the lack of trust in the auditor. Another notable finding is the inverse relationship between service quality and reputation, with a beta value of -0.40, signifying that an increase in service quality is accompanied by a decrease of the need to rely on reputation. However the total estimated effect of service quality on trust is of 0.156 (-0.39 x -0.40). Concluding that overall an increase in service quality positively affects trust, although by a relatively lesser amount. The sections below elaborate further on these findings.

|     |                                   |   | <u>Client</u> |                   |                  |                |
|-----|-----------------------------------|---|---------------|-------------------|------------------|----------------|
|     | Latent                            |   | <u>Mean</u>   |                   | Standard         | <u>β value</u> |
|     | <u>variable</u>                   |   |               |                   | <u>Deviation</u> |                |
| X14 | Reputation                        | The expertise & competence of the audit firm is more important than the expertise of the audit team.                    | 3.6           | Undecided         | 0.14             | -0.42**        |
| X36 | Reputation                        | To be sceptical is the same as distrust   | 3.24          | Agree somewhat    | 0.13             | 0.66***        |
| X1  | Service<br>Quality                | It is realistic to expect prompt rescheduling of missed deadlines   | 2.32          | Agree             | 0.11             | 0.41***        |
| X8  | Service<br>Quality                | The audit partner should have the client's best interests at heart.   | 2.05          | Agree             | 0.11             | 0.75***        |
| Х9  | Service<br>Quality                | Client management should contribute more than required during the audit. (Question for client analysis)                 | 3.25          | Agree<br>somewhat | 0.12             | 0.54***        |
| X5  | Client<br>Support &<br>Monitoring | Management should give adequate support to the audit team so that they do their job well (Question for client analysis) | 1.51          | Strongly<br>Agree | 0.06             | 0.53***        |
| X6  | Client<br>Support &<br>Monitoring | An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures. | 1.98          | Agree             | 0.07             | 0.63***        |
| X11 | Client<br>Support &<br>Monitoring | It is important that clients respond quickly to the auditor's queries (Question for client analysis)                    | 2.01          | Agree             | 0.06             | 0.45***        |
| X4  | Customer<br>Focus                 | The audit partner should be actively involved in the engagement   | 2.25          | Agree             | 0.09             | 0.41***        |
| X7  | Customer<br>Focus                 | It is important that the audit partner gives the client individual attention  | 1.91          | Agree             | 0.07             | 0.91***        |
| X10 | Customer<br>Focus                 | It is important that the regular meetings are held between the client & the audit partner                               | 2.39          | Agree             | 0.09             | 0.51***        |
| X17 | Capability                        | Ethical training should be mandatory for audit and accountancy students.  | 1.55          | Strongly<br>Agree | 0.05             | 0.93***        |
| X18 | Capability                        | Clients should keep their records accurately (Question for client analysis)   | 1.38          | Strongly<br>Agree | 0.04             | 0.44**         |
| X22 | Capability                        | The auditor's code of ethics gives guidance and a sense of direction.   | 1.94          | Agree             | 0.07             | 0.35**         |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

Table 7-6 Observable factors of service quality and groupings of latent variables for clients

### 7.5.1.1 The expertise & competence of the audit firm is more important than the expertise of the audit team ('X14')

The relationship of this variable with reputation resulted in a negative beta value of -0.42. Therefore implying that increasing reliance on the audit firm's abilities

rather than its audit team will inversely affect reputation, i.e. decrease the reliance on reputation. This supports findings by Kilgore *et al.* (2014) who found that 'insiders', i.e. auditors, audit committee chairs and client management ranked audit-team attributes higher than audit-firm qualities.

Respondents were undecided when asked to evaluate whether the expertise and competence of the audit firm is more important than of the audit team, with a mean value estimation of the responses of 3.6 and a standard error of 0.14. Beattie and Fearnley (1995) identify that demand for auditing is driven by three sources: the agency demand, information demand and insurance demand. The agency and information demands stem from information asymmetry, whereas the insurance requirement stems from the need by investors and creditors to verify the financial statements. The indecisiveness of the respondents when faced with the choice between audit firm and audit team attributes could be linked to the fact that as long as the needs discussed by Beattie and Fearnley (1995) are met, then they are indifferent as long as their demands are met.

#### 7.5.1.2 To be sceptical is the same as distrust ('X36')

As described by Nogler (2015), management have a number of misconceptions about the audit, including sometimes the idea that "(*T*)the auditor is an adversary of management" (Nogler, 2015, p. 41). The beta value at 0.66 is significant and the *p*-value between this variable and the intermediate variable of reputation is low, thus there is strong evidence that the relationship is not a chance finding. This indicates that management is of the opinion that a certain measure of distrust is necessary when performing an audit and it increases the reputation of the auditor. The financial controllers' response to this statement in the questionnaire was that they 'somewhat agree', with an average score of 3.24 and a standard error of 0.13. Therefore, the replies of the respondents were positive, although not completely in agreement.

### **7.5.1.3 Expertise, competence, scepticism and their link to reputation**Results revealed that clients positively link the competence of the audit team

rather than the audit firm to reputation. Therefore if clients rely on the audit firms' rather than the audit teams' expertise and competence, decreases the

need to rely on reputation. On the other hand they feel that an element of presumptive scepticism in the auditor's work is necessary. Findings therefore indicate that presumptive scepticism coupled with expertise and audit team competence, leads to an increase in reputation.

#### 7.5.2 Service Quality

### 7.5.2.1 It is realistic to expect prompt rescheduling of missed deadlines ('X1')

As confirmed by Kaufmann and Dant (1992) in today's environment flexibility is key. The results of the questionnaire indicate that this is a prerequisite of service quality in view of the positive beta value of 0.41 with service quality, inferring from Fontaine & Pilotti's (2012) argument that flexibility reduces power asymmetry. This finding also ties in with the findings of Carcello *et al.* (1992) who identified that financial controllers put responsiveness to their needs by auditors high on their agenda. Although results also indicate that due to the fact that in today's environment flexibility is important, one cannot always expect an immediate rescheduling of deadlines. The client respondents agree, although they did not strongly agree with Kaufmann and Dant's assessment, with an average of 2.32 and a standard deviation of 0.12.

### 7.5.2.2 The audit partner should have the client's best interest at heart ('X8')

A study performed by Frost *et al.* (1978) determined that trust is vested when it is perceived that the other party has altruistic motives. This is evident in the total influence of service quality on trust with a beta value of 0.75 and a low *p*-value. This confirms that respondents feel it is important that the client's interests are given their due importance if service quality and ultimately trust between the parties is to be nurtured. The clients' responses to this statement are also of the opinion that the audit partner should have the client's interest at with an average of 2.05, a standard deviation of 0.12.

### 7.5.2.3 Client management should contribute more than required during the audit ('X9')

The beta value is of 0.54 between this factor and service quality. This confirms that building a mutually beneficial relationship (Wu & Cavusgil, 2006), based on commitment and transfer of knowledge could increase the service quality by the audit firm and ultimately trust. Although results also indicate that clients might still feel an element of distrust or adversity towards the auditor, but at the same time recognise the importance of a good relationship with the auditor and the transfer of knowledge from the client to the auditor and vice versa. The respondents were furthermore positively inclined towards this statement, since the average of their replies was that they somewhat agree.

### 7.5.2.4 Responsiveness in the relationship between the auditor and the client

Clients are of the view that in the relationship between the auditor and the client, flexibility and altruism by the auditor is important, as this increases service quality. When queried about their responsiveness, clients were still positively inclined but perhaps as discussed above they are still cautious in disclosing more information than is requested to the auditor. All factors linked to service quality were found to have a positive influence over it, although the latter was then found to have a negative relationship with reputation. This finding is interpreted as a trade off experienced by clients between service quality and reliance on reputation. Although it is important to note that the combined effect of service quality and the intermediate factor of reputation ultimately have a positive influence over trust, with a beta value of 0.156. Concluding that ultimately service quality combined with reputation is valued by clients and increases trust.

#### 7.5.2.5 Client support and monitoring

### 7.5.2.5.1 Management should give adequate support to the audit team so that they do their job well ('X5')

The beta value with client support and monitoring is of 0.53. This result confirms the findings of Rennie *et al.* (2010) and Fontaine & Pilotti (2012), that an

effective and efficient audit requires the support of management. The importance of this factor is supplemented further by its relationship with client support, client service and ultimately trust. This indicates that clients believe in forming relationships with the auditors, creating a medium where management not only responds to queries by the auditor but also informs the auditor about the company to the best of its abilities (Meier, 2011). Additionally respondents reacted positively to this statement with results of a mean value of 1.51, accompanied by a standard deviation of 0.06.

### 7.5.2.5.2 An internal review on a selection of audit files ensures that the audit firm maintains high quality control procedures ('X6')

This factor is drawn from a requirement by ISQC1, 'Quality control for firms that perform audits and reviews of financial statements, and other assurance and related service engagements', to address audit quality by audit firms (IAASB, 2016). A notable finding is the low *p*-value between this factor and the beta value of 0.63 with client support and monitoring, indicating the ultimate relationship between the clients' perception that auditor files should be reviewed if service quality is to be maintained. This contrasts to findings by Kilgore *et al.* (2014) in a study they performed with all stakeholders of the financial statements, where they identified that the audit quality assurance review was ranked as the lowest attribute increasing audit quality. Respondents replied that they agree to this statement with a mean value of 1.98 and a standard deviation of 0.07.

### 7.5.2.5.3 It is important that clients respond quickly to the auditor's queries ('X11')

The findings of this factor supplement the findings of factor 'X5' above. Responses resulted in a beta value with client support and monitoring of 0.45, thus confirming that they understand that they should cooperate with the auditor to ensure effective client service and ultimately trust. The result also signifies that clients are ready to be flexible but within the bounds of practicality. Clients responding to the questionnaire stated that they agree to this statement with a mean average of 2, a standard deviation of 0.06. The mean value of the

responses to this statement links to replies received when the clients were asked whether it is realistic to expect prompt rescheduling of missed deadlines, whereby they also allowed an element of flexibility.

#### 7.5.2.5.4 Client support and monitoring increase service quality

Clients are of the view that their support and adequate monitoring of the auditors' files is important to ensure service quality, this is evident in the beta value between this intermediate variable and service quality at a relatively high value of 0.70. Clients' replies revealed that support by management to the audit team as well as prompt action by the client is important if service quality is to be maintained or increased. Likewise clients were positive when queried about auditor monitoring. The latter is a notable finding as other studies identified from the literature review always gave this attribute a low ranking.

#### 7.5.2.6 Customer Focus

### 7.5.2.6.1 The audit partner should be actively involved in the engagement ('X4')

A study by Schroeder *et al.* (1986) and a more recent publication by IFAC (2014) identified that audit partner involvement is key for audit quality. Therefore, results of this study substantiate other studies since the beta value with customer focus is of 0.41. The results reflect the client's realistic perspective of the situation, perceiving that due to limited time the audit partner cannot always be actively involved in the engagement. These findings are further supported with a mean value attributed to this factor is of 2.25 with a standard deviation of 0.09

### 7.5.2.6.2 It is important that the audit partner gives the client individual attention ('X7')

It is positive that this level of perception of individual attention is linked to a better client service, evidenced by a beta value with service with customer focus of 0.91. This is the highest value contributing to the intermediate variable of customer focus, signifying that clients value personal contribution by the audit partner. This confirms findings by Parasuraman *et al.* (1998) who identified

empathy, i.e. showing caring and individualised attention to customers as a prerequisite to service quality.

Findings also revealed that clients agree that the audit partner should give the client individual attention, with results giving a mean value of 1.91 and a standard deviation of 0.07. The resultant mean value links to the concept of professional scepticism referred to earlier where as described by Nogler (2015), clients are of the opinion that the auditor has to maintain a certain amount distance from the client.

### 7.5.2.6.3 It is important that the regular meetings are held between the client & the audit partner ('X10')

Communication between the auditor and the client is mandated by international auditing standards (IAASB - ISA 260, 2016), which state that communication should be two-way and continuous. Client management confirmed this in their replies to the questionnaire, where results revealed a standardized coefficient with customer focus of 0.51 These results are also supported with a *p*-value of less than 0.05 between the observable factor and the intermediate latent variable, rejecting the null hypothesis. Sarapaivanich & Patterson (2015) link this continuous relationship to building a rapport, instilling confidence and reducing perceptions of risk. The findings are similar to 'X4' above implying that clients are realistic and that occasionally, time might be a limiting factor and that therefore it is not always possible to hold meetings. The average value of the responses to this construct was of 2.39 with a standard deviation of 0.09.

#### 7.5.2.6.4 Partner involvement and service quality

Undoubtedly personal attention to clients increases the perception of client service, as resulting from the positive influence of this intermediate variable on service quality with a beta value of 0.53. Audit partner involvement was deemed to be important by clients although results imply that they are also conscious that there is a limit to audit partner involvement possible. This can be attributed to a number of factors mainly linked to time availability by the partner, the cost of partner involvement and the conscious requirement that the partner is independent and should maintain a certain element of scepticism. Although

clients were of the view that this does not deter from the importance of giving individualized attention, where showing caring and individualised attention to customers is perceived to be a prerequisite to service quality.

#### 7.5.2.7 Capability

### 7.5.2.7.1 Ethical training should be mandatory for audit and accountancy students ('X17')

The respondents felt very strongly about this issue as evidenced in the relationship of this factor with capability with a beta value of 0.93. This substantiates the argument put forth by Thomas (2012), whose research identified that an accounting university education positively influences deliberate decision-making in ethical decision-making. As discussed by Ardelean (2013), the increase in importance of ethics in auditing was mainly triggered off by the financial accounting scandals, which happened in recent years. Unfortunately these scandals led to the questioning of auditor's integrity and morality by users of audit service. Auditors' ethical conduct was perceived as compromised. One might therefore also deduct that the respondents to the questionnaire are cognisant of these past experiences and therefore feel that a restoration of trust in the auditor's capabilities requires auditors to increase their ethical training. The average value of this construct was of 1.55 with a standard deviation 0.05. Therefore, the clients' opinion was strongly in favour of ensuring that students should be given ethical training.

#### 7.5.2.7.2 Clients should keep their records accurately ('X18')

The standardised coefficient with capability is positive with a value of 0.44. All international standards on auditing propound that it is vital that management understands their responsibility in the preparation of financial statements. Their role is of the essence to ensure that adequate internal controls are in place for the preparation of accurate financial reporting. Responses therefore indicate that management understands its responsibilities. This finding also links to Whitner *et al.* (1998), who stated that accurate information is one of the strongest pillars of the relationship between a principal and agent. Therefore this augurs well, when linked to the relationship between capability and service

quality. Since without accurate information from the client it is difficult for the auditor to perform his/ her work appropriately. On the other hand, as in the findings above when evaluating the link between the client's attributes and the intermediate variables, one notes an element of hesitance when compared to other replies by the clients, possibly indicating that they value auditor's attributes as a prerequisite of trust more than the clients'. The average response of the construct is 'strongly agree' at 1.38 and a negligible standard deviation at 0.06.

### 7.5.2.7.3 The auditor's code of ethics gives guidance and a sense of direction ('X22')

The code of ethics for accountants is important although the beta value of 0.35 signifies that perhaps clients recognise that the code of ethics is not a panacea to all ethical dilemmas, but the auditor still needs to use his/ her professional judgement. Nevertheless the positive beta value of this factor with capability coupled with a low *p*-value corroborates Pflugrath *et al.*'s (2007) study that stated that the code of ethics, coupled with training and exposure improves the quality of professional judgement, therefore capability and service quality. Clients' responses are in agreement with an average of 1.94, although they did not strongly agree to the statement. Therefore confirming the findings above that the code of ethics needs to be supplemented with objective professional judgement.

### 7.5.2.7.4 The importance of the auditor's ethical capability and the client's competency in record keeping

Clients' responses revealed a strong positive link between ethical training for auditor and capability. They are also of the opinion that the code of ethics gives guidance and direction. Additionally they believe that their contribution in terms of competency in record keeping aids in capability. The value of beta between this intermediate variable and service quality is positive at 0.24, which indicates a positive influence over service quality although it is also the lowest when compared to customer focus and client support and monitoring.

#### 7.5.3 Ethical Behaviour

Barlaup *et al.* (2009) discuss ethics and trust and state that each situation is different to the other, which in turn requires different decision-making. They also state a practical decision-making framework is based on ethics, self-awareness of motivation and commitment to guiding principles. The sections below bring to the fore these arguments and their link to trust.

Trust  $\beta = -34$  P=.00086 X24 Ethical  $\beta = .86$ P=1.2e-11 Behaviour  $\beta = .66$ X23 P=2.8e-06 P=2.0e-05  $\beta = -.53$ Public Independence Interest P=.001  $\beta = .85/P=$ P=1.0e-05  $\beta = .5$ √P=.01 P=1.5e-06  $\beta = .31$  $\left( \mathbf{\epsilon}_{_{7}}\right)$ X28 X15 X38 X39 .81 X30 X20

Figure 7-7 Path diagram for client's perception of ethical behaviour

|     |                                  |  | <u>Client</u> |                      |                    |                |
|-----|----------------------------------|--|---------------|----------------------|--------------------|----------------|
|     | <u>Latent</u><br><u>Variable</u> |  | <u>Mean</u>   |                      | Standard Deviation | <u>β value</u> |
| X23 | Ethical<br>Behaviour             | The auditor's ethical decision making varies from one situation to another   | 5.11          | Disagree<br>somewhat | 0.15               | 0.66***        |
| X24 | Ethical<br>Behaviour             | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action. (Question for client analysis) | 4.08          | Undecided            | 0.15               | 0.86***        |
| X28 | Independence                     | The importance of the auditor's independence is overrated.   | 3.68          | Undecided            | 0.14               | 0.7***         |
| X30 | Independence                     | Client retention is a determining factor in the auditor's ultimate decisions.  | 2.89          | Agree<br>somewhat    | 0.13               | -0.62***       |
| X39 | Independence                     | Auditors have to trust management to be able to perform the audit  | 2.62          | Agree<br>somewhat    | 0.11               | -0.51***       |
| X15 | Public Interest                  | The auditor should be sceptical on whether the client will stick to his word.  | 3.91          | Undecided            | 0.15               | 0.85***        |
| X20 | Public Interest                  | The auditor's responsibility is to act in the public interest.   | 2.77          | Agree somewhat       | 0.13               | 0.31**         |
| X38 | Public Interest                  | Increased control over the profession will increase trust in the auditor   | 2.78          | Agree<br>somewhat    | 0.12               | 0.50***        |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

### Table 7-7 Observable factors of ethical behaviour and groupings of latent variables for clients

Figure 7-7 and Table 7-7 above summarise the relationships of the path for ethical behaviour. The beta values of the responses with the latent variable of ethical behaviour, give an idea of the perceptions of clients with respect to ethical behaviour and trust in auditing. The beta value between the intermediate variable of ethical behaviour and trust might initially give the impression of an unusual relationship. On the other hand further evaluation of the results with respect to the observable factors influencing ethical behaviour corroborates previous findings, since the replies all express what clients do not favour in their audit. Therefore a more specific labeling of this latent variable would be 'unethical behaviour' versus trust.

A conventional level of integrity by the auditor was preferred. Simultaneously an increase in the importance of role of the auditor in the public interest decreases the perception of unethical behaviour. Whereas an increase in the overall independence granted to the auditor leads to an increase in unethical

behaviour, possibly related to a negative perception held by clients with respect to the auditors. The sections below delve deeper into the interpretation of these results, and also contemplate further studies and measures, which could be undertake to address certain salient issues emanating from this research.

### 7.5.3.1 The auditor's ethical decision making varies from one situation to another ('X23')

This statement portrays the highest level of moral development, where individuals act following their ethical principles, even if it means going against the law (Reiter, 1996 & Trevino, 1992). On the other hand, Shaub (1994) and Armstrong (1987) stated that unfortunately accountants' moral reasoning is lower than the average of the general population. It is interesting to note that this statement has a low *p*-value and positive beta value of 0.66 with unethical behaviour. Therefore, rejecting the null hypothesis that there is no relationship between this factor and ethical behaviour and indicating that clients are of the opinion that increasing adaptability to the situation at hand increases the perceived unethical decision-making. This result implies that clients prefer a conventional level of ethical decision-making rather than moral reasoning at the high ethical principles of the post-conventional level. Respondents to this statement stated that they 'somewhat disagree' with a mean average of 5.11 and a standard deviation of 0.15.

### 7.5.3.2 Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action ('X24')

The low *p*-value and a positive beta value of 0.86 in the statistical analysis conducted reveals that adaptability in ethical decision-making is perceived to positively affect unethical behaviour. This complements the findings above and signifies that clients are of the opinion that they favour a conventional attitude towards ethical decision-making rather than 'post conventional' (Shaub, 1994). The mean value of the responses to this statement is of 4.08 with a standard deviation of 0.15. This demonstrates that clients are undecided as to how they should act in terms of morality when lying.

#### 7.5.3.3 Adaptability and ethical decision-making

When clients were asked whether auditors should vary their decision-making depending on the circumstances their replies positively influenced unethical behavior. This coincides with other research which identifies that an auditor's ethical reasoning is at the conventional level. This was also confirmed when asked whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action, as it was also found to positively contribute to the negative relationship of the intermediate variable of ethical behaviour ("unethical behaviour") with trust. Concluding therefore that clients do not favour volatility in ethical decision-making.

#### 7.5.3.4 Independence

Ardelean (2013, p. 59) states that: "(I) it is acknowledged that an ethical conduct is essential when performing an audit in order to meet the defining characteristics of the auditing profession which are trust, independence and integrity". The following sub-sections analyse this statement from the viewpoint of clients.

#### 7.5.3.4.1 The importance of the auditor's independence is overrated ('X28')

The beta value of this observable factor with independence is 0.70, indicating that it is perceived as contributing to an auditor's independence. Independence is key in the role of the auditor, as their function is one of public interest. The International Code of Ethics for Accountants (IESBA, 2016) maintains that an auditor should not only be independent in mind, but also in appearance. Therefore clients are of the opinion that overrating such a concept would increase their perception of the auditor's independence. The mean response value to this statement is of 3.68 with a standard deviation of 0.14. Therefore clients are undecided as to whether the independence of the profession is given too much importance. The results possibly reveal that client respondents are not wholly aware of the present discussions surrounding independence of the auditor.

### 7.5.3.4.2 Client retention is a determining factor in the auditor's ultimate decisions ('X30')

This statement has a negative relationship with independence, with a beta value of -0.62 and a low *p*-value therefore rejecting the null hypothesis. Although client dependence might be one of the most threatening factors to auditors' independence (Sciriha, 2016; Cote, 2002, Bettie *et al.*, 1999), it is also a determining factor to ensure that an auditor is not biased in his/ her decision-making. Clients are therefore of the opinion that client retention negatively affects the perception of auditors' independence. When clients were asked to grade this statement, their response was 'agree somewhat' with a mean value of 2.89 and a standard deviation of 0.13, thus confirming that this fact has a bearing on the auditor's decision-making.

### 7.5.3.4.3 Auditors have to trust management to be able to perform the audit ('X39')

An increase in trust in management would decrease the perception of independence by the auditor. However clients are also conscious that they are in a position whereby their knowledge about the business is too important to disregard as revealed by the beta value between this observable factor and the intermediate latent variable of independence is of -0.51. This finding also implies that clients understand that the role of the auditor requires a certain element of scepticism. Clients somewhat agreed to this statement, with a mean value of 2.62 and a standard deviation of 0.11. This indicates that they are of the view that there needs to be an element of trust between management and the client, to enable the auditor to perform an audit effectively.

#### 7.5.3.4.4 The client's perception of auditor independence

The findings give interesting and somewhat disconcerting results in this respect. Clients' responses revealed that customer retention and trust in management negatively influences auditor's actions auditor's independence. On the other hand they are of the opinion that overrating the concept of independence positively influences independence. Overall the intermediate variable of independence has a beta value of 0.70 with unethical behaviour. This signifies

that an increase in independence positively influences the perception of unethical behaviour in the client. Unfortunately this means that as perceived by clients the coveted independence given to the auditor is being abused leading to unethical behaviour. This is certainly a worrying finding as independence is the crux of this profession and further action should be taken by professionals and regulators alike to restore this confidence held in the auditors.

#### 7.5.3.5 Public Interest

"IFAC defines the public interest as the net benefits derived for, and procedural rigor employed on behalf of, all society in relation to any action, decision or policy." (IFAC, 2012, p.1)

Further to the above IFAC stated that this definition is applicable only if an assessment can be made against a given set of criteria falling within two sets of categories, consisting of:

- The benefits outweighing the costs to the society, and
- The process of the action should be made within the context of transparency, public accountability, independence, and adherence to due process.

The factors below take into consideration some of the criteria identified by IFAC, linking them to the perception of ethical conduct and trust.

### 7.5.3.5.1 The auditor should be sceptical on whether the client will stick to his word ('X15')

When clients were queried, their responses linked this statement, which is also a representation of presumptive scepticism, to public interest. The beta value of this observable factor with public interest is a notable positive value of 0.85. Therefore this finding signifies that they feel that the auditor should adopt a sceptic approach to auditing to ensure non-bias and influence positively public interest. Their responses also resulted in an undecided response with an average of 3.91 and a standard deviation of 0.15. Interestingly clients were not sure in terms of the sceptical attitude the auditor should adopt in their respect.

#### 7.5.3.5.2 The auditor's responsibility is to act in the public interest ('X20')

As described above and as specifically required by the Code of Ethics for Professional Accountants (2016) an auditor should act in the public interest. When clients were asked about their perceptions to this statement, it resulted in a beta value of 0.31. Therefore clients' understand that ultimately auditors' duty is towards the public, cognisant of the fact that ultimately the audit report is relied upon by all stakeholders following its publication. However this statistical finding also implies that they are somewhat also of the view that primarily the duty is towards the shareholders, since as required by law the audit report is addressed to them. With reference to the variable the mean value of the replies is 2.77 with a standard deviation of 0.13. This signifies that clients somewhat agree that the auditor is responsible to act in the public interest. Although the mean value is positive the average is not high this possibly signifies that perhaps clients do not fully understand the importance of the public role of the auditor.

### 7.5.3.5.2 Increased control over the profession will increase trust in the auditor ('X38')

The beta value with public interest with public interest is of 0.50. Therefore, a certain degree of increased control would increase the role of the public interest by the auditor. This is significant because a distinguishing feature of the auditing profession is its self-regulation through its code of ethics. This indicates therefore that the current movement at an International and European level to increase regulation, is therefore to a certain extent justified if ultimately trust is to be upheld. Clients answered that they somewhat agreed to this statement with a mean value of 2.78 and a standard deviation of 0.12.

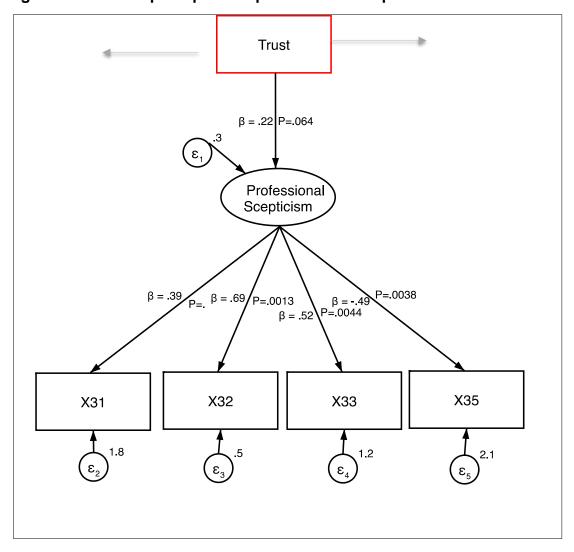
#### 7.5.3.5.3 The importance of public interest

The replies given by the clients resulted a significant positive relationship between scepticism and public interest. They also agreed that they believe that the auditor's role is in the public interest. Simultaneously respondents are in favour of increased regulation. This latter finding implies that they are of the opinion that more control over the profession increases independence. The

overall standardised coefficient of the latent variable of public interest with unethical behaviour is a negative beta value of -0.53. This means that an increase in actions by the auditor in the interest of the public leads to a decrease in the perception of unethical behaviour.

#### 7.5.4 Professional Scepticism

Figure 7-8 Client's perception of professional scepticism



Kopp *et al.* (2003) state that it is difficult to balance an attitude of professional scepticism with trust in the client-auditor relationship, when performing an audit. Hurtt *et al.* (2003) identified six characteristics of audit evidence, which include examination of evidence, a questioning mind, suspension of judgement, search for knowledge, interpersonal understanding, self-confidence and self-determination. These factors lead the researchers to identify four behaviours

that are expected of sceptics, these include increased information search, increased contradiction detection, increased alternative generation, and expanded scrutiny of interpersonal information. These behavioural requirements underlie the factors below used in study as a prerequisite to trust.

|     |                                  |  | <u>Client</u> |                |                    |                |
|-----|----------------------------------|--|---------------|----------------|--------------------|----------------|
|     | <u>Latent</u><br><u>Variable</u> |  | <u>Mean</u>   |                | Standard Deviation | <u>β value</u> |
| X31 | Professional Scepticism          | The auditor usually notices inconsistencies in explanations  | 3.32          | Agree somewhat | 0.12               | 0.39***        |
| X32 | Professional<br>Scepticism       | The auditor does not like to decide until she/he has looked at all of the readily available information.     | 2.27          | Agree          | 0.08               | 0.69***        |
| X33 | Professional<br>Scepticism       | The auditor frequently questions things that he/she sees or hears  | 2.75          | Agree somewhat | 0.1                | 0.52***        |
| X35 | Professional<br>Scepticism       | It is understandable that the auditor has doubts about the accuracy of the information received from clients | 4.35          | Undecided      | 0.13               | -0.49***       |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

Table 7-8 Observable factors of professional scepticism as perceived by clients

The observable factors and the resultant SEM with respect to professional scepticism as perceived by the clients is the simplest in this research. The standardised coefficient between the latent variable of professional scepticism and trust is 0.22. Therefore an increase in professional scepticism by the auditor increases trust. Nonetheless the findings give interesting results about the perceptions of the clients.

#### 7.5.4.1 The auditor usually notices inconsistencies in explanations ('X31')

It is a universally accepted fact that an audit has inherent limitations and it is impossible for the auditor to identify all misstatements (IAASB – ISA 240, 2016). When clients were queried about this factor, they also seem to be cognisant of this, since when one looks at the relationship between this factor and professional scepticism, the *p*-value contradicts the null hypothesis and the beta value resulted in a positive value of 0.39. Although clients understand that an increase in the auditor's ability to notice inconsistencies increases the perceived

professional scepticism by the clients. The average value of their was 'somewhat agree', with an average of 3.32 and a standard deviation of 0.12.

### 7.5.4.2 The auditor does not like to decide until she/ he has looked at all of the readily available information ('X32')

Clients are of the opinion that the auditor is cautious, and wants to collect all the necessary evidence. This is implied by the positive beta value between professional scepticism and the observable factor of 0.69. This finding reveals that clients feel that the auditors are meticulous in their work. Therefore clients feel confident that the auditor does the utmost to collect all evidence instilling an element of trust in his/ her competences. The mean value of the responses to this factor was of 2.27 with a standard deviation of 0.08. The clients did not strongly agree, perhaps recognising that as stated by Zuca (2015), in the pursuance of his/ her work the auditor is in a continual balancing act between cost and performing further procedures.

### 7.5.4.3 The auditor frequently questions things that he/she sees or hears ('X33')

As in the paragraphs above clients questioned are of the opinion that adopting a questioning attitude increases professional scepticism with a beta value of 0.52. Although in agreement, one notes some hesitance. The lack of scepticism has been linked to a number of high profile fraud cases, including the demise of Enron and Arthur Anderson, their auditors at the time of the scandal. Therefore, although the findings do not demean the link with trust, they also indicate that clients are of the view that perhaps the auditor is keeping back from asking some necessary questions. The average value of this construct was of 2.75 (i.e. 'agree somewhat') and a standard deviation of 0.10.

### 7.5.4.4 It is understandable that the auditor has doubts about the accuracy of the information received from client ('X35')

This statement addresses the scepticism of the auditors with respect to the veracity and validity of their representations. The results of this observable factor are furthermore inversely linked to professional scepticism with a negative beta value of -0.49. Therefore an increase in doubts held in the client's

abilities does not lead to an increase but rather a decrease in professional scepticism. This means that clients do not feel that doubting their ability to provide accurate information leads to an increase in the professional scepticism applied. Furthermore clients were undecided as to how rate this factor, with an average score of 4.35 and a standard deviation of 0.13.

### 7.5.4.5 Clients' perception of the auditor's ability to apply professional scepticism

The clients' responses linked the statements presented addressing the auditors' behavioural traits to a sceptical attitude. Thus indicating that noting inconsistencies, looking at all the available information and questioning things they hear or see increases professional scepticism. On the other hand, doubting clients' representations was negatively linked to professional scepticism. Therefore clients are of the opinion that doubting their ability to provide accurate information is not as prerogative of scepticism but rather leads to a decrease in the professional scepticism applied.

#### 7.6 Conclusion

One can conclude that, as perceived by the auditors as well as by the clients, a framework of trust-based auditing focusing on service quality, professional scepticism and ethical behaviour can be established, albeit distinctly as perceived by both parties. The next chapter will look at the resultant audit usefulness of this framework followed by a description of the differences or similarities in perceptions between the two parties in more detail.

#### CHAPTER 8 – TRUST AND AUDIT USEFULNESS

#### 8.1 Introduction

Chapter 7 addressed the first part of the conceptual framework. It focused on the prerequisites of trust as perceived by the auditors and clients. This chapter follows by looking at the second part of the conceptual framework in this research, focusing on the explanation of post-adoption behaviour and therefore the result of the trust between the auditors and the clients, namely the perceived usefulness of the audit. In brief, findings reveal that auditors and clients are of the opinion that the pillars of the respective framework increase trust, which consequently increases audit usefulness. Although the influence of audit usefulness on trust is marginally higher as perceived by clients, when compared to the auditors. The following sections look at how the specific observable factors are perceived to support the concept that a useful audit increases credibility and confidence in financial reporting.

### 8.2 Will a useful audit increase the credibility and confidence in financial reporting?

ICAEW (n.d.) examined the auditors' role in the issue of audited financial statements highlighting their contribution to promote prosperity, security, fairness and integrity. It emphasized the complexity of today's business environment and the demands it places on wider and more accurate financial reporting. Further stressing the increase in scrutiny by experts and the responsibility of business to society. It also comments that society not only expects this from companies but also places trust in the auditor "to support confidence in business". The following sub-sections analyse the support of the auditor in enhancing prosperity, security, fairness and integrity by looking at the contribution of audited financial statements to increase the creditworthiness of a company, to provide feedback on possible bias and the importance of discovering a breach or possible misstatement.

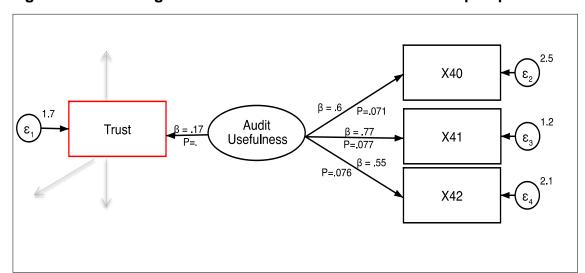
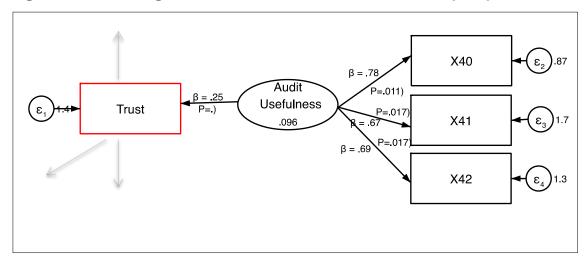


Figure 8-1 Path diagram for audit usefulness - the auditors' perspective

Figure 8-2 Path diagram for audit usefulness - the clients' perspective



The path diagrams above outline the relationships between the observable factors and audit usefulness and trust. It is important to note the link between the factors characterising audit usefulness and trust. The beta value between trust and audit usefulness is marginally higher in the case of the clients' perceptions, when compared to the auditors. This is replicated in the underlying observable factors in their relationship with audit usefulness. Nonetheless the overall perceptions of both parties are similar. Furthermore one also notes that all three observable factors almost equally influence the latent variable of audit usefulness as perceived both by auditors and clients. On the other hand the p-

value in the case of the auditors' is higher than the clients' therefore the possibility of a chance occurrence is greater. Nonetheless they are still within the acceptable range and therefore one can conclude that the null hypothesis that trust is not dependent on audit usefulness can be rejected.

### 8.2.1 The function of audited financial statements is to increase the creditworthiness of a company ('X40')

The replies of the auditors and the clients resulted in a positive beta value with audit usefulness of 0.60 and 0.78 respectively. Therefore an increase in the function of the audit to increase creditworthiness increases audit usefulness. One of the main sources of credit in Malta is still the bank. When asking for credit a bank still requests a copy of the audited accounts, even though it relies on other information. Therefore this finding concurs with prior research (Dedman & Kausar; 2012) that audited accounts aid in obtaining credit and research by Duréndez Gómez-Guillamón (2003) that the type of audit report influences credit availability.

The mean value of the responses by the auditors was of 3.86 with a standard deviation of 0.15. This signifies that respondents were undecided as to whether audited financial statements increases creditworthiness. . On the other hand, clients were more confident as they somewhat agreed, their responses consisting of a mean value of 2.78 and a standard deviation of 0.12.

## 8.2.2 The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results (X41)

As described in the previous chapters, the preparation of financial statements unavoidably involves the application of professional judgement in many situations such as determining accounting estimates and in deciding on the appropriate accounting policies, amongst others. This statement addressed the function of the audit in addressing management bias. The beta values of this factor with the intermediate factor of audit usefulness were of 0.77 and 0.67 for the auditors and the clients respectively meaning that both parties are of the opinion that it increases the audit usefulness of the audit. Auditors' as well as

clients' responses in this respect were that they somewhat agree, with mean values of 3.31 (and standard deviation of 0.13) and 3.13 (and a standard deviation of 0.14), respectively. Therefore both parties feel that to a certain extent the audit reduces the risk of management bias.

### 8.2.3 Discovering a breach or a misstatement is a measure of usefulness of the audit (X42)

The positive beta values of this factor with audit usefulness at 0.55 for the auditors and 0.69 for the clients imply that they are of the opinion that in part, the usefulness of the auditor is as overseer in the principal-agent relationship between the auditor and the client. This finding corroborates previous research, in that one of the purposes of the audit is to reduce the risk of error (Swedish National Audit Office, 2017). The average responses of the auditors' as well as clients' was that they somewhat agree, with mean values of 3.49 (and standard deviation of 0.13) and 2.94 (and a standard deviation of 0.13), respectively.

#### 8.3 Conclusion

The results above indicate that the audit is still perceived to be useful, which in turn increases the trust held in the audit, although one notes that the influence of audit usefulness over trust is less in terms of beta value than the former. In recent years the importance of the auditing profession has been put into disrepute. This has lead to increased monitoring by regulatory bodies. Additionally European legislation advocating the 'think small first' has over the years increased the number of exempted medium, small and micro companies from the requirement of an audit. This chapter validated that an audit is perceived to be useful not only because it is required by law but also because it increases the company's creditworthiness and the review performed by auditors identifies bias, fraud or error. These factors have been also linked to an increase in trust, however results identify that this relationship should not be taken for granted. This is important since it indicates that an audit of financial statements is still relevant. The resultant mean values reveal an element of uncertainty as responses were not so strong. This latter finding signifies that more needs to be done in terms of research.

The next chapter will look at the similarities and differences in the model holistically thus summarizing the different viewpoints. This will be followed by a closer look at the attributes of the clients that support trust in the audit.

# CHAPTER 9 – DISCUSSING THE DIFFERENCES AND SIMILARITIES IN PERSPECTIVES AND CONCLUDING ON THE CLIENT ATTRIBUTES THAT SUPPORT TRUST IN THE AUDIT

#### 9.1 Introduction

The previous chapters evaluated the framework for trust-based auditing, by analysing the different perspectives of the auditors and their clients. The analysis also identified some differences and similarities. The following sections will compare the perspectives of the two groups. Ultimately ending with an analysis of the client attributes found to be necessary components of trust to enable a useful audit.

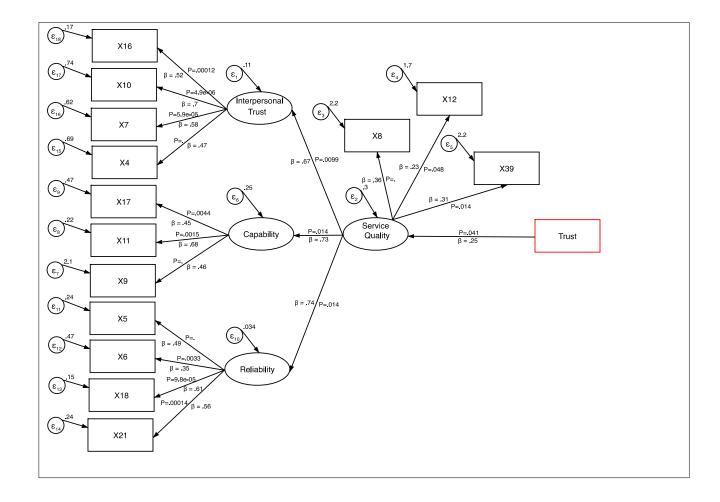
#### 9.2 Analysing the Differences and Similarities in the Model Results

The following sections will focus on comparing the way auditors and their clients feel the observable indicators of the latent factors of service quality, ethical behaviour and professional scepticism, influence trust. One can argue that this methodology has a drawback because differences/ similarities in perceptions might be due to different evaluations or a different understanding of each and every attribute. However in practical terms, it is important to know what the different groups focus on, rather than knowing the cause of the differences (Carcello *et al.*, 1992).

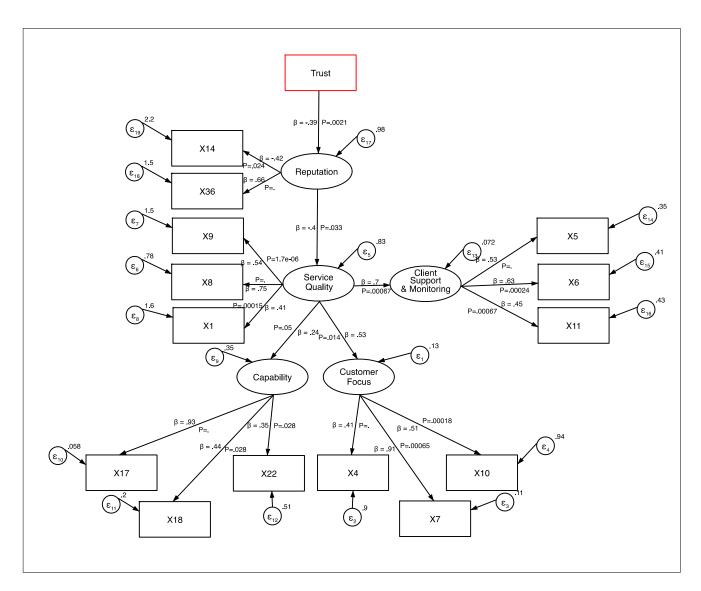
### 9.2.1 Service quality (H1-Perceived quality of the auditor's service affects management's trust in the auditor)

Figure 9-1 Comparison of the path diagrams of service quality

### The auditors' perspective



#### The clients' perspective



The diagrams above indicate that the pillar of service quality is the most extensive, since research results identified that a number of factors are correlated to each other with the commonality of the attribute of giving a better service linking them together, albeit in different ways. The first notable finding is in the client's model where service quality is inversely linked to reputation and the latter is inversely related to trust. Therefore in the case of the auditors, holistically all observable factors positively influence service quality ultimately positively influencing trust. Whereas with respect to clients their perception is that there is a trade of between reputation and trust, and service quality and trust. Although overall, trust is positively influenced by an increase in the combined effects of service quality and reputation. Grouping is not the only difference in the model for auditors and clients, but also in the intermediate and observable factors themselves. The auditor's perception is that interpersonal trust and reliability have a bearing on service quality, whereas the clients are of the opinion that client support and monitoring and customer focus influence service quality. The following sections elaborate further on these differences and also some similarities.

#### 9.2.1.1 Auditors' perceptions

Tests performed using SEM linked the factors describing empathy, other services and trust in management together. The characteristics of these factors which links them together was labelled as <a href="service quality">service quality</a>. The auditors' replies were that they value clients' interests but they are cautious about offering other services and trusting management. Findings also revealed that auditors value independence and scepticism. The intermediate component of <a href="reliability">reliability</a> consists of client management support, audit quality control procedures, accurate client reporting and performing work to the best of their abilities. These factors were supported by positive beta values in relation to reliability, indicating that auditors view reliability as important if trust is to be maintained. Results grouped together ethical training, prompt cooperation from clients and unprompted information sharing by the client. Labelled as <a href="capability">capability</a>, these factors were also considered as major influencers on service quality by the auditor. The last factor linked to service quality is interpersonal trust. The sub-

elements of this component were all positively related to interpersonal trust and ultimately service quality. They looked at the level of involvement by the audit partner, giving clients personal attention, the importance of regular meetings and maintaining high ethical standards. Responses revealed that a positive increase in these prerequisites is perceived to increase service quality. Respondents recognise that constant two-way communication and the development of a working relationship is vital in an audit as it increases interpersonal trust and service quality. Although auditors are still cautious in their relationships with clients and understand the importance of maintaining scepticism, and contemporaneously value maintaining a high level of ethical standard.

#### 9.2.1.2 Clients' perceptions

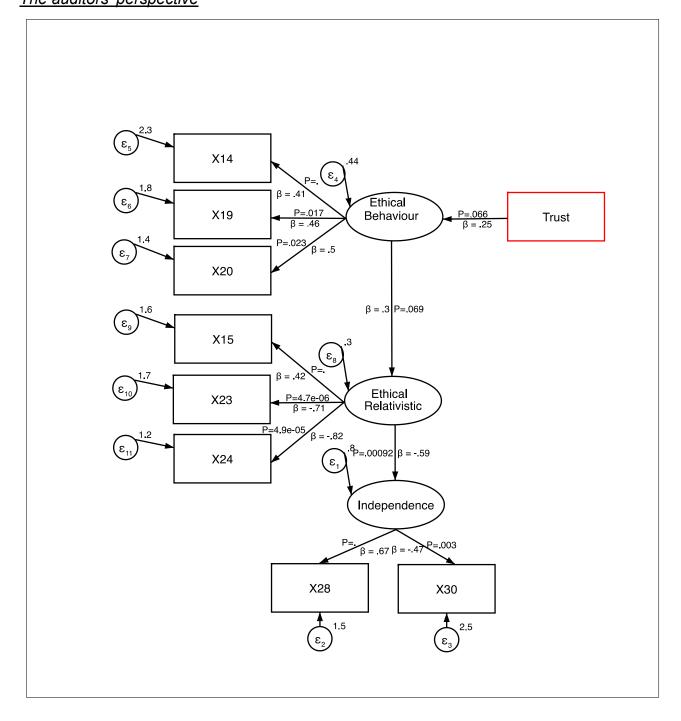
Running a SEM analysis for clients' replies linked service quality to reputation, albeit inversely. Therefore, clients' perception is that service quality is inversely related to reputation, which is also inversely related to trust in the auditor. This is a notable finding, as it indicates that in the client's opinion there is a trade off between service quality and reputation, and reputation and trust. Although the combined increase in service quality and reputation positively influences trust. Results revealed that clients positively link the competence of the audit team rather than the audit firm to reputation. Therefore clients give importance to the personal element of the relationship. Findings also identified that clients link the concept of scepticism and distrust, and believe that this increases service quality. These factors were grouped together concluding therefore that it is important that the auditor's personal reputation is important and that whereby he/ she applies the required scepticism. Analysis of the results further identified that capability, client focus and client support and monitoring all positively influence service quality. Flexibility in rescheduling deadlines, altruism with respect to the client and unprompted information sharing by the client were all linked to <u>service quality</u>. All these factors positively increase service quality, although contemporaneously service quality has a negative relationship with reputation. Therefore clients either place reliance on service quality or reputation. Ethical training for the auditor, the auditors' code of ethical conduct

and accurate client reporting were all linked to capability, as a prerequisite of service quality. Clients' responses revealed a strong positive link between ethical training for auditor and capability. They are also of the opinion that the code of ethics gives guidance and direction. Additionally they believe that their contribution in terms of competency in record keeping aids in capability. Client support and monitoring, focuses on the client supporting the audit team, client's commitment to prompt cooperation and audit quality control procedures. These factors were all deemed as important factors leading to service quality. The fact that clients viewed audit quality control procedures as important is interesting since a study carried out by Kilgore et al. (2014) concluded that auditors do not see the benefit of this review when the time and cost were also taken into consideration. Customer focus factors largely concerned audit partner involvement. Clients are of the opinion that active involvement by the audit partner and that regular meetings increase customer focus although they are also conscious that the audit partner is to maintain independence and a certain level of scepticism if service quality is to be maintained. Nonetheless they were also of the view that this does not deter from the importance of giving individualized attention, where showing caring and individualised attention to customers is perceived to be a significant prerequisite to customer focus and service quality.

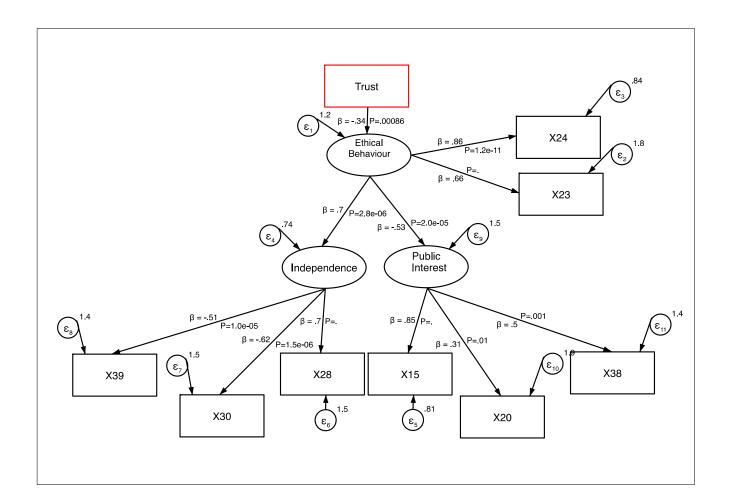
### 9.2.2 Ethics (H2 - Auditor's ethical behaviour promotes auditor's trust in management)

Figure 9-2 Comparison of the path diagrams of ethical behaviour

The auditors' perspective



#### The clients' perspective



When comparing the two models above one can immediately notice that where auditors perceive that ethical conduct increases trust, clients are of the opinion that the factors they perceive to affect ethical behavior negatively influences trust. However it is important to note that the factors connecting ethical conduct and trust as perceived by the auditors' are different to the factors identified by the clients. Except for factors 'X23' (The auditor's ethical decision making varies from one situation to another) and 'X24' ('Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action'), all other factors are different. This distinction is important since on closer evaluation one immediately notices that the factors affecting ethical behavior as perceived by the clients are negative. Therefore their focus was on what are the attributes that they would not like the auditor/ audit to have. The following analysis will look at the details of the two different perspectives.

#### 9.2.2.1 The auditors' perspective

Whether the audit team is more competent than the firm, whether the auditor should take risks and the ultimate responsibility of the auditor towards the public were all linked together as <a href="ethical behaviour">ethical behaviour</a>. Respondents linked the expertise and competence of the audit team to ethical behaviour, indicating that acting in an ethical manner is perceived to be a personal trait, which nevertheless requires the support of the organization. Contemporaneously respondents were cautious in ascertaining that they should never take risks, as it is practicably impossible. Finally, auditors were asked whether, their responsibility to act in the public interest increases ethical behaviour. Respondents agree however with reservations, this was interpreted as due to the fact that they feel that primarily the audit report is addressed to the shareholders.

Characteristics tending towards the relativistic ethical stance were grouped together into one component. Consequently, veracity of client's representations, circumstantial variance in ethical decision-making and morality of lying were identified as belonging to the component labelled as <a href="ethical relativistic">ethical relativistic</a>. Analysis of the results corroborated previous findings that auditors are non-relativistic in their decision-making but rather conventional in their ethical reasoning, which positively affected ethical behaviour. SEM analysis further linked independence

to ethical relativistic and ultimately ethical behaviour. Replies by the auditors resulted in an inverse link between independence and a non-relativistic attitude towards ethics. Consequently an increase in independence leads to a decrease in non-relativistic ethics. Thus confirming a conventional attitude towards ethical behaviour. Additionally, respondents' were of the view that an increase in the perception of the overrating of an auditor's independence increases the perception of independence. Additionally if client retention is a determining factor in the auditor's ultimate decisions, then this leads to a decrease in independence.

#### 9.2.2.2 The clients' perspective

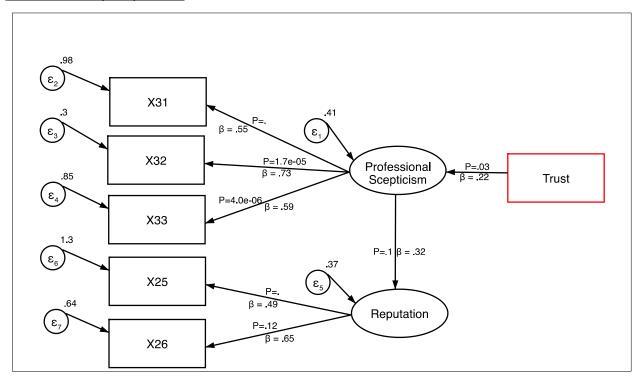
As mentioned previously although the models seem to be different, they are in actual fact the same since clients linked the negative observable factors to ethical behaviour, causing the latter to have a negative relationship with trust. Therefore a more precise labeling of this component would be unethical behaviour. Therefore clients agree that unethical behavior reduces trust, which is the somewhat similar in the relationship identified by the auditors between ethical behavior and trust, albeit in different ways. The factors directly linked to the component ethical behaviour refer to the adaptability of ethical decisionmaking, i.e. circumstantial variance in ethical decision-making and morality of lying. These relationships indicate that clients are of the opinion that auditors' ethical perspectives should be at the conventional level, a perception also shared by auditors themselves. Factors addressing the concept of independence gave interesting and somewhat disconcerting results. Customer retention and trust in management influence auditor's actions, however they feel that this affects the auditor's independence negatively. Clients on the other hand expressed the view that overrating the concept of independence positively influences independence. Overall the intermediate variable of independence has a beta value of 0.70 with unethical behaviour. This signifies that an increase in the perception of independence positively influences the perception of unethical behaviour in the client. Unfortunately this signifies that as perceived by clients the coveted independence given to the auditor is perceived as being abused leading to unethical behaviour. This is certainly a worrying finding as

independence is the crux of this profession. The replies given by the clients resulted a significant positive relationship between scepticism and public interest. They also agreed that they believe that the auditor's role is in the public interest. Simultaneously respondents are to some extent in favour of increased regulation. Concurrently the overall standardised coefficient of the latent variable of <u>public interest</u> with unethical behaviour is a negative beta value of -0.53. Therefore indicating that an increase in actions by the auditor in the interest of the public leads to a decrease in the perception of unethical behaviour.

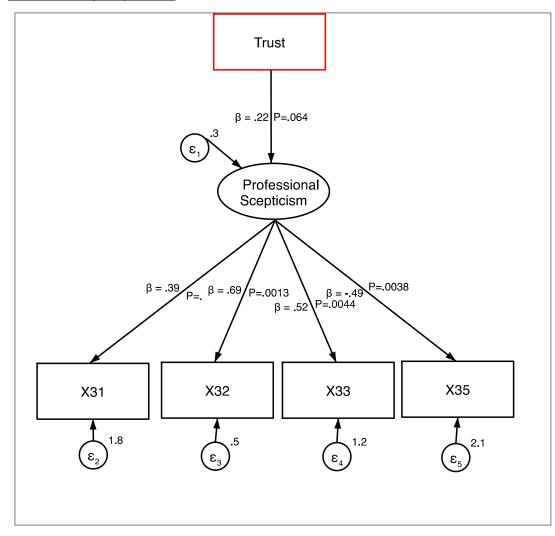
## 9.2.3 Scepticism (H3-Auditor's professional scepticism is positively related to management's trust in the auditor)

Figure 9-3 Comparison of the path diagrams for professional scepticism

#### The auditor's perspective



#### The client's perspective



The pillars of the framework for scepticism gave much simpler results. Although there are similarities, one finds a notable distinction in the perception of the auditor's reputation in terms of scepticism between the two views.

#### 9.2.3.1 Auditors' views

The fact that the auditor usually notices inconsistencies, that auditors do not like to decide until presented with all relevant facts and a questioning attitude were all found to have a direct positive relationship with professional <u>scepticism</u>. On closure evaluation the results indicated that auditors perceive that they can give reasonable but not absolute assurance and tend to adopt a neutral perspective to scepticism. Although they also reveal that ensuring that auditors do not decide until they have looked at all readily available significantly influences professional scepticism. The beta value and *p*-value for the relationship between <u>reputation</u> and scepticism was positive. The replies received from the auditors reflected that collecting information about the client through networks and in particular applying objectivity in professional judgment positively influences professional scepticism and trust. The latter link between reputation and professional scepticism did not emerge in the replies from the clients.

#### 9.2.3.2 Clients' views

Most of the factors linked to professional scepticism in the auditors' replies were reciprocated in the clients' replies. Therefore, the fact that the auditor usually notices inconsistencies, that auditors do not like to decide until presented with all relevant facts and a questioning attitude were all found to increase the perception of <a href="scepticism">scepticism</a>. On the other hand the statement; 'it is understandable that the auditor has doubts about the accuracy of the information received from clients', was found to be negatively related to the latent factor of scepticism. The latter finding is interesting in view of the fact that clients do not feel that doubt in their ability to prepare accurate information induces increased professional scepticism.

#### 9.2.4 A divergence of opinions

As described in the research findings and analysis chapters 6 and 7, diverging opinions resulted when the statistical tests were performed (refer to Table 9-1).

A number of factors were eliminated from the model due to the following reasons:

- The variable affected Cronbach's alpha negatively, or
- The variable was linked to one single factor, or
- The factor resulted in a path coefficient greater than 0.10, or
- The iterative estimation failed to converge and variables were not key to the model (as detailed in section 7.4.1 The basis of the path diagram).

This statistical findings above indicates that:

- If the variables affected Cronbach's alpha negatively then they have a low correlation and are not valid determinants of trust,
- When variables are linked to a sinlge factor they are usually associated with a low relaibility (Wanous et al., 1997), and
- In cases when the path coefficient was greater than 0.10 or resulted in an error path, it was deemed not to be statistically significant.

The interpretation of these statistical results are evaluated in the following paragraphs and present interesting findings, consequently aiding in addressing the expectations gap between the two groups.

|     |                                  |  | <u>Auditor</u> |                   |                       |                | <u>Client</u> |                   |                       |                |
|-----|----------------------------------|--|----------------|-------------------|-----------------------|----------------|---------------|-------------------|-----------------------|----------------|
|     | <u>Latent</u><br><u>Variable</u> |  | <u>Mean</u>    |                   | Standard<br>Deviation | <u>β value</u> | Mean          |                   | Standard<br>Deviation | <u>β value</u> |
| X1  | Service<br>Quality               | It is realistic to expect prompt rescheduling of missed deadlines  | n/a            |                   | n/a                   | n/a            | 2.32          | Agree             | 0.11                  | 0.41***        |
| X12 | Service<br>Quality               | Auditors should offer other assurance services besides the audit of historical information                               | 2.62           | Agree somewhat    | 0.11                  | 0.23**         | n/a           |                   | n/a                   | n/a            |
| X16 | Service<br>Quality               | It is important that the audit partner has high ethical standards.   | 1.18           | Strongly<br>Agree | 0.04                  | 0.52***        | n/a           |                   | n/a                   | n/a            |
| X19 | Ethical<br>Behaviour             | The auditor should never take risks, irrespective of how small the risk might be.  | 2.74           | Agree<br>somewhat | 0.12                  | 0.46***        | n/a           |                   | n/a                   | n/a            |
| X21 | Service<br>Quality               | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities              | 1.3            | Strongly<br>Agree | 0.04                  | 0.56***        | n/a           |                   | n/a                   | n/a            |
| X22 | Service<br>Quality               | The auditor's code of ethics gives guidance and a sense of direction.  | n/a            |                   | n/a                   | n/a            | 1.94          | Agree             | 0.07                  | 0.35**         |
| X25 | Professional<br>Scepticism       | It is understandable that an auditor collects information about clients through their professional and personal networks | 2.47           | Agree             | 0.1                   | 0.49***        | n/a           |                   | n/a                   | n/a            |
| X26 | Professional Scepticism          | The audit firm is always objective in its judgements.  | 2.13           | Agree             | 0.08                  | 0.65*          | n/a           |                   | n/a                   | n/a            |
| X35 | Professional<br>Scepticism       | It is understandable that the auditor has doubts about the accuracy of the information received from clients             | n/a            |                   | n/a                   | n/a            | 4.35          | Undecided         | 0.13                  | -0.49***       |
| X36 | Service<br>Quality               | To be sceptical is the same as distrust  | n/a            |                   | n/a                   | n/a            | 3.24          | Agree somewhat    | 0.13                  | 0.66***        |
| X38 | Ethical<br>Behaviour             | Increased control over the profession will increase trust in the auditor   | n/a            |                   | n/a                   | n/a            | 2.78          | Agree<br>somewhat | 0.12                  | 0.50***        |

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)
(n/a refers to instances where the factor was eliminated from the model by either the auditor or the client)

Table 9-1 Diverging opinions

#### 9.2.4.1 Auditors' vs clients' views

As summarised in Table 9-1 above there are a number of observable variables, wherein auditors are of the opinion that these variables have a bearing on trust, however clients do not concur with their opinion. The results of 'X12' 'Auditors should offer other assurance services besides the audit of historical information', can be interpreted that the auditors' perceptions correspond with the studies of Knechel *et al.* (2012), who stated that the provision of non-audit services could result in positive knowledge spill-overs, thus increasing service quality. The clients' viewpoint reconciles with that of Duff (2004) and Kilgore *et al.* (2011), who identified that the provision of non-audit services does not affect audit quality. Concluding therefore that although offering non-audit services aids in the performance of an audit due to knowledge spill-over and might be requested by clients, the latter do not perceive it to increase trust in the auditor as much as other factors.

'X16' propounds that 'it is important that the audit partner has high ethical standards'. Findings from previous research and statements by regulatory bodies claim that ethics in exercising the profession is of the essence. It therefore comes as a surprise that clients did not give this variable its due importance in contributing to an increase in trust. This finding possibly indicates that more research needs to be performed to identify the reason of this finding. When clients were as asked whether 'The auditor should never take risks. irrespective of how small the risk might be' 'X19', this variable scored the lowest alpha at 0.782<sup>7</sup> (compared to an overall of 0.7781) of all the variables. In other words, clients felt that this attribute has the least correlation to trust. On the other hand at a positive beta value of 0.46, auditors are of the view that it has a relationship with ethical behaviour and thus increases trust. The difference of opinions with respect to risk is probably due to the fact that the client does not fully understand the weight of the auditor's responsibility in taking risks and the resultant link to trust, whereas the auditor is cognisant of the interplay between time, cost and giving reasonable assurance. It therefore

<sup>7</sup> Refer to **Table 6-9** 

transpires that this is another area that needs further study since these initial findings possibly indicate that the client does not fully comprehend the fact that auditors can only give reasonable assurance.

As propounded by the Economic Efficiency Model (Satava et al., 2006), auditors strongly agree that they should perform their work to the best of their ability if they want client's trust. However clients do not feel that this factor increases trust in the auditor as much as the other factors presented in the questionnaire. Replies by the auditors resulted in a positive beta value with service quality, thus recognising that this is a requirement leads to an increase in service quality and trust. Clients however do not link it to an increase in trust as much as the other factors. The performance of a job to the utmost of one's ability goes without saying, clients might feel that this is such an obvious statement that it is a duty rather than a quality required to increase trust. 'X25' focuses on whether 'It is understandable that an auditor collects information about clients through their professional and personal networks'. Auditors are of the view that collecting client information aids professional scepticism and increases trust. On the other hand, this is not perceived to contribute as much towards trust by the clients. Cosserat and Rodda (2009) state that the scope of client evaluation is ultimately to assess whether the entity's management can be trusted. This is important if the auditor is intent on performing a trustworthy audit however clients do not share this view. The latter might feel that the auditor is impinging on their personal life, possibly stemming from Malta's small and closed community.

The fact that clients did not link the statement that 'the audit firm is always objective in its judgements' X26' as much as the other factors to trust, reflects that clients are of the view that the auditor is not applying the required professional scepticism sufficiently. This corroborates with other findings as elaborated section 7.5.3.4.48 where it was found that other replies by clients indicated that they are not so confident in the independence applied by the auditors.

<sup>8</sup> Refer to 7.5.3.4.4 The client's perception of auditor independence

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#### 9.2.4.2 Clients' vs Auditors' views

The previous section looked at the variables deemed to lead to trust by the auditors but not by the clients. The following is an analysis of the variables that clients perceive are linked to trust but not by the auditors.

'X1' refers to whether the factor 'it is realistic to expect prompt rescheduling of missed deadlines' increases trust. This statement is derived from the concept of flexibility and clients are of the opinion that this is linked to service quality and trust. This view is shared by findings in the research conducted by Carcello *et al.* (1992), where financial controllers stated that it is important that auditors are responsive to their needs. Auditors did not concur to this view, since when a Varimax Rotation was performed this factor was only linked to a single factor, indicating that the factor's reliability is not so strong and was therefore eliminated. This finding is reminiscent of the differing opinions of the groups in terms of service, where clients want the auditor to be flexible to their workload, whereas on the other hand the auditor does not feel that flexibility is a measure of trust. The latter finding is perhaps due to circumstances beyond their control where work pressure does not allow auditors to be flexible.

The Code of Ethics includes regulations that have to be abided by all professional accountants in Malta, however when asked whether 'The auditor's code of ethics gives guidance and a sense of direction' 'X22', responses by the auditors did not give it the same importance as other factors in relation to trust, whereas clients were of a differing opinion. Clients are therefore in agreement with Pflugrath *et al.*'s (2007), who stated that the code of ethics, coupled with training and exposure improves the quality of professional judgement. Furthermore, clients feel that this is positively related to capability and service quality. This difference in opinion implies that clients perceive that regulations are needed if auditors are to be trusted in terms of ethical conduct, however auditors might perceive that a person's integrity is more important.

'X35' 'It is understandable that the auditor has doubts about the accuracy of the information received from clients', addresses an aspect of professional scepticism focusing on the reliability of the client's representations. This is an inverted scale statement and auditors' replies did not link it to trust. The results

of this observable factor, as perceived by the clients inversely link it to professional scepticism with a negative beta value of -0.49. Therefore an increase in doubts held in the client's abilities does not lead to an increase but rather a decrease in professional scepticism. Therefore clients do not feel that doubting their ability to provide accurate information leads to an increase in the professional scepticism applied. 'X36' 'To be sceptical is the same as distrust' is also an inverted scale statement. Auditors did not perceive that 'X36' is a strong variable that influences trust. As discussed in Chapter 29, although trust and distrust are two distinct concepts they are also related and therefore cannot be seen in isolation (Vlarr *et al.*, 2007; Lewicki *et al.*, 1998; Flores & Solomon, 1998). Therefore scepticism is not distrust but a neutral or presumptive stance towards collecting audit evidence (Nelson, 2009). On the other hand, clients are of the opinion that a certain measure of distrust is an aspect of service quality. This finding further signifies that clients are possibly not fully aware of the implication of scepticism.

Clients are of the opinion that 'increased control over the profession will increase trust in the auditor' 'X38', increases the perceived public interest and decreases unethical behaviour, whereas the auditors do not concur. This finding corresponds to earlier findings, further confirming that clients are in favour of regulations if auditors are to be trusted in terms of ethics. This is an important finding as it might indicate that overall clients are not fully confident of the auditor's ethical capabilities, and that monitoring over the profession should increase.

This section presented a summary of the divergent opinions in the observable indicators. The following section will focus on the client attributes that influence trust in the auditor.

#### 9.3 Client Attributes as components of trust in auditing

This study also set out to identify which client attributes are necessary components of trust to enable a useful audit. A number of client attributes have been identified as factors leading to an increase in trust. These are that:

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<sup>&</sup>lt;sup>9</sup> 2.4.2 Trust. Distrust and Mutual Trust

- Management should give adequate support to the audit team so that they do their job well,
- Client management should contribute more than required during the audit,
- It is important that clients respond quickly to the auditor's queries, and
- Clients should keep their records accurately.

However the following was inversely linked to an increase in ethical behaviour.

 Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.

It is notable to point out that both parties on average assign the same level of importance to the attributes that a client should posses, although the statistical *t*-tests resulted in some differences as discussed in further detail in 6.4.4 Discussing the mean values of the client attributes.

(Sig.:\*\*\*<.01, \*\*<.05, \*<.10)

|     |  | <u>Auditor</u>                   |             |                   |                       | Client         |                                   |             |                   |                       |                |
|-----|--|----------------------------------|-------------|-------------------|-----------------------|----------------|-----------------------------------|-------------|-------------------|-----------------------|----------------|
|     |  | <u>Latent</u><br><u>Variable</u> | <u>Mean</u> |                   | Standard<br>Deviation | <u>β value</u> | <u>Latent</u><br><u>Variable</u>  | <u>Mean</u> |                   | Standard<br>Deviation | <u>β value</u> |
| X5  | Management should give adequate support to the audit team so that they do their job well             | Service<br>Quality               | 1.35        | Strongly<br>Agree | 0.42                  | 0.49***        | Service<br>Quality/<br>Reputation | 1.51        | Strongly<br>Agree | 0.06                  | 0.53***        |
| Х9  | Client management should contribute more than required during the audit                              | Service<br>Quality               | 3.38        | Agree<br>somewhat | 0.12                  | 0.46***        | Service<br>Quality/<br>Reputation | 3.25        | Agree<br>somewhat | 0.12                  | 0.54***        |
| X11 | It is important that clients respond quickly to the auditor's queries                                | Service<br>Quality               | 1.62        | Agree             | 0.05                  | 0.68***        | Service<br>Quality/<br>Reputation | 2.01        | Agree             | 0.06                  | 0.41***        |
| X18 | Clients should keep their records accurately   | Service<br>Quality               | 1.3         | Strongly<br>Agree | 0.04                  | 0.61***        | Service<br>Quality/<br>Reputation | 1.38        | Strongly<br>Agree | 0.04                  | 0.44***        |
| X24 | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action | Ethical<br>Behaviour             | 3.7         | Undecided         | 0.15                  | -0.82***       | Ethical<br>Behaviour              | 4.08        | Undecided         | 0.15                  | 0.86***        |

Table 9-2 Analysis of client attributes

These findings clearly signify that both auditors and clients believe that cooperation by clients is a must to ensure service quality. However they are also of the opinion that this does not necessitate that clients exceed the norm in their zeal. In terms of integrity auditors are of the opinion that volatility in ethical decision making decreases ethical behaviour, likewise clients believe that it increase unethical behaviour. These identified client attributes are not only a significant finding in themselves, but also prove that a relationship based on trust between the auditor and the client is needed if the auditor is to be trusted to contribute towards a useful audit.

#### 9.4 Conclusion

This chapter brought together the similarities and differences in the models as well as highlighted the client attributes that lead to trust in the auditor. A number of innovative points and areas for further research were also identified and these will be discussed in more detail in the following chapter. The following chapter will summarise the overall findings and conclusions reached in this study, concluding with recommendations and areas of further research suggested.

## CHAPTER 10 – FINAL REFLECTIONS, AREAS FOR FURTHER RESEARCH AND CONCLUSIONS

#### 10.1 Introduction

The economy needs to trust the auditors whose job is to ensure that the work performed by others is accurate, adequate and appropriate (Neu, 1991). As described by Boland (1982), without trust and public confidence the auditing profession has nothing to offer. In order to fulfil this important role the auditor has to have strong technical and analytical skills, be honest and ethical, apply the necessary scepticism and communicate with management, amongst other qualities (FRC, 2016; IFAC, 2014). This research set out to develop a framework for auditing by focusing on the factors of ability, benevolence and integrity, cited by Mayer *et al.* (1995) as determinants of a relationship of trust. Consequently, conceptualising a framework of trust-based auditing based on the factors of professional scepticism, service quality and ethical behaviour. This chapter summarises all the findings of this research addressing the main research questions that this study set out to verify:

#### A. Can trust in the auditor produce a useful audit?

### B. What client attributes are necessary components of trust to enable a useful audit?

It therefore commences with the key findings of this research, followed by a summary of areas encountered in the course of this research that require further separate study. The limitations encountered in this research are outlined, followed by some reflections and recommendations. A few closing thoughts conclude this chapter and this research.

#### 10.2 Summary and key findings

The research philosophy adopted was of a positivist nature based on two main concepts. The first concept is that reality can be explained by explanatory/ independent variables and dependent variables. The other is that knowledge

can be built on observation and experience by constructing complex statistical models using large volumes of data, thus further testing relationships and formulating hypothesis (Major, 2017). A rough model was therefore conceived, also applying an element of interpretation in determining certain choices. The scope of the model was to identify the observable indicators that lead to the latent unobservable, intermediate variables, ultimately assessing the perceptions of auditors and clients of what are the prerequisites leading to trust in a useful audit. The intermediate variables were also used to discover the necessary client attributes required to foster a relationship of trust. The research methodology was of a quantitative nature. The population consisted of auditors and their clients within the Maltese economy and questionnaires were sent out between July 2015 and July 2016. The questionnaire was structured in two parts: the first part focused on demographic information, and the second part included 42 questions, addressing service quality, ethical disposition, professional scepticism, trust and increased audit usefulness. All answers to the questions in the second part of the questionnaire had to be graded on a Likert scale. 176 responses were received from the auditors from a population of 531, resulting in a response rate of 33%. 1,140 questionnaires were sent by post to companies and 155 responses were received, giving a response rate of 14%. Consequently, the response rate of the

This research has shown that auditors believe that a trust-based audit relies on optimum service quality, professional scepticism and ethical behavior, ultimately resulting in a useful audit. However clients' perception is somewhat different, where clients perceive that service quality is an intermediate variable inversely related to reputation, which is also inversely related to trust. Therefore the perception is that service quality substitutes reputation and reputation is relied upon in the absence of trust. Furthermore it was agreed by both parties that professional scepticism and ethical behavior leads to trust in the auditor, and that a useful audit leads to trust. Another interesting finding are the client attributes that were identified as necessary components of trust to enable a useful audit. The significance of this finding has been further highlighted by the

questionnaires received was comparable to the norm.

fact that both groups positively linked these attributes to trust. A more comprehensive summary of the findings has been elaborated in the paragraphs below.

#### 10.2.1 The framework as perceived by the auditors

Findings of this study revealed that auditors perceive that service quality, ethical behaviour and professional scepticism equally contribute positively to an increase trust. Although it was noted that the observable indicators influence service quality, professional scepticism and ethical behaviour by a higher amount than the ultimate increase of the latter in trust.

SEM identified that service quality is the most extensive pillar of the model, since respondents linked the highest number of observable indicators to this latent variable. Empathy towards the client, offering other services, trust in management, reliability, capability, and an element of interpersonal trust are all attributes of service quality perceived to increase trust. A number of observable factors have been linked directly to ethical behavior, these included the importance of the competence of the auditor as an individual, aversion to risk taking and the responsibility to act in the public interest. Factors relating to a relativistic attitude towards ethics have been linked to trust, although an element of conventional ethical thinking was noted. This was substantiated further in the relationship emanating between the importance of auditor's independence and a non-relativistic ethical stance. Finally, the link between professional scepticism and trust also gave interesting results where it transpired that auditors perceived that reputation is an important prerequisite for professional scepticism and ultimately trust. Results identified that clients' reputation as well as an auditor's reputation of objectivity is linked to scepticism. This finding is contrary to other findings such as that by Hurtt (2010), who identified that reputation was not a determining factor of scepticism. These results are analysed in more detail in the following sub-sections.

#### 10.2.1.1 Service Quality

This study identified that the following attributes are linked to service quality and ultimately trust.

#### 10.2.1.1.1 Empathy, other services, trust in management

Auditors perceive that having the client's interest at heart is important in a relationship, however it is still important to keep some distance. They are cognisant of the importance of independence and believe that they should be sceptical when they approach an audit. They are positive about offering other services however believe that this should be done with caution. Results also indicated that Maltese auditors believe that management can be trusted but with an element of presumptive doubt, assuming that management's responses include a level of dishonesty or bias in certain cases. These findings all indicate that auditors are aware that all these factors increase service quality however they are also conscious of the importance of independence and believe that they should be sceptical when they approach an audit, if they want to increase trust by the client.

#### **10.2.1.1.2** Reliability

Reliability is perceived to positively affect service quality. Additionally, auditors feel strongly about the importance of collaboration by management if the job is to be done well, testifying that the relationship between the auditor and the client is more than just a one-off transactional exchange of the financial statements for the audit opinion. They are of the opinion that internal reviews of files ensure that audited financial statements are reliable and necessary if audit quality is to be maintained. This contrasts to the findings of Kilgore *et al.*'s (2014) study, where results indicated that auditors do not see any benefit arising from this review, when one considers the time and cost it involves. Furthermore, auditors are of the opinion that clients should keep their records accurately and that they should perform their work to the best of their ability.

#### 10.2.1.1.3 Capability

Ethical capability, prompt cooperation from clients, and spontaneous contribution are all factors deemed as necessary attributes contributing to service quality. Maltese auditors are of the opinion that increased education will aid auditors in their ethical decision-making. They also agree that clients should respond quickly to their queries. One can possibly extend this cooperation to

companies scheduling their activities at a time when it is convenient to the external auditors (Holt *et al.*, 2012). On the other hand, although positively related to capability responses imply that auditors believe more contribution than requested by client management contributes less to service quality than prompt cooperation. All these attributes of capability were linked to a positive influence over service quality.

#### 10.2.1.1.4 Interpersonal trust

Auditors perceive that although communication is important, the audit partner does not need to get heavily involved. This perhaps can be attributed to the fact that in practice audit partner involvement depends on time, resources and riskiness of the client. They are also of the view that caring and giving individualised attention increases service quality and ultimately trust, but a certain distance should be maintained due to possible independence issues. Auditors are of the opinion that regular meetings held between the client and the audit partner positively affect interpersonal trust, recognizing that regular communication is an important part of the audit (IAASB - ISA 260, 2016). Furthermore, they believe that the 'tone at the top' is essential and that therefore the partner should maintain high ethical standards if service quality and trust is to be upheld. However findings revealed that giving personal attention to the audit client increases interpersonal trust and service quality more than the partner's individual ethical stance.

#### 10.2.1.2 Ethical Behaviour

#### 10.2.1.2.1 Ethical behavior and practicality

This research identified that acting in an ethical manner is perceived to be a personal trait, which nevertheless requires the support of the organization. Contemporaneously respondents were cautious in ascertaining that they should never take risks, as it is practicably impossible. Respondents agree that acting in the public interest positively influences ethical behaviour however with reservations, this was interpreted as due to the fact that as perceived by the auditors primarily the audit report is addressed to the shareholders. These factors together with the resultant positive influence over trust imply that

Maltese auditors do not hold idealistic notions of ethics but value ethics in a more practical way.

#### 10.2.1.2.2 Non - relativistic attitude towards ethics

Holistically findings revealed that a non-relativistic attitude towards ethics increases the perception of ethical behaviour. Maltese auditors believe that clients are conscious of their ethical responsibilities but they are still cautious in placing their trust. When evaluating ethical decision-making, auditors are of the opinion that volatility in ethical decision-making decreases a non-relativistic ethical stance. This could be interpreted that they value interpersonal trust and social approval, and consideration of society's rules of what is right or wrong (Trevino, 1992).

#### 10.2.1.2.3 Independence and ethics

A prerequisite of an auditor's ethical conduct is independence. The Code of Ethics (2016) mandates that it is in the public interest that auditors are independent of their audit clients. Respondents' answers revealed that an increase in the perception of overrating an auditor's independence is supported by a positive beta value in the link to independence; therefore overrating independence leads to a substantial increase in independence. Additionally if client retention is a determining factor in the auditor's ultimate decisions then this leads to a decrease in independence.

#### 10.2.1.3 Professional Scepticism

#### 10.2.1.3.1 Character traits and scepticism

Overall results reflect that auditors perceive that they should apply professional scepticism to increase trust in the audit however there are limitations, which they cannot control. Auditors feel that they usually notice inconsistencies in explanations, but are also conscious that they can give reasonable but not absolute assurance. They are of the view that they should not decide until they have looked at all of the readily available information as a predecessor of professional scepticism. Additionally auditors are of the opinion that frequently

questioning things that they see or hear positively influences professional scepticism.

#### 10.2.1.3.2 Reputation and Scepticism

Respondents agree that collecting information about clients through their professional and personal networks, positively influences professional scepticism. This is possible due to the small business community in Malta, where everyone knows each other and collecting information about others is the norm. On the other hand it contradicts conclusions by Hurtt (2010) who identified that reputation was not a determining factor of scepticism. Additionally findings revealed that auditors recognise that objectivity is of the essence in the application of professional scepticism.

#### 10.2.2 Clients' perception of a trust-based audit

As mentioned earlier in this chapter, results of this research revealed that service quality is inversely linked to reputation, which is also inversely linked to trust. This substantiates the theory propounded by Firmstone & Morrison (2000), who stated that reputation is a willingness by a party to trust the other in the absence of actual knowledge concerning their capacity. As perceived by clients this is the most extensive pillar in terms of observable variables, where most of the statements presented were ultimately linked to the latent variable of service quality. The distinction between the firm's and the team's abilities, as well as the concept of distrust were directly linked to reputation and ultimately trust. All the other attributes were then directly or indirectly linked to service quality, where clients' responses indicated that service quality by the auditors is important as it is referred to in the absence of reputation. Specifically clients' replies signified that they value efforts by the auditor to maintain quality in terms of internal reviews, monitoring and training and adherence to ethical standards. Concurrently, they are also in favour of their own commitment towards the auditors. On the other hand, they do not favour unethical behaviour, which was inversely related to trust. A conventional level of integrity by the auditor was preferred. Simultaneously an increase in the importance of the role of the auditor in the public interest was perceived to decrease the perception of

unethical behaviour. However clients' replies resulted in an unexpected finding where an increase in the overall independence granted to the auditor leads to an increase in unethical behaviour. This is a worrying finding since it is possibly related to a negative perception held by clients with respect to the auditors.

#### 10.2.2.1 Reputation

# **10.2.2.1.1 Expertise, competence, scepticism and their link to reputation** Results revealed that relying on the audit firm's rather than the audit team's expertise and competence decreases the need to rely on reputation. On the other hand they feel that an element of presumptive scepticism in the auditor's work is necessary and positively influences reputation.

## 10.2.2.1.2 Responsiveness in the relationship between the auditor and the client

Clients are of the view that in the relationship between the auditor and the client, flexibility and altruism by the auditor is important, as this increases service quality. When queried whether they should contribute more than required during the audit and its resultant relationship to reputation, clients were still positively inclined but to a lesser extent, perhaps because they still feel an element distrust in sharing more than is requested. All factors linked to service quality were found to have a positive influence over it, although service quality was then found to have a negative relationship with reputation. This finding means that clients are of the opinion that they either place reliance on service quality or reputation when determining whether to trust an auditor. Although it is important to note that the combined effect of service quality and the intermediate factor of reputation ultimately has a positive influence over trust.

#### 10.2.2.1.3 Client support and monitoring increase service quality

Responses showed that clients believe in supporting their auditors, creating a medium where management not only responds to queries by the auditor but also helps the auditor to the best of its abilities. Thus conforming to previous findings (Rennie *et al.*, 2010; Fontaine & Pilotti, 2012), that an effective and efficient audit requires the support of management. Clients are of the view that

an internal review of files is a significant prerequisite of service quality. This on the other hand contrasts to previous findings by Kilgore *et al.* (2014) who identified that the audit quality assurance review was ranked as the lowest attribute increasing audit quality. Consequently clients believe that their support and adequate monitoring of the auditors' files is important to ensure service quality.

#### 10.2.2.1.4 Partner involvement and service quality

Audit partner involvement, giving the client individual attention and holding regular meetings are deemed to be important by clients, with a positive influence on service quality. Although results also imply that they are conscious that there is a limit to the closeness of the relationship. This can be attributed to a number of factors mainly linked to time availability by the partner, the cost of partner participation and the conscious requirement that the partner has to be independent and should ensure professional scepticism. Clients are of the view that this does not deter from the importance of giving individualised attention, where caring for customers is perceived to be a prerequisite to service quality.

## 10.2.2.1.5 The importance of the auditor's ethical capability and the client's competency in record keeping

Clients' responses revealed a strong positive link between ethical training for the auditor and capability. They are also of the opinion that the code of ethics gives guidance and direction. The importance given to this factor might be due to the recent financial accounting scandals, where auditors' ethical conduct fell into disrepute. Thus deducing that respondents are cognisant of these dpast experiences and therefore feel that a restoration of trust in the auditor's capabilities requires auditors to observe the ethical code of conduct.

Furthermore, clients extend the importance of competency in terms of record keeping to them as well. The relationship between this intermediate variable of capability and service quality is positive although it is also the lowest when compared to customer focus and client support and monitoring. This signifies that in terms of service quality clients value personal attention more than

capability. This result might imply an expectation gap experienced by clients in their relationship with the auditor, which could merit further research.

#### 10.2.2.2 Ethical Behaviour

#### 10.2.2.2.1 Adaptability and ethical decision-making

On evaluation of the results with respect to the observable factors influencing ethical behaviour, replies refer to what attributes are not favoured by clients with respect to auditors' behaviour. Therefore a more specific labeling of this latent variable would be 'unethical behaviour' versus trust. When clients were asked whether auditors should vary their decision-making depending on the circumstances their replies positively influenced unethical behaviour. This coincides with other research which identifies that an auditor's ethical reasoning is at the conventional level. When asked whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action, this was found to positively contribute to the negative relationship of the intermediate variable of ethical behaviour ("unethical behaviour") with trust. Concluding therefore that clients do not favour volatility in ethical decision-making.

#### 10.2.2.2.2 The client's perception of auditor independence

The findings give interesting and somewhat disconcerting results in this respect. Clients' responses revealed that customer retention and trust in management negatively influence auditor's actions. Although they believe that that overrating the concept of independence positively influences independence. Overall results revealed that independence has a positive relationship with unethical behaviour. This signifies that an increase in the perception of independence positively influences the perception of unethical behaviour by the auditor. Unfortunately this means that as perceived by clients the coveted independence given to the auditor is being abused leading to unethical behaviour.

#### 10.2.2.2.3 The importance of public interest

The replies given by the clients resulted in a significant positive relationship between scepticism and public interest. They agree that the auditor's role is in the public interest. Simultaneously respondents are in favour of increased regulation leading to an increase in public interest. Nonetheless overall the relationship of public interest with unethical behaviour is a negative. Therefore indicating that an increase in actions by the auditor in the interest of the public leads to a decrease in the perception of unethical behaviour.

#### 10.2.2.3 Professional Scepticism

## 10.2.2.3.1 Clients' perception of the auditor's ability to apply professional scepticism

Clients perceive that that noting inconsistencies, looking at all the available information and questioning things they hear or see increases professional scepticism. On the other hand when the statement directly addressed whether the auditor should doubt clients' representations, they negatively linked this factor to professional scepticism. Therefore clients are of the opinion that doubting their ability to provide accurate information is not a prerogative of scepticism but rather leads to a decrease in the professional scepticism applied.

#### 10.2.3 Audit Usefulness

Increased audit usefulness measures the importance of the auditor's report to stakeholders. This part of the study addressed the second part of the conceptual framework in this research, focusing on the explanation of post-adoption behaviour. The influence of audit usefulness on trust is marginally higher as perceived by clients, when compared to the auditors. This is replicated in the underlying observable factors in their relationship with audit usefulness. Although overall the perceptions of both parties are similar where audit usefulness is believed to increase trust. Findings revealed that auditors and clients perceive an audit to be useful not only because it is required by law but also because it increases the company's creditworthiness and the review performed by auditors identifies bias, fraud or error, thus increasing trust. This is important since it indicates that an audit of financial statements is still relevant, although it was also noted that the beta value between audit usefulness and trust was lower than other values resulting in this research. Therefore this result has to be interpreted with caution.

#### 10.2.4 Comparison of the models and mean results

The analysis above and the more detailed analysis in chapters 7, 8 and 9 clearly indicate that although the SEM models largely support the hypothesis they also have their differences. Furthermore, it also transpired that grouping is not the only difference in the model for auditors and clients, but also in the mean values attributed to the observable factors.

#### 10.2.4.1 Differences and similarities in the models

Auditors and clients perceive that there is a relationship between trust and service quality, ethical behaviour and professional scepticism, although in different ways as is apparent in the previous sections. As perceived by both groups the pillar of service quality is the most extensive, since research results identified that a number of factors are correlated to each other with the commonality of service quality linking them together, albeit in different ways. The first notable finding is in the client's model where service quality is inversely linked to reputation and the latter is inversely related to trust. Therefore in the case of the auditors, holistically all observable factors positively influence service quality ultimately positively influencing trust. Whereas with respect to clients their perception is that there is a trade off between reputation and trust, and service quality and trust. Although overall, trust is positively influenced by an increase in the combined effects of service quality and reputation. Findings further revealed that auditors perceive that ethical conduct increases trust, whereas clients linked negative ethical attributes to unethical behavior which was inversely linked to trust. Therefore in absolute terms both parties are in agreement. Another difference in the ethical component was with respect to independence. Auditors expressed the view that independence is inversely related to a relativistic ethical stance. Whereas clients are of the view that an increase in the overall independence granted to the auditor leads to an increase in unethical behaviour, possibly related to a negative perception held by clients with respect to the auditors. Finally both parties perceive that professional scepticism increases trust. Although a difference was noted in the models where auditors were of the opinion that reputation affects professional scepticism.

A number of factors were eliminated from the respective models, due to a divergence of opinions. It resulted that there are a number of observable variables, wherein auditors are of the opinion that these variables have a bearing on trust, however clients do not concur with their opinion. On the other hand some variables were linked to trust by clients but not by the auditors. The two groups also shared opinions regarding some of the observable indicators.

#### 10.2.4.5 Discussing the rating of factors of audit usefulness

Findings identified that when asked whether the function of audited financial statements is to increase the creditworthiness of a company, auditors were undecided as to whether audited financial statements increases creditworthiness although clients were more confident. One of the functions of auditing is to provide feedback to managers who sometimes unintentionally bias their decision-making to show better results. Auditors' as well as clients' responses in this respect were that they somewhat agree. Therefore both parties feel that to a certain extent the audit reduces the risk of management bias. Both groups replied that they somewhat agree that discovering a breach or a misstatement is a measure of usefulness of the audit although the perception of clients is stronger than that of the auditors. This result ties with previous findings that auditor's point of view reflects the reality of reasonable assurance, whereas clients are not so clear on this bounded rationality. Holistically these replies are not reflective of a strong positive opinion in the auditor's capabilities. Therefore it is necessary that if the auditing profession is to remain relevant these findings have to be followed up and acted upon.

#### 10.2.5 Client attributes that foster a relationship based on trust

The output of an audited set of financial statements is the result of a mutual engagement by the auditors and their clients, based on a relationship of trust and cooperation. The objective to succeed by both parties necessitates a reciprocal relationship of trust. Client management have the in-depth knowledge of the organisation they lead and are in a position to provide the auditor with the information required. Therefore as stated by Rennie *et al.* (2010), the auditor has no option but to trust members of client management to some degree.

Previous findings drawn from studies in general management and auditing, were used to identify management attributes found to foster an agency relationship based on trust. These attributes fall into the two main broad categories of openness of communication and demonstration of concern (Whitener *et al.*, 1998; Rennie *et al.*, 2010; Williams, 2001). These characteristics and the supporting research have been used to identify a number of attributes, which were presented to the respondents. The following attributes were agreed upon by both groups as determinants of trust, albeit in various degrees, but unanimously agreed in terms of sentiment and influence over service quality and ethical behaviour.

- Auditors and clients strongly agree that management should give adequate support to the audit team so that they do their job well, and that clients should keep their records accurately,
- Both groups agree that it is important that clients respond quickly to the auditor's queries,
- Furthermore both groups agree somewhat that client management should contribute more than required during the audit, and
- Finally they are undecided as to whether a lie is judged to be moral or immoral depending upon the circumstances surrounding the action.

#### 10.3 Areas for further research

The scope of this research was to address the research questions and the hypothesis as described in the initial chapter. As outlined in the previous chapters as well as earlier in this chapter, this has been attained. As happens in every research undertaken, particularly in areas where the topic is either vast or not researched enough, other focused areas for further research emerge. The following have been noted whilst performing this study, which indicate that further specific research into the topic is required.

Findings revealed that whereas auditors link offering other services
besides the audit of historical information to service quality, clients did
not agree. A previous study by Knechel et al. (2012), identified that the
provision of non-audit services could result in positive knowledge

spillovers. Whilst Duff (2004) and Kilgore *et al.* (2011) identified that the provision of non-audit services does not affect audit quality. In the light of the differences found in this study and differing opinions found in previous studies it would be beneficial if this topic is researched further and the detailed underlying reasons behind such differences are investigated.

- Another factor that was not perceived to contribute to trust in the auditor, by the clients, is that the audit partner has high ethical standards. This is rather an unusual finding since in other instances, clients linked ethical training and the importance of the code of ethics to trust. Therefore further research needs to be performed in this respect.
- Clients were of the opinion that auditors' risk aversion also has a very
  low correlation to trust and the factor that the auditor should never take
  risks was excluded from the model. Whereas auditors are of the view
  that it has a relationship to ethical behaviour and trust. It therefore
  transpires that this is another area that needs further study since these
  initial findings possibly indicate that the clients do not fully comprehend
  the fact that auditors can only give reasonable assurance.
- Another finding related to the above is that auditors link objectivity in their
  judgements to professional scepticism and trust however clients are not
  of the same opinion. Other instances also indicated that clients are not
  as confident as the auditor in the independence applied by the auditor.
  This finding warrants further study as objectivity and independence are of
  the essence in auditing a set of financial statements.
- The study revealed that clients link scepticism to distrust, and are of the opinion that distrust influences service quality, whereas auditors do not share this point of view. However as described by Nelson (2009), scepticism is not distrust but a neutral or presumptive stance adopted towards collecting audit evidence. It would be interesting to delve deeper into why client are of the opinion that this is the case as it might indicate that they do not fully understand the concept of professional scepticism which is a vital element in the performance of an audit.

• The findings revealed that clients perceive that an increase in the perception of independence granted to auditors increases the perception of unethical behaviour. Unfortunately this means that clients are of the view that the coveted independence given to the auditor is being abused leading to unethical behaviour. This is certainly a worrying finding as independence is the crux of this profession therefore further research should be undertake to evaluate the specific cause of this perception.

The points mentioned above outline the areas identified during the study that require further research. The next section looks at some of the limitations encountered in conducting this research.

#### 10.4 Limitations of the study

Although all measures were undertaken to ensure a thorough evaluation of the topics, as in any other research certain limitations were still encountered. Questions were asked to auditors and their clients in the form of a questionnaire. The use of the questionnaire is debated by some critics who state that it restricts the depth of the answers and also argue that the replies are subject to the interretation of the researcher (Rattary & Jones, 2007). A drawback when collecting perceptions is also that differences/ similarities might be due to either different evaluations or different understanding of each and every attribute. However, in practical terms, it is still important to know what the different groups focus on rather than knowing the cause of the differences (Carcello et al., 1992). Furthermore an extensive literature review and distribution to a population with a high level of understanding limited the negative effect of this research instrument. The response rate to the questionnaire was of 33% and 14% from the auditors and the clients respectively, and a higher response rate is always favoured. However this is debatable since all measures available were taken to improve the response rate as much as possible and the results achieved are considered to be comparable to the norm.

Initially a dyadic approach was contemplated, but due to ethical, legal and methodological restraints as described in more detail in Chapter 3, this could

not be performed. The dyadic approach would have enabled the evaluation of a corresponding relationship between two individuals. However the study was still performed by matching the audit firms' replies to their respective audit clients, therefore it was still of a dyadic nature giving valid and distinctive results. The response rate and the demogrpahic information of the respondents all indicate that the results of the sample can be generalised to the rest of the population, although restricted to Maltese auditors and their clients. However even though this study and these conclusions focus on Malta, given that our economy is a modern growing economy similar to those of other European countries certain concusions are also applicable to other European countries. This study focuses on the trust between the auditor and the client in situations where a full-scope financial statement audit is performed. However as described in the literature review, at the time of writing this thesis, only Malta and Cyprus require all companies to undergo a financial statement audit. It is therefore possible that the last two remaining countries having this requirement will no longer mandate it in the long term. Additionally due to the changing nature of the financial environment and increased reliance on information technology in accounting, other assurance services are increasingly being required from auditors. These two aspects have not been specifically considered in their own merit, nonetheless as described in more detail in the conclusion to this chapter, although these are initial steps in the progression of the profession the basic concepts that emanate from this research are still considered to be applicable.

Finally, the conceptual framework was set by looking at a specific aspect of the problem. Criteria taken into consideration prior to chosing the research topic included (Fisher, 2010): motivation and relevance, durability, breath of research questions, topic adequacy, access, micro-politics, risk and security and resources. A focused approach is necessary if a conceptual framework is to clarify an issue and dientify a solution. This study therefore excludes other aspects which ultimately increase trust in the auditor such as technical quality. However the scope of this research was to focus on a specific aspect of the problem with the ultimate aim of identifying a solution.

#### 10.5.1 A brief recapitulation

Auditors believe that service quality, independence and professional scepticism positively influence trust in equal measures. Collaboration from management, internal reviews of files, communication with management and ethical behavior at high levels are viewed as prerequisites of service quality and ultimately trust. Responses received revealed that auditors do not hold idealistic notions of ethics but value ethics in a more practical way. Their focus was mainly concerned on maintaining relations with clients at a conventional level of integrity and that overrating independence increases the perceived independence. Auditors are also of the view that an increase in professional scepticism leads to an increase in trust. However they were cautious in their views as they recognize that regardless of the level of professional scepticism applied they can only give reasonable assurance.

The framework of trust-based auditing as perceived by clients also holds albeit with a difference where service quality is inversely related to reputation and the latter is inversely related to trust. Therefore reputation is referred to in the absence of trust and likewise service quality is perceived to be important, as it is considered to be a substitute of reputation. Although overall, trust is positively influenced by an increase in the combined effects of service quality and reputation. Findings revealed that the audit team's attributes and distrust increase an auditor's reputation. Whilst flexibility and altruism by the auditor, increases service quality. Clients agree with the auditors that communication and regular internal review of files increases service quality. It also followed that reasonable partner involvement was also viewed favourably. Another notable finding is that clients believe that ethical training increases capability. Clients do not favour volatility in ethical decision-making. Unfortunately they are also of the opinion that giving more independence to the auditors leads to unethical behaviour. Overall clients perceive that upholding public interest fosters ethical behaviour. Clients' responses confirmed that noting inconsistencies, looking at all the available information and questioning things they hear or see increases

professional scepticism. On the other hand an interesting fact emerged where clients felt that doubting their representations negatively influences professional scepticism.

With respect to the latter part of the model, auditors' and clients' responses revealed that all factors presented increased the perceived usefulness and ultimately trust. This research also set out to identify which client attributes are necessary components of trust and a useful audit. This is a significant finding since both parties agree on the attributes presented. So much so that both groups confirmed that management support and quick response to the auditors' queries by the client not only aids in the performance of an audit, but also increases trust.

## 10.5.2 Promoting trust, the framework and the individual observable factors of service quality, ethical behaviour, professional scepticism and audit usefulness

The role of the auditor originated to safeguard the interest of the principals who were not wholly involved in the management of the company. The scope of the auditor was thereafter extended to safeguard the interest of the public at large and therefore the statutory audit was introduced. These roles have over time been challenged due to a number of reasons, including the idea of 'think small first' for small and medium-sized entities and the number of financial scandals that have been brought into light with the involvement of the auditors. These have therefore also led many to question trust and usefulness of the audit.

#### 10.5.2.1 The model and its contribution to theory

This study set out to identify what fosters trust addressing a gap in current research. As detailed above, the conceptual framework has been validated, albeit with some differences in the overall perspectives. This research identified that a number of practices presently adopted by auditors are perceived to increase trust. However it also revealed a major distinction between the two models. Auditors are of the opinion that the three pillars of service quality, ethical behaviour and professional scepticism positively influence trust, however clients' opinion differs. They look at reputation as a substitute of trust and

service quality a substitute for reputation. Furthermore they expressed the view that increasing independence given to the auditors will increase unethical behaviour. This is a grave and important finding as unfortunately it reveals that although clients agree that a number of actions pursued by the auditor increase service quality and independence, they do not believe that these increase trust in the audit.

This research also identified that a number of factors were perceived by the clients to influence trust, whereas the auditors did not share their view and statistical tests excluded them from the model. Clients value flexibility in rescheduling missed deadlines, give importance to the code of ethics, they feel that doubting the reliability of their representations decreases professional scepticism, link scepticism and distrust and feel that this increases service quality, and finally that increased control over the profession will increase trust. All these factors therefore contribute to the expectations gap between the auditors and the clients.

On the other hand it is important to mention that both auditors and clients agree that there are a number of management attributes, which positively influence trust. This study identified that the auditors' work in terms of increasing the creditworthiness of the financial statements and identifying bias or error all contribute towards audit usefulness and trust. However findings also revealed that although the observable factors significantly increased usefulness, the influence of audit usefulness over trust is of a significantly lesser amount.

#### 10.5.2.2 The observable factors

This research identified that there are a number of factors that were agreed upon by both parties in terms of construct rating. These included the importance of ethical training for accountancy students, regular communication between clients and management and the importance of individual attention, as well as the fact that a conventional level of ethical behaviour is preferred. However there are other factors, which were not agreed upon by both groups. Minor differences were noticed in terms of partner involvement, internal reviews of files, audit team ability, perception of information gathering and identification of bias or error. Differences were more accentuated when considering the level of

altruism by the auditor, sceptical attitudes towards the client, public interest, auditor's independence, client retention, auditor's competence, trust in management and the function of the audit to increase creditworthiness.

These findings should consequently encourage all interested parties to promote the factors that are agreed upon and investigate further the cause of the differences, if trust is to be maintained. Therefore it is important that auditors, regulators, academics and other stakeholders who believe in the importance of the profession, put their heads together and identify what the clients and the public at large really want from the auditors. The following are some recommendations.

#### 10.5.2.3 Recommendations to auditors, regulators and academics

Findings identified that the expectations gap between the auditors and the clients is still present in Malta. Differences in the model indicate that clients perceive that auditors' reputation does not increase trust and this is accentuated further by the finding that clients are of the opinion that independence increases unethical behaviour. It also transpired that the influence of audit usefulness on trust is not so strong. If auditors want to remain relevant then these issues have to be addressed urgently, to ensure the continued relevance of the profession and in the public interest. Importance should be given to the attributes identified by this study that increase trust, namely increase actions leading to ethical behaviour and professional scepticism, and actions, attributes and qualities that improve service quality. Auditors also have to find ways to increase trust through increased audit usefulness.

As revealed in the findings, clients favour a conventional way of ethical behaviour, where the auditor is not focused on client retention, is somewhat wary of trusting management and should act in the interest of the public. These are the elements that the auditors should seek to address in their actions.

Another factor that was identified to increase ethical behaviour is an increase in control over the profession. Auditors were until recently: "largely autonomous when acting professionally and self-regulating as a group" (Brien, 1998, p. 391),

however as identified by the findings, it transpires that we have lost this ability therefore if the profession wants to increase trust then control by the regulators must increase. Local regulators should carry out more inspections to ensure that audit quality is maintained. Controls should not only focus on the technical abilities of the audit firms but prominence given to ethical behaviour; ensuring that firms adhere to the code of ethics and that support is given when members of the audit team are faced with ethical dilemmas.

Auditors should mandate that their work practices should focus on attributes perceived to lead to a sceptical attitude and positively influencing trust.

Therefore increasing actions by the auditors to note inconsistencies, look at all the available information and question things they hear or see, rather than doubting clients' representations which was negatively linked to professional scepticism. The IAESB (2018, p.1) issued guidance in this respect which addresses the issues identified in this study, auditors have to: "maintain a questioning mindset and critically evaluate evidence; not be a cynic; be aware of time pressure; and become more aware of our situation". Further stating that education in critical skills should be promoted as it also has a vital role in increasing professional scepticism.

Focusing on actions that increase service quality and reputation have also been identified as positively influencing trust. A closer look at the variables indicates that clients favour personal attention, where audit team expertise and competence are coupled with the audit partner's focus in ensuring the client's best interest. Auditors should therefore reconsider the personal element, which is so important and not rely solely on the reputation of their firms. It is also notable that clients called for more control over internal reviews on a selection of files. Therefore auditors have to increase practices, which ensure that quality is adhered to and possibly find ways to promote these practices with their clients.

Clients and auditors linked ethical training to service quality and are of the opinion that ethical training has a strong positive influence on capability and service quality when compared to other factors. This is a cue to regulators and the local university, as it indicates that the public at large is calling for better

ethical education. Findings by Tomas (2012) identified that education has a beneficial effect on ethical decision-making. These findings bring to the fore that education needs to change. Ethics has to be given its due importance as much as technical ability, where appropriate practical as well as technical training is given to students so that they are more conscious of their public role in society. Regulators should also contribute to ensure that adequate education is given to students and ensure that practicing auditors continue their ethical training. This can perhaps be aided by imposing more controls, and in collaboration with the University of Malta, ensure that practicing auditors are required to attend a number of compulsory continued professional education hours in ethical training.

Finally regulators should consider whether the audit is actually achieving its' purpose as the issue of a compulsory audit might be a contributing factor towards a decrease in the link between usefulness and trust. Malta and Cyprus in the EU, are the only two countries which still require all companies to audit their financial statements regardless of their size. Findings in this study are perhaps a sign that this practice should change. There are a number of opportunities, which require the expertise and knowledge of the auditor, such as assurance required for limited reviews. If a tax audit or limited review is required rather than a full scope audit, this might be an indication that the law should change. A tax review or limited review is a less comprehensive and more focused audit. As identified in the study, the audit is still considered to be useful. Therefore even if the law is changed, then it does not necessarily mean that clients will not require the services of the auditor, but perceptions will change. Additionally there are other services that an auditor can offer, which are not presently required since a full scope audit is mandatory. These services are of a more focused or limited nature and include: assurance engagements other than audits or reviews of historical financial information, examination of prospective financial information, compilation engagements, and others (IFAC, 2016). The recommendations above give much food for thought, however resilience will not help the profession and the public. Measures above identified what the auditors and the regulators can do, however academics also have a role to

play. More should be done by academics in terms of further study not only with respect to the further research identified above, but most importantly to address the differences in opinions as well as to highlight the positive aspects. It is proposed that the same study is conducted in different scenarios and countries, and repeated locally within a few years. Furthermore regulators, auditors and academics could use this study to promote further the elements of service quality, ethical behaviour and professional scepticism, if they want the relationship between the auditors and the clients to prosper.

#### 10.6 The way forward

This chapter outlined the findings, resultant areas for further research and also reflected upon some significant findings and their relationship to trust. Although the scope of this thesis was not to delve into the concept of information technology, ignoring its effect on auditing would be tantamount to ignoring the elephant in the room. The advancements in information technology will introduce new challenges and opportunities to auditors. Auditors therefore have to embrace these advancements, but this does not mean that it has to be done to the detriment of the basic principles. Likewise the findings of this research will still be applicable, where it has been identified that trust is influenced by service quality, reputation, ethical behaviour and professional scepticism. The large amount of data and the increase in efficiency will increase the relevance and importance of this framework.

I believe that the conclusions reached give interesting insights and also include a number of issues, which require further thought whether in research or in immediate actions, that need to be taken by the profession. Academics and practitioners should work together if they do not want this profession to end. I believe my work is not complete, as this thesis has encouraged me to perform further research on trust and this profession that I love. Researching the topic of trust has given me an insight of the importance of this concept in the auditing profession, in all professions, as well as in our daily lives.

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# **Appendices**

### **Appendix A Copies of the questionnaire**

## Appendix A.1 Questionnaire sent to auditors

## Introduction and Purpose of the Questionnaire

I am a PhD student with the **University of Leicester** and am presently collecting data for my thesis. The scope of my research is to identify a framework for auditing based on trust, by focusing on service quality, ethics and scepticism.

I kindly ask for your assistance by completing the attached questionnaire and return the completed questionnaire in the enclosed self-addressed stamped envelope. The total completion time should be approximately 10 minutes.

Thank you for your cooperation and support.

Michelle Spiteri Bailey

Michelle

Dipl. (Shipp. Econ. & Op.) Cambridge Academy of Transport,

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### **Participant Consent Form**

#### **BACKGROUND INFORMATION**

Title: Conceptualising a framework for trust-based auditing focusing on service quality, ethics and scepticism.

**Details of Participation:** You are kindly requested to complete the attached questionnaire containing statements focusing on service quality, ethics and scepticism.

Debriefing Statement: The basis of an audit is a relationship of trust, whereby the auditor is entrusted, by the shareholders, with the responsibility to provide an independent check on the information provided by management. Concurrently shareholders assign management the responsibility for preparing valid and useful financial information as well as engaging the auditors. Therefore this study focuses on measuring the trust held by management in the auditors. Since the audit is also performed to provide an independent check on management, this research will also endeavour to discover the components that are considered as relevant management attributes to foster a relationship based on trust. The study will ultimately contribute towards a better and updated understanding of the importance of this relationship towards achieving an audit of high quality, by comparing the views held by both parties.

#### **CONSENT STATEMENT:**

- 1. I understand that my participation is voluntary and that I can withdraw unconditionally at any time from taking part in this online study.
- 2. I understand the Debriefing Statement, which explains the reasons for this study.
- 3. My data are to be held confidentially and only the researcher, her associates, and supervisor will have access to them.
- 4. My data will be kept in a locked cabinet for a period of at least five years after the appearance of any associated publications. Any aggregate data (e.g. spreadsheets) will be kept in electronic form for up to five years after which time they will be deleted.
- 5. My coded data may also be used in other related studies. The names and other identifying details will not be shared with anyone.
- 6. The overall findings may be submitted for publication in a scientific journal, or presented at scientific conferences.
- 7. This study will take approximately 12 months to complete.
- 8. I will be able to obtain general information about the results of this research from the researcher.

I am giving my consent for data to be used for the outlined purposes of the present study.

All questions that I have about the research have been satisfactorily answered

| G | GENERAL INFORMATION                     |         |         |          |              |  |  |  |  |
|---|---|---------|---------|----------|--------------|--|--|--|--|
|   |   | Male    | Female  |          |              |  |  |  |  |
| 1 | Gender                                  |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
| 2 | Age                                     | 18-25   | 26-35   | 36-45    | 45 and above |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
| _ | What is your position at the            |         |         |          |              |  |  |  |  |
| 3 | company?                                |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
|   | Director/ partner                       |         |         |          |              |  |  |  |  |
|   | Manager                                 |         |         |          |              |  |  |  |  |
|   | Audit Senior                            |         |         |          |              |  |  |  |  |
|   | Other                                   |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
| 1 | Years of experience in audit &          |         |         |          |              |  |  |  |  |
| 4 | assurance                               | 1-3 yrs | 4-5 yrs | 5-10 yrs | Over 10 yrs  |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
| 5 | Type of audit firm                      |         |         |          |              |  |  |  |  |
| Ü | rype or addit illili                    |         |         |          |              |  |  |  |  |
|   | Big 4 Audit Firm (Deloitte, EY, KPMG,   | PwC)    |         |          |              |  |  |  |  |
|   | Non-Big 4 Audit Firm                    |         |         |          |              |  |  |  |  |
|   | Sole Practitioner                       |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
|   |   |         |         |          |              |  |  |  |  |
| 6 | Main Client Activity                    |         |         |          |              |  |  |  |  |
|   | (You can tick more than one box)        |         |         |          |              |  |  |  |  |
|   | Man fact day                            |         |         |          |              |  |  |  |  |
|   | Manufacturing                           |         |         |          |              |  |  |  |  |
|   | Wholesale & Retail Construction         |         |         |          |              |  |  |  |  |
|   | Tourism                                 |         |         |          |              |  |  |  |  |
|   | Finance & Banking                       |         |         |          |              |  |  |  |  |
|   | i manoe & banking                       |         |         |          |              |  |  |  |  |
|   | Other (Please specify):                 |         |         |          |              |  |  |  |  |
|   | • |         |         |          |              |  |  |  |  |

| Please consider your recent interaction. Please indicate how much the following features characterize the relationship with and perceptions of your auditor/ audit firm. If you agree to the statement tick 'Strongly Agree' if you do not agree to a statement tick 'Strongly Disagree'. If your feelings are less strong, please tick one of the boxes in the middle. |  | Strongly Agree | Agree | Agree Somewhat | Undecided | Disagree Somewhat | Disagree | Strongly Disagree |
|---|--|----------------|-------|----------------|-----------|-------------------|----------|-------------------|
| 1   | It is realistic to expect prompt rescheduling of missed deadlines.   |                |       |                |           |                   |          |                   |
| 2   | The auditor should strive to create minimum disruption as practically possible during the audit.                         |                |       |                |           |                   |          |                   |
| 3   | Management should provide the auditor with the relevant information without being asked for it.                          |                |       |                |           |                   |          |                   |
| 4   | The audit partner should be actively involved in the engagement.   |                |       |                |           |                   |          |                   |
| 5   | Management should give adequate support to the audit team so that they do their job well.                                |                |       |                |           |                   |          |                   |
| 6   | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures. |                |       |                |           |                   |          |                   |
| 7   | It is important that the audit partner gives the client individual attention.  |                |       |                |           |                   |          |                   |
| 8   | The audit partner should have the client's best interests at heart.  |                |       |                |           |                   |          |                   |
| 9   | The client should contribute more than required during the audit.  |                |       |                |           |                   |          |                   |
| 10  | It is important that the regular meetings are held between the client & the audit partner.                               |                |       |                |           |                   |          |                   |
| 11  | It is important that clients respond quickly to the auditor's queries.   |                |       |                |           |                   |          |                   |
| 12  | Auditors should offer other assurance services besides the audit of historical information.                              |                |       |                |           |                   |          |                   |
| 13  | The audit firm operates to the highest standards of integrity.   |                |       |                |           |                   |          |                   |
| 14  | The expertise & competence of the audit firm is more important than the expertise of the audit team.                     |                |       |                |           |                   |          |                   |
| 15  | The auditor should be sceptical on whether the client will stick to his word.  |                |       |                |           |                   |          |                   |
| 16  | It is important that the audit partner has high ethical standards.   |                |       |                |           |                   |          |                   |
| 17  | Ethical training should be mandatory for audit and accountancy students.   |                |       |                |           |                   |          |                   |
| 18  | Clients should keep their records accurately.  |                |       |                |           |                   |          |                   |
| 19  | The auditor should never take risks, irrespective of how small the risk might be.  |                |       |                |           |                   |          |                   |
| 20  | The auditor's responsibility is to act in the public interest.   |                |       |                |           |                   | _        |                   |
| 21  | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities.             |                |       |                |           |                   |          |                   |
| 22  | The auditor's code of ethics gives guidance and a sense of direction.  |                |       |                |           |                   |          |                   |
| 23  | The auditor's ethical decision making varies from one situation to another.  |                |       |                |           |                   |          |                   |
| 24  | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.                    |                |       |                |           |                   |          |                   |

| Please consider your recent interaction. Please indicate how much the following features characterize the relationship with and perceptions of your auditor/ audit firm. If you agree to the statement tick 'Strongly Agree' if you do not agree to a statement tick 'Strongly Disagree'. If your feelings are less strong, please tick one of the boxes in the middle. |  | Strongly Agree | Agree | Agree Somewhat | Undecided | Disagree Somewhat | Disagree | Strongly Disagree |
|---|--|----------------|-------|----------------|-----------|-------------------|----------|-------------------|
| 25  | It is understandable that an auditor collects information about clients through their professional and personal networks.                      |                |       |                |           |                   |          |                   |
| 26  | The audit firm is always objective in its judgements.  |                |       |                |           |                   |          |                   |
| 27  | Larger audit firms can provide better service in terms of expertise.   |                |       |                |           |                   |          |                   |
| 28  | The importance of the auditor's independence is overrated.   |                |       |                |           |                   |          |                   |
| 29  | A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity.                          |                |       |                |           |                   |          |                   |
| 30  | Client retention are a determining factor in the auditor's ultimate decisions  |                |       |                |           |                   |          |                   |
| 31  | The auditor usually notices inconsistencies in explanations.   |                |       |                |           |                   |          |                   |
| 32  | The auditor does not like to decide until she/he has looked at all of the readily available information.                                       |                |       |                |           |                   |          |                   |
| 33  | The auditor frequently questions things that he/she sees or hears.   |                |       |                |           |                   |          |                   |
| 34  | Professional scepticism depends on past experiences.   |                |       |                |           |                   |          |                   |
| 35  | It is understandable that the auditor has doubts about the accuracy of the information received from clients.                                  |                |       |                |           |                   |          |                   |
| 36  | To be sceptical is the same as distrust.   |                |       |                |           |                   |          |                   |
| 37  | In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk.                                  |                |       |                |           |                   |          |                   |
| 38  | Increased control over the profession will increase trust in the auditor.  |                |       |                |           |                   |          |                   |
| 39  | Auditors have to trust management to be able to perform the audit.   |                |       |                |           |                   |          |                   |
| 40  | The function of audited financial statements is to increase the creditworthiness of a company.   |                |       |                |           |                   |          |                   |
| 41  | The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results. |                |       |                |           |                   |          |                   |
| 42  | Discovering a breach or a misstatement is a measure of usefulness of the audit.  |                |       |                |           |                   |          |                   |

### Appendix A.2 Questionnaire sent to clients

## **Introduction and Purpose of the Questionnaire**

I am a PhD student with the **University of Leicester** and am presently collecting data for my thesis. The scope of my research is to identify a framework for auditing based on trust, by focusing on service quality, ethics and scepticism.

I kindly ask for your assistance by completing the attached questionnaire and return the completed questionnaire in the enclosed self-addressed stamped envelope. The total completion time should be approximately 10 minutes.

Thank you for your cooperation and support.

Michelle

Michelle Spiteri Bailey

Dipl. (Shipp. Econ. & Op.) Cambridge Academy of Transport, B.A. Hons. (Accty), CPA, MBA (Finance) Leicester

#### **Participant Consent Form**

#### **BACKGROUND INFORMATION**

Title: Conceptualising a framework for trust-based auditing focusing on service quality, ethics and scepticism.

**Details of Participation:** You are kindly requested to complete the attached questionnaire containing statements focusing on service quality, ethics and scepticism.

Debriefing Statement: The basis of an audit is a relationship of trust, whereby the auditor is entrusted, by the shareholders, with the responsibility to provide an independent check on the information provided by management. Concurrently shareholders assign management the responsibility for preparing valid and useful financial information as well as engaging the auditors. Therefore this study focuses on measuring the trust held by management in the auditors. Since the audit is also performed to provide an independent check on management, this research will also endeavour to discover the components that are considered as relevant management attributes to foster a relationship based on trust. The study will ultimately contribute towards a better and updated understanding of the importance of this relationship towards achieving an audit of high quality, by comparing the views held by both parties.

#### **CONSENT STATEMENT:**

- 1. I understand that my participation is voluntary and that I can withdraw unconditionally at any time from taking part in this online study.
- 2. I understand the Debriefing Statement, which explains the reasons for this study.
- 3. My data are to be held confidentially and only the researcher, her associates, and supervisor will have access to them.
- 4. My data will be kept in a locked cabinet for a period of at least five years after the appearance of any associated publications. Any aggregate data (e.g. spreadsheets) will be kept in electronic form for up to five years after which time they will be deleted.
- 5. My coded data may also be used in other related studies. The names and other identifying details will not be shared with anyone.
- 6. The overall findings may be submitted for publication in a scientific journal, or presented at scientific conferences.
- 7. This study will take approximately 12 months to complete.
- 8. I will be able to obtain general information about the results of this research from the researcher.

I am giving my consent for data to be used for the outlined purposes of the present study. All questions that I have about the research have been satisfactorily answered

#### **GENERAL INFORMATION**

|   |   | Male    | Female   |          |              |
|---|---|---------|----------|----------|--------------|
| 1 | Gender  |         |          |          |              |
|   |   |         |          |          |              |
| 2 | Age   | 18-25   | 26-35    | 36-45    | 45 and above |
|   |   |         |          |          |              |
| 3 | What is your position in the company? (You can tick more than one box – e., manager business you can tick share |         |          |          |              |
|   | Shareholder Director Financial Controller Financial Manager/ Accounts Executive Accountant                      |         |          |          |              |
|   | Other (Please specify):   |         |          |          |              |
| 4 | How long has the present audit firm serviced your company?  | 1-3 yrs | 4f-5 yrs | 5-10 yrs | Over 10 yrs  |

#### 5 Select the applicable company financial characteristics?

According to the latest audited accounts 
Total assets amounted to:

Total revenue was of:

Average number of employees employed by the company:

| Small                            | Medium-sized                          | Large                  |
|----------------------------------|---------------------------------------|------------------------|
| Does not<br>exceed<br>€4,000,000 | Between<br>€4,000,001<br>&€20,000,000 | Exceeds<br>€20,000,001 |
|                                  |                                       |                        |
| Does not<br>exceed<br>€8,000,000 | Between<br>€8,000,001<br>&€40,000,000 | Exceeds<br>€40,000,001 |
|                                  |                                       |                        |
| Does not exceed 50               | Between 50 & 250                      | Exceeds 250            |
|                                  |                                       |                        |

| mud<br>and<br>stat<br>stat | ase consider your recent interaction. Please indicate how ch the following features characterize the relationship with perceptions of your auditor/ audit firm. If you agree to the ement tick 'Strongly Agree' if you do not agree to a ement tick 'Strongly Disagree'. If your feelings are lessing, please tick one of the boxes in the middle. | Strongly Agree | Agree | Agree Somewhat | Undecided | Disagree<br>Somewhat | Disagree | Strongly Disagree |
|----------------------------|--|----------------|-------|----------------|-----------|----------------------|----------|-------------------|
| 1                          | It is realistic to expect prompt rescheduling of missed deadlines.   |                |       |                |           |                      |          |                   |
| 2                          | The auditor should strive to create minimum disruption as practically possible during the audit.   |                |       |                |           |                      |          |                   |
| 3                          | Management should provide the auditor with the relevant information without being asked for it.  |                |       |                |           |                      |          |                   |
| 4                          | The audit partner should be actively involved in the engagement.   |                |       |                |           |                      |          |                   |
| 5                          | Management should give adequate support to the audit team so that they do their job well.  |                |       |                |           |                      |          |                   |
| 6                          | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures.   |                |       |                |           |                      |          |                   |
| 7                          | It is important that the audit partner gives the client individual attention.  |                |       |                |           |                      |          |                   |
| 8                          | The audit partner should have the client's best interests at heart.  |                |       |                |           |                      |          |                   |
| 9                          | The client should contribute more than required during the audit.  |                |       |                |           |                      |          |                   |
| 10                         | It is important that the regular meetings are held between the client & the audit partner.   |                |       |                |           |                      |          |                   |
| 11                         | It is important that clients respond quickly to the auditor's queries.   |                |       |                |           |                      |          |                   |
| 12                         | Auditors should offer other assurance services besides the audit of historical information.  |                |       |                |           |                      |          |                   |
| 13                         | The audit firm operates to the highest standards of integrity.   |                |       |                |           |                      |          |                   |
| 14                         | The expertise & competence of the audit firm is more important than the expertise of the audit team.   |                |       |                |           |                      |          |                   |
| 15                         | The auditor should be sceptical on whether the client will stick to his word.  |                |       |                |           |                      |          |                   |
| 16                         | It is important that the audit partner has high ethical standards.   |                |       |                |           |                      |          |                   |
| 17                         | Ethical training should be mandatory for audit and accountancy students.   |                |       |                |           |                      |          |                   |
| 18                         | Clients should keep their records accurately.  |                |       |                |           |                      |          |                   |
| 19                         | The auditor should never take risks, irrespective of how small the risk might be.  |                |       |                |           |                      |          |                   |
| 20                         | The auditor's responsibility is to act in the public interest.   |                |       |                |           |                      |          |                   |
| 21                         | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities.   |                |       |                |           |                      |          |                   |
| 22                         | The auditor's code of ethics gives guidance and a sense of direction.  |                |       |                |           |                      |          |                   |
| 23                         | The auditor's ethical decision making varies from one situation to another.  |                |       |                |           |                      |          |                   |
| 24                         | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.  |                |       |                |           |                      |          |                   |

| mud<br>and<br>stat | ase consider your recent interaction. Please indicate how the following features characterize the relationship with perceptions of your auditor/ audit firm. If you agree to the ement tick 'Strongly Agree' if you do not agree to a ement tick 'Strongly Disagree'. If your feelings are lessing, please tick one of the boxes in the middle. | Strongly Agree | Agree | Agree Somewhat | Undecided | Disagree<br>Somewhat | Disagree | Strongly Disagree |
|--------------------|---|----------------|-------|----------------|-----------|----------------------|----------|-------------------|
| 25                 | It is understandable that an auditor collects information about clients through their professional and personal networks.   |                |       |                |           |                      |          |                   |
| 26                 | The audit firm is always objective in its judgements.   |                |       |                |           |                      |          |                   |
| 27                 | Larger audit firms can provide better service in terms of expertise.  |                |       |                |           |                      |          |                   |
| 28                 | The importance of the auditor's independence is overrated.  |                |       |                |           |                      |          |                   |
| 29                 | A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity.   |                |       |                |           |                      |          |                   |
| 30                 | Client retention are a determining factor in the auditor's ultimate decisions   |                |       |                |           |                      |          |                   |
| 31                 | The auditor usually notices inconsistencies in explanations.  |                |       |                |           |                      |          |                   |
| 32                 | The auditor does not like to decide until she/he has looked at all of the readily available information.  |                |       |                |           |                      |          |                   |
| 33                 | The auditor frequently questions things that he/she sees or hears.  |                |       |                |           |                      |          |                   |
| 34                 | Professional scepticism depends on past experiences.  |                |       |                |           |                      |          |                   |
| 35                 | It is understandable that the auditor has doubts about the accuracy of the information received from clients.   |                |       |                |           |                      |          |                   |
| 36                 | To be sceptical is the same as distrust.  |                |       |                |           |                      |          |                   |
| 37                 | In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk.   |                |       |                |           |                      |          |                   |
| 38                 | Increased control over the profession will increase trust in the auditor.   |                |       |                |           |                      |          |                   |
| 39                 | Auditors have to trust management to be able to perform the audit.  |                |       |                |           |                      |          |                   |
| 40                 | The function of audited financial statements is to increase the creditworthiness of a company.  |                |       |                |           |                      |          |                   |
| 41                 | The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results.  |                |       |                |           |                      |          |                   |
| 42                 | Discovering a breach or a misstatement is a measure of usefulness of the audit.   |                |       |                |           |                      |          |                   |

## Appendix B Statistical results for the development of model

## Appendix B.1 Statistical results for the auditors

## Appendix B.1.1 Initial overall Cronbach Alpha for the auditors

| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | ltem-test<br>correlation | Item-rest<br>correlation | Average<br>Inter-item<br>covariance | <u>Alpha</u> | Test for items with an alpha greater than the global alpha |
|-------------|------------|-------------|--------------------------|--------------------------|-------------------------------------|--------------|--|
| X1          | 171        | +           | 0.3302                   | 0.222                    | 0.0985                              | 0.6939       | FALSE  |
| X2          | 176        | +           | 0.1635                   | 0.0875                   | 0.1042                              | 0.7009       | TRUE   |
| X3          | 176        | +           | 0.308                    | 0.2058                   | 0.0993                              | 0.6945       | FALSE  |
| X4          | 175        | +           | 0.1746                   | 0.1109                   | 0.1041                              | 0.6997       | FALSE  |
| X5          | 176        | +           | 0.2003                   | 0.1624                   | 0.1043                              | 0.6981       | FALSE  |
| X6          | 176        | +           | 0.1839                   | 0.1333                   | 0.1042                              | 0.6988       | FALSE  |
| X7          | 176        | +           | 0.2023                   | 0.138                    | 0.1034                              | 0.6983       | FALSE  |
| X8          | 174        | +           | 0.4373                   | 0.3426                   | 0.0954                              | 0.6854       | FALSE  |
| X9          | 173        | +           | 0.5538                   | 0.4698                   | 0.0908                              | 0.6744       | FALSE  |
| X10         | 175        | +           | 0.4775                   | 0.4113                   | 0.0963                              | 0.6837       | FALSE  |
| X11         | 175        | +           | 0.2186                   | 0.1766                   | 0.1039                              | 0.6975       | FALSE  |
| X12         | 169        | +           | 0.2542                   | 0.1624                   | 0.1013                              | 0.6971       | FALSE  |
| X13         | 176        | +           | -0.0476                  | -0.0929                  | 0.1076                              | 0.7054       | TRUE   |
| X14         | 174        | +           | 0.334                    | 0.2224                   | 0.0987                              | 0.6943       | FALSE  |
| X15         | 175        | +           | 0.3494                   | 0.2574                   | 0.0984                              | 0.6911       | FALSE  |
| X16         | 176        | +           | 0.1331                   | 0.0998                   | 0.1053                              | 0.6999       | FALSE  |
| X17         | 176        | +           | 0.1723                   | 0.1212                   | 0.1044                              | 0.6991       | FALSE  |
| X18         | 176        | +           | 0.209                    | 0.1765                   | 0.1044                              | 0.6982       | FALSE  |
| X19         | 175        | +           | 0.2777                   | 0.1722                   | 0.1001                              | 0.6964       | FALSE  |
| X20         | 174        | +           | 0.3466                   | 0.2566                   | 0.0985                              | 0.6909       | FALSE  |
| X21         | 176        | +           | 0.1981                   | 0.1587                   | 0.1043                              | 0.6983       | FALSE  |
| X22         | 176        | +           | 0.0587                   | 0.0045                   | 0.1063                              | 0.7033       | TRUE   |
| X23         | 176        | -           | 0.4249                   | 0.3107                   | 0.0943                              | 0.6866       | FALSE  |
| X24         | 175        | -           | 0.4943                   | 0.3859                   | 0.0911                              | 0.6793       | FALSE  |
| X25         | 176        | +           | 0.3404                   | 0.2582                   | 0.0996                              | 0.6924       | FALSE  |
| X26         | 175        | +           | 0.2115                   | 0.1419                   | 0.1032                              | 0.6984       | FALSE  |
| X27         | 176        | +           | 0.2567                   | 0.1192                   | 0.1016                              | 0.7055       | TRUE   |
| X28         | 176        | -           | 0.3169                   | 0.1996                   | 0.0994                              | 0.6964       | FALSE  |
| X29         | 175        | +           | 0.1849                   | 0.0685                   | 0.1034                              | 0.7043       | TRUE   |
| X30         | 175        | +           | 0.3117                   | 0.1867                   | 0.0983                              | 0.6954       | FALSE  |
| X31         | 175        | +           | 0.361                    | 0.2808                   | 0.0991                              | 0.6907       | FALSE  |
| X32         | 175        | +           | 0.2121                   | 0.1561                   | 0.1036                              | 0.6979       | FALSE  |
| X33         | 175        | +           | 0.1819                   | 0.1062                   | 0.1040                              | 0.7006       | FALSE  |
| X34         | 176        | +           | 0.191                    | 0.0901                   | 0.1034                              | 0.7026       | TRUE   |
| X35         | 175        | -           | 0.4117                   | 0.33                     | 0.0963                              | 0.686        | FALSE  |
| X36         | 176        | -           | 0.3402                   | 0.2557                   | 0.0989                              | 0.6914       | FALSE  |
| X38         | 175        | +           | 0.3481                   | 0.2483                   | 0.0979                              | 0.6911       | FALSE  |
| X39         | 175        | +           | 0.3203                   | 0.2185                   | 0.0992                              | 0.6942       | FALSE  |
|             | Tes        | t scale     |                          |                          | 0.1007                              | 0.7009       |  |

Appendix B.1.2 Removing items with low correlation in auditors' questionnaire

| REMOV       | REMOVING 'X2' |             |                   |                   |                              |                  | REMO        | /ING 'X    | <u>(13'</u> |                  |                  |                              | 1                | REMO        | OVING      | 'X22'       |                  |                  |                              |                  |
|-------------|---------------|-------------|-------------------|-------------------|------------------------------|------------------|-------------|------------|-------------|------------------|------------------|------------------------------|------------------|-------------|------------|-------------|------------------|------------------|------------------------------|------------------|
|             |               |             | <u>ltem-test</u>  | Item-rest         | <u>Average</u><br>inter-item |                  |             |            |             | <u>Item-test</u> | Item-rest        | <u>Average</u><br>inter-item |                  |             |            |             | Item-test        | Item-rest        | <u>Average</u><br>inter-item |                  |
| <u>ltem</u> | <u>Obs</u>    | <u>Sign</u> | correlation       | correlation       | covariance                   | <u>Alpha</u>     | <u>Item</u> | <u>Obs</u> | <u>Sign</u> | correlation      | correlation      | covariance                   | <u>Alpha</u>     | <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | correlation      | correlation      | covariance                   | <u>Alpha</u>     |
|             |               |             |                   |                   |                              |                  |             |            |             |                  |                  |                              |                  |             |            |             |                  |                  |                              |                  |
| X1          | 171           | +           | 0.3328            | 0.2236            | 0.1019                       | 0.6938           | X1          | 171        | +           | 0.335            | 0.2264           | 0.1093                       | 0.6989           | X1          | 171        | +           | 0.3316           | 0.2226           | 0.1162                       | 0.7023           |
| X3          | 176           | +           | 0.3019            | 0.1983            | 0.1031                       | 0.6951           | X3          | 176        | +           | 0.3041           | 0.2011           | 0.1106                       | 0.7001           | X3          | 176        | +           | 0.3023           | 0.1991           | 0.1175                       | 0.7034           |
| X4          | 175           | +           | 0.1782            | 0.1138            | 0.1078                       | 0.6997           | X4          | 175        | +           | 0.1755           | 0.1113           | 0.1158                       | 0.7049           | X4          | 175        | +           | 0.1735           | 0.1092           | 0.1230                       | 0.708            |
| X5          | 176           | +           | 0.1946            | 0.1562            | 0.1081                       | 0.6984           | X5          | 176        | +           | 0.1851           | 0.1467           | 0.1161                       | 0.7037           | X5          | 176        | +           | 0.1774           | 0.1388           | 0.1235                       | 0.7069           |
| X6          | 176           | +           | 0.187             | 0.1359            | 0.1079                       | 0.6988           | X6          | 176        | +           | 0.1796           | 0.1285           | 0.1159                       | 0.7041           | X6          | 176        | +           | 0.1725           | 0.1214           | 0.1233                       | 0.7074           |
| X7          | 176           | +           | 0.1936            | 0.1284            | 0.1073                       | 0.6988           | X7          | 176        | +           | 0.192            | 0.1269           | 0.1152                       | 0.7039           | X7          | 176        | +           | 0.1908           | 0.1256           | 0.1224                       | 0.707            |
| X8          | 174           | +           | 0.4226            | 0.3257            | 0.0992                       | 0.6866           | X8          | 174        | +           | 0.4226           | 0.3261           | 0.1065                       | 0.6919           | X8          | 174        | +           | 0.4269           | 0.3307           | 0.1130                       | 0.6947           |
| X9          | 173           | +           | 0.5603            | 0.4763            | 0.0936                       | 0.6736           | X9          | 173        | +           | 0.5642           | 0.481            | 0.1005                       | 0.6788           | X9          | 173        | +           | 0.5686           | 0.4858           | 0.1065                       | 0.6817           |
| X10         | 175<br>475    | +           | 0.4856            | 0.4193            | 0.0994                       | 0.6831           | X10         | 175        | +           | 0.4862           | 0.4202           | 0.1068                       | 0.6885           | X10         | 175        | +           | 0.4829           | 0.4166           | 0.1135                       | 0.6918           |
| X11<br>X12  | 175           | +           | 0.2166            | 0.174             | 0.1076                       | 0.6977           | X11<br>X12  | 175        | +           | 0.2152           | 0.1728           | 0.1155                       | 0.7028<br>0.7034 | X11<br>X12  | 175        | +           | 0.2057           | 0.1631           | 0.1228<br>0.1201             | 0.7061           |
| X12         | 169<br>176    | +           | 0.2447<br>-0.0604 | 0.1517<br>-0.1061 | 0.1052<br>0.1116             | 0.6978<br>0.7059 | X12<br>X14  | 169<br>174 | +           | 0.238<br>0.3303  | 0.1451<br>0.2176 | 0.1131<br>0.1100             | 0.7034           | X12<br>X14  | 169<br>174 | +           | 0.2397<br>0.3325 | 0.1467<br>0.2199 | 0.1201                       | 0.7063<br>0.7031 |
| X13         | 176           | +           | 0.3314            | 0.2184            | 0.1116                       | 0.7059           | X14<br>X15  | 174        | +           | 0.353            | 0.2176           | 0.1100                       | 0.7001           | X14<br>X15  | 174        | +           | 0.3525           | 0.2199           | 0.1167                       | 0.7031           |
| X14<br>X15  | 175           | +           | 0.3514            | 0.2104            | 0.1023                       | 0.6948           | X15<br>X16  | 176        | +           | 0.333            | 0.2000           | 0.1093                       | 0.7054           | X15         | 175        | +           | 0.3019           | 0.2098           | 0.1136                       | 0.7085           |
| X15<br>X16  | 176           | +           | 0.3303            | 0.2373            | 0.1019                       | 0.7001           | X10<br>X17  | 176        | +           | 0.1165           | 0.0027           | 0.1172                       | 0.7034           | X10<br>X17  | 176        | +           | 0.113            | 0.0795           | 0.1243                       | 0.7083           |
| X10<br>X17  | 176           | +           | 0.127             | 0.0934            | 0.1091                       | 0.6992           | X17<br>X18  | 176        | +           | 0.100            | 0.1144           | 0.1163                       | 0.7043           | X17<br>X18  | 176        | +           | 0.1409           | 0.093            | 0.1237                       | 0.7062           |
| X17<br>X18  | 176           | +           | 0.1722            | 0.1203            | 0.1083                       | 0.6985           | X10         | 175        | +           | 0.1910           | 0.1774           | 0.1103                       | 0.7014           | X10         | 175        | +           | 0.1881           | 0.1332           | 0.1230                       | 0.7041           |
| X10<br>X19  | 175           | +           | 0.2811            | 0.1040            | 0.1005                       | 0.6963           | X20         | 173        | +           | 0.3392           | 0.1774           | 0.1111                       | 0.6967           | X19<br>X20  | 173        | +           | 0.23349          | 0.1022           | 0.1170                       | 0.7041           |
| X20         | 174           | +           | 0.3485            | 0.2577            | 0.1019                       | 0.6908           | X21         | 176        | +           | 0.1811           | 0.1412           | 0.1162                       | 0.7039           | X21         | 176        | +           | 0.1763           | 0.1362           | 0.1235                       | 0.7071           |
| X21         | 176           | +           | 0.1912            | 0.1513            | 0.1081                       | 0.6986           | X22         | 176        | +           | 0.0484           | -0.0062          | 0.1183                       | 0.7089           | X23         | 176        | · <u>-</u>  | 0.4353           | 0.3213           | 0.1109                       | 0.6944           |
| X22         | 176           | +           | 0.0546            | -0.0002           | 0.1101                       | 0.7036           | X23         | 176        | ·<br>-      | 0.4299           | 0.3153           | 0.1046                       | 0.6917           | X24         | 175        | _           | 0.5179           | 0.4116           | 0.1064                       | 0.6857           |
| X23         | 176           | _           | 0.4278            | 0.3126            | 0.0974                       | 0.6865           | X24         | 175        | _           | 0.5125           | 0.4054           | 0.1004                       | 0.6831           | X25         | 176        | +           | 0.346            | 0.2635           | 0.1174                       | 0.7005           |
| X24         | 175           | _           | 0.5045            | 0.3961            | 0.0938                       | 0.6783           | X25         | 176        | +           | 0.3445           | 0.262            | 0.1106                       | 0.6975           | X26         | 175        | +           | 0.1921           | 0.1215           | 0.1224                       | 0.7076           |
| X25         | 176           | +           | 0.3426            | 0.2596            | 0.1030                       | 0.6924           | X26         | 175        | +           | 0.2037           | 0.1334           | 0.1150                       | 0.704            | X27         | 176        | +           | 0.2458           | 0.1068           | 0.1205                       | 0.7152           |
| X26         | 175           | +           | 0.2083            | 0.1378            | 0.1070                       | 0.6987           | X27         | 176        | +           | 0.2456           | 0.1067           | 0.1135                       | 0.7121           | X28         | 176        | _           | 0.3329           | 0.216            | 0.1168                       | 0.7036           |
| X27         | 176           | +           | 0.2527            | 0.1136            | 0.1054                       | 0.7063           | X28         | 176        | -           | 0.3225           | 0.2053           | 0.1103                       | 0.7013           | X29         | 175        | +           | 0.1959           | 0.0788           | 0.1217                       | 0.7119           |
| X28         | 176           | _           | 0.3191            | 0.201             | 0.1029                       | 0.6964           | X29         | 175        | +           | 0.1958           | 0.079            | 0.1146                       | 0.7089           | X30         | 175        | +           | 0.3344           | 0.2095           | 0.1151                       | 0.7021           |
| X29         | 175           | +           | 0.1924            | 0.0751            | 0.1069                       | 0.704            | X30         | 175        | +           | 0.3274           | 0.2025           | 0.1086                       | 0.6996           | X31         | 175        | +           | 0.3663           | 0.2854           | 0.1169                       | 0.6989           |
| X30         | 175           | +           | 0.3179            | 0.1921            | 0.1015                       | 0.6951           | X31         | 175        | +           | 0.3692           | 0.2888           | 0.1099                       | 0.6956           | X32         | 175        | +           | 0.2059           | 0.1493           | 0.1225                       | 0.7064           |
| X31         | 175           | +           | 0.3633            | 0.2823            | 0.1025                       | 0.6907           | X32         | 175        | +           | 0.211            | 0.1547           | 0.1152                       | 0.7032           | X33         | 175        | +           | 0.1848           | 0.1086           | 0.1227                       | 0.7088           |
| X32         | 175           | +           | 0.2114            | 0.1548            | 0.1073                       | 0.6981           | X33         | 175        | +           | 0.1884           | 0.1124           | 0.1154                       | 0.7055           | X34         | 176        | +           | 0.2042           | 0.1029           | 0.1216                       | 0.7101           |
| X33         | 175           | +           | 0.1899            | 0.1136            | 0.1075                       | 0.7004           | X34         | 176        | +           | 0.1983           | 0.0969           | 0.1147                       | 0.7074           | X35         | 175        | -           | 0.4306           | 0.3495           | 0.1131                       | 0.6932           |
| X34         | 176           | +           | 0.1951            | 0.0933            | 0.1070                       | 0.7026           | X35         | 175        | -           | 0.4301           | 0.3488           | 0.1065                       | 0.6901           | X36         | 176        | -           | 0.349            | 0.2644           | 0.1165                       | 0.6993           |
| X35         | 175           | -           | 0.4259            | 0.3441            | 0.0993                       | 0.6851           | X36         | 176        | -           | 0.349            | 0.2644           | 0.1097                       | 0.6962           | X38         | 175        | +           | 0.3528           | 0.2525           | 0.1155                       | 0.6993           |
| X36         | 176           | -           | 0.3432            | 0.2579            | 0.1023                       | 0.6913           | X38         | 175        | +           | 0.3551           | 0.2551           | 0.1086                       | 0.696            | X39         | 175        | +           | 0.3092           | 0.2062           | 0.1175                       | 0.7036           |
| X38         | 175           | +           | 0.3555            | 0.2552            | 0.1011                       | 0.6907           | X39         | 175        | +           | 0.3112           | 0.2083           | 0.1106                       | 0.7003           |             |            |             |                  |                  |                              |                  |
| X39         | 175           | +           | 0.3129            | 0.2097            | 0.1029                       | 0.6949           |             |            |             |                  |                  |                              |                  |             |            |             |                  |                  |                              |                  |
|             | Test          | scale       |                   |                   | 0.1042                       | 0.7009           | Test        | scale      |             |                  |                  | 0.1116                       | 0.7059           | Test        | scale      |             |                  |                  | 0.1183                       | 0.7089           |

Appendix B.1.2 Removing items with low correlation in auditors' questionnaire (continued)

REMOVING 'X27'

REMOVING 'X29'

| REMOVING 'X27' |            |             |                    |                    |                   | n in audi        | _           | estion<br>VING 'X |             | (continuea)        |                    |                   | - 1          | REMO        | VING 'X    | <u>(34'</u> |                    |                    |                   |              |
|----------------|------------|-------------|--------------------|--------------------|-------------------|------------------|-------------|-------------------|-------------|--------------------|--------------------|-------------------|--------------|-------------|------------|-------------|--------------------|--------------------|-------------------|--------------|
|                |            |             |                    |                    | <u>Average</u>    |                  |             |                   |             |                    |                    | <u>Average</u>    |              |             |            |             |                    |                    | <u>Average</u>    |              |
|                |            |             | Item-test          | <u>Item-rest</u>   | inter-item        |                  |             |                   |             | Item-test          | <u>ltem-rest</u>   | inter-item        |              |             |            |             | Item-test          | <u>Item-rest</u>   | inter-item        |              |
| <u>ltem</u>    | <u>Obs</u> | <u>Sign</u> | <u>correlation</u> | <u>correlation</u> | <u>covariance</u> | <u>Alpha</u>     | <u>ltem</u> | <u>Obs</u>        | <u>Sign</u> | <u>correlation</u> | <u>correlation</u> | <u>covariance</u> | <u>Alpha</u> | <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | <u>correlation</u> | <u>correlation</u> | <u>covariance</u> | <u>Alpha</u> |
| X1             | 171        | +           | 0.3265             | 0.2141             | 0.1188            | 0.7099           | X1          | 171               | +           | 0.3284             | 0.2138             | 0.1217            | 0.7124       | X1          | 171        | +           | 0.325              | 0.2079             | 0.1251            | 0.7139       |
| Х3             | 176        | +           | 0.3146             | 0.2093             | 0.1194            | 0.7094           | Х3          | 176               | +           | 0.3143             | 0.2065             | 0.1223            | 0.7118       | Х3          | 176        | +           | 0.3133             | 0.2033             | 0.1256            | 0.713        |
| X4             | 175        | +           | 0.1667             | 0.1006             | 0.1257            | 0.7149           | X4          | 175               | +           | 0.1802             | 0.113              | 0.1285            | 0.7168       | X4          | 175        | +           | 0.1893             | 0.121              | 0.1318            | 0.7174       |
| X5             | 176        | +           | 0.185              | 0.1456             | 0.1259            | 0.7131           | X5          | 176               | +           | 0.2145             | 0.1746             | 0.1285            | 0.7145       | X5          | 176        | +           | 0.2164             | 0.1758             | 0.1319            | 0.7154       |
| X6             | 176        | +           | 0.1691             | 0.1165             | 0.1259            | 0.714            | X6          | 176               | +           | 0.1762             | 0.1227             | 0.1289            | 0.7161       | X6          | 176        | +           | 0.1807             | 0.1263             | 0.1323            | 0.7169       |
| X7             | 176        | +           | 0.1855             | 0.1186             | 0.1250            | 0.7139           | X7          | 176               | +           | 0.1894             | 0.1212             | 0.1281            | 0.7161       | X7          | 176        | +           | 0.2092             | 0.1401             | 0.1310            | 0.7162       |
| X8             | 174        | +           | 0.4229             | 0.3239             | 0.1154            | 0.702            | X8          | 174               | +           | 0.4373             | 0.3375             | 0.1175            | 0.7032       | X8          | 174        | +           | 0.4291             | 0.3264             | 0.1209            | 0.7049       |
| X9             | 173        | +           | 0.5848             | 0.5018             | 0.1078            | 0.6871           | X9          | 173               | +           | 0.6008             | 0.5181             | 0.1096            | 0.6878       | X9          | 173        | +           | 0.6032             | 0.5192             | 0.1121            | 0.6882       |
| X10            | 175        | +           | 0.4691             | 0.3999             | 0.1162            | 0.6993           | X10         | 175               | +           | 0.4693             | 0.3986             | 0.1190            | 0.7016       | X10         | 175        | +           | 0.4851             | 0.4143             | 0.1215            | 0.7014       |
| X11            | 175        | +           | 0.2215             | 0.1781             | 0.1251            | 0.7121           | X11         | 175               | +           | 0.2172             | 0.1727             | 0.1282            | 0.7144       | X11         | 175        | +           | 0.2296             | 0.1845             | 0.1315            | 0.7149       |
| X12            | 169        | +           | 0.2528             | 0.1579             | 0.1221            | 0.7123           | X12         | 169               | +           | 0.2679             | 0.1715             | 0.1244            | 0.7136       | X12         | 169        | +           | 0.265              | 0.1665             | 0.1279            | 0.7149       |
| X14            | 174        | +           | 0.3371             | 0.2221             | 0.1190            | 0.71             | X14         | 174               | +           | 0.3506             | 0.2341             | 0.1214            | 0.7116       | X14         | 174        | +           | 0.3552             | 0.2369             | 0.1244            | 0.7125       |
| X15            | 175        | +           | 0.3702             | 0.2762             | 0.1178            | 0.705            | X15         | 175               | +           | 0.3666             | 0.2701             | 0.1207            | 0.7075       | X15         | 175        | +           | 0.3697             | 0.2715             | 0.1237            | 0.7083       |
| X16            | 176        | +           | 0.0952             | 0.0605             | 0.1273            | 0.7153           | X16         | 176               | +           | 0.1111             | 0.0758             | 0.1302            | 0.7172       | X16         | 176        | +           | 0.127              | 0.0912             | 0.1336            | 0.7178       |
| X17            | 176        | +           | 0.1415             | 0.0882             | 0.1263            | 0.7149           | X17         | 176               | +           | 0.1502             | 0.0959             | 0.1293            | 0.7169       | X17         | 176        | +           | 0.167              | 0.1118             | 0.1325            | 0.7173       |
| X18            | 176        | +           | 0.1647             | 0.1306             | 0.1264            | 0.7137           | X18         | 176               | +           | 0.1708             | 0.1361             | 0.1294            | 0.7158       | X18         | 176        | +           | 0.1764             | 0.141              | 0.1329            | 0.7166       |
| X19            | 175        | +           | 0.3181             | 0.211              | 0.1189            | 0.7088           | X19         | 175               | +           | 0.3272             | 0.2181             | 0.1213            | 0.7104       | X19         | 175        | +           | 0.3285             | 0.2174             | 0.1245            | 0.7114       |
| X20            | 174        | +           | 0.3209             | 0.2265             | 0.1195            | 0.7079           | X20         | 174               | +           | 0.319              | 0.2222             | 0.1224            | 0.7103       | X20         | 174        | +           | 0.3306             | 0.2327             | 0.1252            | 0.7105       |
| X21            | 176        | +           | 0.1681             | 0.127              | 0.1262            | 0.7138           | X21         | 176               | +           | 0.1878             | 0.146              | 0.1290            | 0.7155       | X21         | 176        | +           | 0.1954             | 0.153              | 0.1323            | 0.7162       |
| X23            | 176        | -           | 0.4454             | 0.3297             | 0.1125            | 0.7007           | X23         | 176               | -           | 0.4474             | 0.331              | 0.1149            | 0.7026       | X23         | 176        | -           | 0.4371             | 0.3181             | 0.1183            | 0.7047       |
| X24            | 175        | -           | 0.529              | 0.4216             | 0.1078            | 0.6916           | X24         | 175               | -           | 0.5219             | 0.412              | 0.1103            | 0.6941       | X24         | 175        | -           | 0.5177             | 0.4056             | 0.1131            | 0.6952       |
| X25            | 176        | +           | 0.3521             | 0.2677             | 0.1196            | 0.7069           | X25         | 176               | +           | 0.3511             | 0.2651             | 0.1225            | 0.7093       | X25         | 176        | +           | 0.3583             | 0.2713             | 0.1254            | 0.7097       |
| X26            | 175        | +           | 0.1832             | 0.1106             | 0.1252            | 0.7147           | X26         | 175               | +           | 0.2023             | 0.1289             | 0.1277            | 0.7162       | X26         | 175        | +           | 0.2097             | 0.1353             | 0.1310            | 0.7168       |
| X28            | 176        | -           | 0.3381             | 0.2184             | 0.1190            | 0.7105           | X28         | 176               | -           | 0.3317             | 0.21               | 0.1224            | 0.714        | X28         | 176        | -           | 0.3314             | 0.2077             | 0.1258            | 0.7154       |
| X29            | 175        | +           | 0.2157             | 0.0958             | 0.1233            | 0.7174           | X30         | 175               | +           | 0.3034             | 0.1695             | 0.1215            | 0.7143       | X30         | 175        | +           | 0.2818             | 0.1441             | 0.1258            | 0.7174       |
| X30            | 175        | +           | 0.3557             | 0.2282             | 0.1163            | 0.7073           | X31         | 175               | +           | 0.3554             | 0.2697             | 0.1223            | 0.7083       | X31         | 175        | +           | 0.3698             | 0.2832             | 0.1250            | 0.7083       |
| X31            | 175        | +           | 0.3613             | 0.2779             | 0.1193            | 0.7058           | X32         | 175               | +           | 0.2104             | 0.1515             | 0.1279            | 0.715        | X32         | 175        | +           | 0.2158             | 0.1559             | 0.1312            | 0.7158       |
| X32            | 175        | +           | 0.1929             | 0.1347             | 0.1252            | 0.7135           | X33         | 175               | +           | 0.1798             | 0.1004             | 0.1285            | 0.7182       | X33         | 175        | +           | 0.1779             | 0.0973             | 0.1321            | 0.7194       |
| X33            | 175        | +           | 0.1725             | 0.0943             | 0.1256            | 0.7161           | X34         | 176               | +           | 0.2221             | 0.1169             | 0.1265            | 0.7183       | X35         | 175        | -           | 0.3686             | 0.2783             | 0.1229            | 0.7067       |
| X34            | 176        | +           | 0.2217             | 0.1183             | 0.1235            | 0.7159           | X35         | 175               | -           | 0.3878             | 0.3001             | 0.1192            | 0.7046       | X36         | 176        | -           | 0.3304             | 0.2403             | 0.1253            | 0.7101       |
| X35            | 175        | -           | 0.4129             | 0.3285             | 0.1158            | 0.7011           | X36         | 176               | -           | 0.3346             | 0.246              | 0.1220            | 0.709        | X38         | 175        | +           | 0.3592             | 0.2519             | 0.1232            | 0.7087       |
| X36            | 176<br>175 | -           | 0.3547             | 0.2684             | 0.1186            | 0.7057           | X38<br>X39  | 175<br>175        | +           | 0.3401             | 0.2339             | 0.1210            | 0.7094       | X39         | 175        | +           | 0.2958             | 0.1858             | 0.1268            | 0.7154       |
| X38            | 175<br>175 | +           | 0.3567<br>0.2952   | 0.2538             | 0.1176<br>0.1206  | 0.7059<br>0.7117 | 738         | 175               | +           | 0.3105             | 0.203              | 0.1228            | 0.7131       |             |            |             |                    |                    |                   |              |
| X39            | 1/5        | +           | 0.2932             | 0.1888             | 0.1∠00            | 0.7117           |             |                   |             |                    |                    |                   |              |             |            |             |                    |                    |                   |              |
| Test           | scale      |             |                    |                    | 0.1205            | 0.7152           | Test        | scale             |             |                    |                    | 0.1233            | 0.7174       | Test        | scale      |             |                    |                    | 0.1265            | 0.7183       |

## Appendix B.1.3 Principal Component Analysis - auditors test 1

Factor analysis/correlation Number of obs = 157
Method: principal-component Retained factors = 12
Rotation: (unrotated) Number of params = 318

| <u>Factor</u> | <u>Eigenvalue</u> | <u>Difference</u> | <u>Proportion</u> | <u>Cumulative</u> |                |
|---------------|-------------------|-------------------|-------------------|-------------------|----------------|
| Factor1       | 3.8699            | 0.8166            | 0.1209            | 0.1209            |                |
| Factor2       | 3.0533            | 0.8904            | 0.0954            | 0.2164            |                |
| Factor3       | 2.1629            | 0.4655            | 0.0676            | 0.2839            |                |
| Factor4       | 1.6974            | 0.0665            | 0.0530            | 0.3370            |                |
| Factor5       | 1.6308            | 0.1477            | 0.0510            | 0.3879            | Eigenvalue     |
| Factor6       | 1.4831            | 0.1115            | 0.0463            | 0.4343            | greater than 1 |
| Factor7       | 1.3717            | 0.0790            | 0.0429            | 0.4772            |                |
| Factor8       | 1.2927            | 0.0697            | 0.0404            | 0.5176            |                |
| Factor9       | 1.2230            | 0.1123            | 0.0382            | 0.5558            |                |
| Factor10      | 1.1107            | 0.0369            | 0.0347            | 0.5905            |                |
| Factor11      | 1.0738            | 0.0714            | 0.0336            | 0.6240            |                |
| Factor12      | 1.0025            | 0.0793            | 0.0313            | 0.6554            |                |
| Factor13      | 0.9231            | 0.0992            | 0.0288            | 0.6842            |                |
| Factor14      | 0.8239            | 0.0210            | 0.0257            | 0.7100            |                |
| Factor15      | 0.8029            | 0.0189            | 0.0251            | 0.7351            |                |
| Factor16      | 0.7841            | 0.0582            | 0.0245            | 0.7596            |                |
| Factor17      | 0.7258            | 0.0239            | 0.0227            | 0.7822            |                |
| Factor18      | 0.7019            | 0.0324            | 0.0219            | 0.8042            |                |
| Factor19      | 0.6695            | 0.0343            | 0.0209            | 0.8251            |                |
| Factor20      | 0.6352            | 0.0636            | 0.0198            | 0.8449            |                |
| Factor21      | 0.5715            | 0.0087            | 0.0179            | 0.8628            |                |
| Factor22      | 0.5628            | 0.0671            | 0.0176            | 0.8804            |                |
| Factor23      | 0.4957            | 0.0051            | 0.0155            | 0.8959            |                |
| Factor24      | 0.4906            | 0.0255            | 0.0153            | 0.9112            |                |
| Factor25      | 0.4651            | 0.0265            | 0.0145            | 0.9257            |                |
| Factor26      | 0.4386            | 0.0158            | 0.0137            | 0.9395            |                |
| Factor27      | 0.4229            | 0.0365            | 0.0132            | 0.9527            |                |
| Factor28      | 0.3864            | 0.0573            | 0.0121            | 0.9647            |                |
| Factor29      | 0.3291            | 0.0238            | 0.0103            | 0.9750            |                |
| Factor30      | 0.3053            | 0.0463            | 0.0095            | 0.9846            |                |
| Factor31      | 0.2590            | 0.0241            | 0.0081            | 0.9927            |                |
| Factor32      | 0.2349            |                   | 0.0073            | 1.0000            |                |

Appendix B.1.4 Varimax Rotation - auditors test 1

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Factor10 | Factor11 | Factor12 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|---------------|
| X1              | -0.0397 | 0.0625  | 0.0304  | 0.0042  | 0.0408  | 0.0458  | 0.0074  | 0.0248  | 0.0599  | 0.1087   | 0.0578   | 0.8372   | 0.8372        |
| X3              | -0.0481 | -0.0109 | -0.1569 | 0.0682  | -0.1744 | 0.0612  | 0.1131  | 0.0376  | 0       | 0.1311   | 0.7781   | 0.1015   | 0.7781        |
| X4              | -0.0453 | 0.5378  | 0.0769  | 0.171   | 0.098   | -0.1485 | -0.1892 | 0.0764  | 0.0105  | 0.098    | 0.3785   | -0.111   | 0.5378        |
| X5              | -0.0811 | 0.0463  | -0.1639 | 0.5854  | 0.235   | 0.0549  | -0.0497 | 0.1597  | 0.0349  | 0.2647   | 0.1231   | 0.1473   | 0.5854        |
| X6              | -0.0622 | 0.122   | 0.1391  | 0.4615  | 0.1096  | -0.0085 | 0.0645  | -0.0735 | 0.0435  | 0.1127   | -0.3769  | 0.117    | 0.4615        |
| X7              | 0.0899  | 0.7387  | 0.0099  | 0.0684  | -0.0577 | 0.0748  | 0.0749  | 0.0462  | -0.101  | 0.0998   | -0.2806  | -0.0671  | 0.7387        |
| X8              | -0.1455 | 0.1979  | -0.0696 | 0.1083  | -0.2433 | 0.299   | 0.2109  | 0.0552  | -0.0929 | 0.5396   | -0.278   | 0.0726   | 0.5396        |
| X9              | -0.3939 | 0.2353  | -0.0555 | 0.0163  | -0.139  | 0.2188  | 0.2859  | 0.3988  | -0.058  | 0.2315   | 0.0808   | 0.3177   | 0.3988        |
| X10             | -0.176  | 0.6873  | 0.3142  | -0.0313 | -0.0719 | -0.0574 | 0       | 0.1918  | 0.077   | 0.0788   | 0.1243   | 0.2685   | 0.6873        |
| X11             | -0.028  | 0.1358  | -0.041  | 0.1862  | 0.0633  | -0.0133 | 0.0051  | 0.7945  | 0.1145  | 0.0328   | 0.024    | 0.0933   | 0.7945        |
| X12             | -0.2118 | 0.1353  | -0.0657 | 0.2674  | 0.2386  | 0.2691  | -0.1033 | -0.2374 | 0.0448  | 0.4862   | 0.1566   | -0.353   | 0.4862        |
| X14             | -0.2661 | -0.0449 | 0.0137  | -0.0602 | 0.1549  | 0.0482  | 0.6664  | 0.0585  | -0.0627 | 0.1476   | 0.2984   | -0.2024  | 0.6664        |
| X15             | -0.6293 | 0.2132  | 0.1543  | -0.0625 | 0.0178  | 0.0908  | 0.1241  | -0.1657 | -0.0529 | -0.2526  | 0.1972   | 0.0478   | 0.2132        |
| X16             | 0.1144  | 0.6689  | -0.1061 | 0.2186  | 0.1195  | 0.1826  | 0.0682  | 0.0236  | -0.0733 | -0.0734  | 0.062    | 0.0346   | 0.6689        |
| X17             | 0.1339  | 0.2255  | 0.1347  | 0.153   | 0.182   | -0.0656 | 0.1153  | 0.4971  | 0.3117  | -0.0557  | 0.1309   | -0.1915  | 0.4971        |
| X18             | 0.1267  | 0.0936  | 0.3255  | 0.6382  | -0.0834 | 0.1397  | 0.0119  | 0.25    | -0.0517 | -0.0191  | 0.123    | 0.0252   | 0.6382        |
| X19             | 0.1012  | -0.0318 | 0.0358  | 0.2237  | -0.2408 | 0.1126  | 0.6881  | -0.045  | 0.0709  | -0.0027  | -0.0362  | 0.1181   | 0.6881        |
| X20             | -0.0326 | 0.3229  | -0.1469 | 0.0063  | 0.1002  | -0.1288 | 0.5798  | 0.105   | 0.3445  | 0.0269   | -0.1161  | 0.166    | 0.5798        |
| X21             | 0.0075  | 0.1297  | 0.1158  | 0.7327  | 0.0294  | -0.0649 | 0.1355  | 0.0845  | 0.0319  | -0.0471  | -0.0203  | -0.1258  | 0.7327        |
| X23             | 0.7968  | 0.1171  | 0.0686  | -0.0432 | 0.0609  | -0.0124 | -0.0191 | -0.0846 | -0.0842 | 0.0706   | -0.0163  | -0.0748  | 0.7968        |
| X24             | 0.7247  | 0.021   | -0.0539 | 0.0568  | 0.2494  | -0.0929 | 0.0042  | 0.055   | -0.2498 | -0.1372  | 0.0833   | 0.0749   | 0.7247        |
| X25             | -0.1027 | 0.0397  | 0.0641  | 0.0353  | -0.1221 | 0.7916  | 0.0961  | 0.0392  | 0.1127  | -0.029   | -0.0171  | 0.022    | 0.7916        |
| X26             | -0.0311 | 0.0292  | 0.1413  | -0.0041 | 0.2877  | 0.6985  | -0.0564 | -0.0365 | 0.0084  | 0.1112   | 0.0878   | 0.0227   | 0.6985        |
| X28             | 0.2733  | 0.0681  | 0.0223  | 0.1322  | 0.683   | 0.2241  | -0.1776 | -0.1307 | 0.0366  | -0.1816  | -0.0401  | 0.1153   | 0.683         |
| X30             | -0.088  | 0.0566  | -0.0137 | 0.0029  | -0.725  | 0.1029  | -0.1317 | -0.2429 | 0.1584  | -0.0775  | 0.1847   | 0.0587   | 0.1847        |
| X31             | -0.2646 | 0.1616  | 0.6744  | 0.0277  | -0.1445 | 0.0754  | -0.1761 | -0.0727 | 0.0817  | 0.0225   | 0.0395   | 0.1101   | 0.6744        |
| X32             | 0.0916  | 0.0077  | 0.786   | 0.2585  | 0.073   | 0.0708  | 0.1081  | -0.0094 | -0.1099 | 0.0122   | -0.0566  | 0.0285   | 0.786         |
| X33             | 0.0102  | 0.0181  | 0.6973  | -0.0869 | 0.0842  | 0.0499  | -0.0508 | 0.0051  | 0.134   | 0.1473   | -0.2203  | -0.0775  | 0.6973        |
| X35             | 0.3012  | -0.1228 | -0.1727 | -0.032  | -0.0135 | 0.2312  | -0.0629 | 0.4127  | -0.4426 | -0.1068  | -0.0979  | -0.2955  | 0.4127        |
| X36             | 0.0917  | 0.0822  | 0.0997  | 0.1785  | 0.2886  | -0.1718 | -0.0708 | -0.0981 | -0.6511 | -0.014   | -0.1276  | -0.0955  | 0.2886        |
| X38             | -0.217  | -0.1032 | 0.0987  | 0.1765  | 0.0395  | 0.1046  | 0.0569  | 0.1739  | 0.6687  | -0.0048  | -0.1399  | -0.0206  | 0.6687        |
| X39             | 0.1673  | 0.0228  | 0.2016  | -0.031  | -0.0332 | -0.0829 | 0.0733  | 0.0495  | 0.0469  | 0.7577   | 0.1794   | 0.1922   | 0.7577        |

Appendix B.1.5 Evaluation of Varimax Rotation - auditors test 1

|         |         |         |         |                | <u>Va</u>      | <u>riable</u>   |                |                |          |          |          |
|---------|---------|---------|---------|----------------|----------------|-----------------|----------------|----------------|----------|----------|----------|
| Factor1 | Factor2 | Factor3 | Factor4 | <u>Factor5</u> | <u>Factor6</u> | Factor7         | <u>Factor8</u> | <u>Factor9</u> | Factor10 | Factor11 | Factor12 |
|         |         |         |         |                |                |                 |                |                |          |          | X1       |
|         |         |         |         |                |                |                 |                |                |          | Х3       |          |
|         | X4      |         |         |                |                |                 |                |                |          |          |          |
|         |         |         | X5      |                |                |                 |                |                |          |          |          |
|         |         |         | X6      |                |                |                 |                |                |          |          |          |
|         | X7      |         |         |                |                |                 |                |                |          |          |          |
|         |         |         |         |                |                |                 | \ <u>'</u>     |                | X8       |          |          |
|         | V4.0    |         |         |                |                |                 | Х9             |                |          |          |          |
|         | X10     |         |         |                |                |                 | V11            |                |          |          |          |
|         |         |         |         |                |                |                 | X11            |                | V12      |          |          |
|         |         |         |         |                |                | X14             |                |                | X12      |          |          |
| X15     |         |         |         |                |                | Λ1 <del>4</del> |                |                |          |          |          |
| VIO     | X16     |         |         |                |                |                 |                |                |          |          |          |
|         | X10     |         |         |                |                |                 | X17            |                |          |          |          |
|         |         |         | X18     |                |                |                 | X17            |                |          |          |          |
|         |         |         | ΧIO     |                |                | X19             |                |                |          |          |          |
|         |         |         |         |                |                | X20             |                |                |          |          |          |
|         |         |         | X21     |                |                | 7,20            |                |                |          |          |          |
| X23     |         |         |         |                |                |                 |                |                |          |          |          |
| X24     |         |         |         |                |                |                 |                |                |          |          |          |
|         |         |         |         |                | X25            |                 |                |                |          |          |          |
|         |         |         |         |                | X26            |                 |                |                |          |          |          |
|         |         |         |         | X28            |                |                 |                |                |          |          |          |
|         |         |         |         | X30            |                |                 |                |                |          |          |          |
|         |         | X31     |         |                |                |                 |                |                |          |          |          |
|         |         | X32     |         |                |                |                 |                |                |          |          |          |
|         |         | X33     |         |                |                |                 |                |                |          |          |          |
|         |         |         |         |                |                |                 |                | X35            |          |          |          |
|         |         |         |         |                |                |                 |                | X36            |          |          |          |
|         |         |         |         |                |                |                 |                | X38            |          |          |          |
|         |         |         |         |                |                |                 |                |                | X39      |          |          |

Appendix B.1.6 Overall Cronbach Alpha for the auditors - amended test 2

(Removal of items with one factor loading)

| •           |            |             | one factor lo      |                    |                   |                  |                               |
|-------------|------------|-------------|--------------------|--------------------|-------------------|------------------|-------------------------------|
| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | <u>ltem-test</u>   | <u>ltem-rest</u>   | <u>Average</u>    | <u>Alpha</u>     | Test for                      |
|             |            |             | <u>correlation</u> | <u>correlation</u> | <u>inter-item</u> |                  | <u>items with</u><br>an alpha |
|             |            |             |                    |                    | covariance        |                  | greater than                  |
|             |            |             |                    |                    |                   |                  | the global                    |
|             |            |             |                    |                    |                   |                  | <u>alpha</u>                  |
| X1          | 171        | +           | 0.3302             | 0.222              | 0.0985            | 0.6939           | FALSE                         |
| X2          | 176        | +           | 0.1635             | 0.0875             | 0.1042            | 0.7009           | TRUE                          |
| X3          | 176        | +           | 0.308              | 0.2058             | 0.0993            | 0.6945           | FALSE                         |
| X4          | 175        | +           | 0.1746             | 0.1109             | 0.1041            | 0.6997           | FALSE                         |
| X5          | 176        | +           | 0.2003             | 0.1624             | 0.1043            | 0.6981           | FALSE                         |
| X6          | 176        | +           | 0.1839             | 0.1333             | 0.1042            | 0.6988           | FALSE                         |
| X7          | 176        | +           | 0.2023             | 0.138              | 0.1034            | 0.6983           | FALSE                         |
| X8          | 174        | +           | 0.4373             | 0.3426             | 0.0954            | 0.6854           | FALSE                         |
| X9          | 173        | +           | 0.5538             | 0.4698             | 0.0908            | 0.6744           | FALSE                         |
| X10         | 175        | +           | 0.4775             | 0.4113             | 0.0963            | 0.6837           | FALSE                         |
| X11         | 175        | +           | 0.2186             | 0.1766             | 0.1039            | 0.6975           | FALSE                         |
| X12         | 169        | +           | 0.2542             | 0.1624             | 0.1013            | 0.6971           | FALSE                         |
| X13         | 176        | +           | -0.0476            | -0.0929            | 0.1076            | 0.7054           | TRUE                          |
| X14         | 174        | +           | 0.334              | 0.2224             | 0.0987            | 0.6943           | FALSE                         |
| X15         | 175        | +           | 0.3494             | 0.2574             | 0.0984            | 0.6911           | FALSE                         |
| X16<br>X17  | 176        | +           | 0.1331             | 0.0998             | 0.1053            | 0.6999           | FALSE                         |
| X17<br>X18  | 176<br>176 | +           | 0.1723<br>0.209    | 0.1212<br>0.1765   | 0.1044<br>0.1044  | 0.6991<br>0.6982 | FALSE<br>FALSE                |
| X10<br>X19  | 175        | +           | 0.209              | 0.1763             | 0.1044            | 0.6962           | FALSE                         |
| X19<br>X20  | 173        | +           | 0.3466             | 0.2566             | 0.0985            | 0.6909           | FALSE                         |
| X21         | 176        | +           | 0.1981             | 0.1587             | 0.1043            | 0.6983           | FALSE                         |
| X22         | 176        | +           | 0.0587             | 0.0045             | 0.1063            | 0.7033           | TRUE                          |
| X23         | 176        | -           | 0.4249             | 0.3107             | 0.0943            | 0.6866           | FALSE                         |
| X24         | 175        | _           | 0.4943             | 0.3859             | 0.0911            | 0.6793           | FALSE                         |
| X25         | 176        | +           | 0.3404             | 0.2582             | 0.0996            | 0.6924           | FALSE                         |
| X26         | 175        | +           | 0.2115             | 0.1419             | 0.1032            | 0.6984           | FALSE                         |
| X27         | 176        | +           | 0.2567             | 0.1192             | 0.1016            | 0.7055           | TRUE                          |
| X28         | 176        | -           | 0.3169             | 0.1996             | 0.0994            | 0.6964           | FALSE                         |
| X29         | 175        | +           | 0.1849             | 0.0685             | 0.1034            | 0.7043           | TRUE                          |
| X30         | 175        | +           | 0.3117             | 0.1867             | 0.0983            | 0.6954           | FALSE                         |
| X31         | 175        | +           | 0.361              | 0.2808             | 0.0991            | 0.6907           | FALSE                         |
| X32         | 175        | +           | 0.2121             | 0.1561             | 0.1036            | 0.6979           | FALSE                         |
| X33         | 175        | +           | 0.1819             | 0.1062             | 0.1040            | 0.7006           | FALSE                         |
| X34         | 176        | +           | 0.191              | 0.0901             | 0.1034            | 0.7026           | TRUE                          |
| X35         | 175        | -           | 0.4117             | 0.33               | 0.0963            | 0.686            | FALSE                         |
| X36         | 176<br>175 | -           | 0.3402             | 0.2557             | 0.0989            | 0.6914           | FALSE                         |
| X38<br>X39  | 175<br>175 | +           | 0.3481             | 0.2483             | 0.0979            | 0.6911           | FALSE<br>FALSE                |
| <b>739</b>  | 173        | +           | 0.3203             | 0.2185             | 0.0992            | 0.6942           | FALSE                         |
| Test scale  | •          |             |                    |                    | 0.1007            | 0.7009           |                               |

removed as well due to only one factor loading

Appendix B.1.7 Principal Component Analysis for the auditors - amended test 2

| <u>Factor</u> | <u>Eigenvalue</u> | <u>Difference</u> | <u>Proportion</u> | <u>Cumulative</u> |                    |
|---------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| Factor1       | 3.6973            | 0.6343            | 0.1232            | 0.1232            |                    |
| Factor2       | 3.0630            | 0.9495            | 0.1021            | 0.2253            |                    |
| Factor3       | 2.1135            | 0.4371            | 0.0704            | 0.2958            |                    |
| Factor4       | 1.6764            | 0.1153            | 0.0559            | 0.3517            |                    |
| Factor5       | 1.5612            | 0.1157            | 0.0520            | 0.4037            |                    |
| Factor6       | 1.4455            | 0.1802            | 0.0482            | 0.4519            |                    |
| Factor7       | 1.2653            | 0.0834            | 0.0422            | 0.4941            | Eigenvalue greater |
| Factor8       | 1.1819            | 0.0491            | 0.0394            | 0.5335            | than 1             |
| Factor9       | 1.1328            | 0.0776            | 0.0378            | 0.5712            |                    |
| Factor10      | 1.0553            | 0.0492            | 0.0352            | 0.6064            |                    |
| Factor11      | 1.0060            | 0.0437            | 0.0335            | 0.6399            |                    |
| Factor12      | 0.9623            | 0.1096            | 0.0321            | 0.6720            |                    |
| Factor13      | 0.8528            | 0.0555            | 0.0284            | 0.7004            |                    |
| Factor14      | 0.7973            | 0.0167            | 0.0266            | 0.7270            |                    |
| Factor15      | 0.7806            | 0.0355            | 0.0260            | 0.7530            |                    |
| Factor16      | 0.7450            | 0.0691            | 0.0248            | 0.7779            |                    |
| Factor17      | 0.6759            | 0.0128            | 0.0225            | 0.8004            |                    |
| Factor18      | 0.6631            | 0.0227            | 0.0221            | 0.8225            |                    |
| Factor19      | 0.6404            | 0.0421            | 0.0213            | 0.8438            |                    |
| Factor20      | 0.5982            | 0.0249            | 0.0199            | 0.8638            |                    |
| Factor21      | 0.5733            | 0.0285            | 0.0191            | 0.8829            |                    |
| Factor22      | 0.5449            | 0.0572            | 0.0182            | 0.9011            |                    |
| Factor23      | 0.4877            | 0.0424            | 0.0163            | 0.9173            |                    |
| Factor24      | 0.4454            | 0.0115            | 0.0148            | 0.9322            |                    |
| Factor25      | 0.4339            | 0.0448            | 0.0145            | 0.9466            |                    |
| Factor26      | 0.3891            | 0.0377            | 0.0130            | 0.9596            |                    |
| Factor27      | 0.3514            | 0.0305            | 0.0117            | 0.9713            |                    |
| Factor28      | 0.3209            | 0.0322            | 0.0107            | 0.9820            |                    |
| Factor29      | 0.2888            | 0.0377            | 0.0096            | 0.9916            |                    |
| Factor30      | 0.2510            |                   | 0.0084            | 1.0000            |                    |

Appendix B.1.8 Varimax Rotation for the auditors - amended test 2

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Factor10 | Factor11 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------------|
| X4              | -0.0304 | 0.5047  | 0.052   | 0.4921  | 0.0661  | -0.1695 | -0.1496 | -0.0253 | 0.0435  | 0.0346   | -0.2416  | 0.5047        |
| X5              | 0.0088  | -0.0048 | -0.0844 | 0.7293  | 0.1321  | 0.0608  | 0.1187  | -0.0748 | 0.0891  | 0.14     | 0.0957   | 0.7293        |
| X6              | 0.0096  | 0.1463  | 0.167   | 0.0745  | -0.0287 | 0.014   | 0.0353  | -0.1403 | 0.1243  | 0.0517   | 0.6462   | 0.6462        |
| X7              | 0.0982  | 0.7076  | -0.038  | -0.1008 | 0.0349  | 0.0972  | 0.0651  | 0.1524  | 0.0108  | 0.0653   | 0.3762   | 0.7076        |
| X8              | -0.0919 | 0.2034  | -0.0732 | 0.0122  | -0.0146 | 0.3786  | 0.243   | 0.104   | -0.2081 | 0.4678   | 0.3007   | 0.4678        |
| X9              | -0.3648 | 0.3156  | -0.0788 | 0.0917  | 0.2869  | 0.2296  | 0.3556  | -0.0406 | -0.1489 | 0.2434   | -0.1246  | 0.3556        |
| X10             | -0.1298 | 0.7673  | 0.2538  | 0.0361  | 0.1812  | -0.036  | 0.0038  | -0.1413 | -0.0637 | 0.1067   | -0.0671  | 0.7673        |
| X11             | -0.001  | 0.1563  | -0.0527 | 0.195   | 0.7761  | 0.0069  | 0.0707  | -0.0596 | 0.0052  | 0.0518   | -0.0307  | 0.7761        |
| X12             | -0.263  | 0.0235  | -0.0766 | 0.4206  | -0.1976 | 0.289   | -0.223  | 0.0513  | 0.2555  | 0.366    | 0.1913   | 0.4206        |
| X14             | -0.4151 | -0.0704 | 0.0043  | 0.0259  | 0.0656  | 0.038   | 0.4947  | 0.139   | 0.3098  | 0.1983   | -0.1642  | 0.4947        |
| X15             | -0.6364 | 0.264   | 0.1315  | 0.0253  | -0.1825 | 0.0634  | 0.0788  | -0.0322 | 0.0362  | -0.2483  | -0.158   | 0.264         |
| X16             | 0.1496  | 0.5684  | -0.0786 | 0.3121  | 0.0579  | 0.1868  | 0.144   | 0.1667  | 0.0813  | -0.1319  | 0.0608   | 0.5684        |
| X17             | 0.0288  | 0.1615  | 0.0996  | 0.0409  | 0.6418  | -0.0528 | 0.0143  | -0.0787 | 0.238   | -0.0074  | 0.1524   | 0.6418        |
| X18             | 0.1704  | 0.1065  | 0.3808  | 0.5456  | 0.2867  | 0.1336  | 0.1128  | 0.096   | -0.1447 | -0.0961  | 0.1402   | 0.5456        |
| X19             | 0.0484  | -0.0541 | 0.0964  | 0.0983  | -0.013  | 0.0969  | 0.7553  | -0.018  | -0.1756 | -0.0056  | 0.1035   | 0.7553        |
| X20             | -0.0646 | 0.2794  | -0.1705 | -0.0118 | 0.1181  | -0.1357 | 0.6298  | -0.3131 | 0.1341  | 0.0317   | 0.0618   | 0.6298        |
| X21             | -0.0612 | 0.0148  | 0.2052  | 0.4355  | 0.2154  | -0.0943 | 0.1085  | 0.1074  | 0.0325  | -0.0893  | 0.555    | 0.555         |
| X23             | 0.7845  | 0.0817  | 0.0808  | 0.0043  | -0.0865 | -0.0168 | 0.0051  | 0.1048  | 0.0879  | 0.0949   | -0.0772  | 0.7845        |
| X24             | 0.706   | 0.0247  | -0.019  | 0.045   | 0.0695  | -0.1182 | 0.0153  | 0.2535  | 0.2475  | -0.1083  | -0.0553  | 0.706         |
| X25             | -0.1302 | -0.0028 | 0.0907  | -0.0109 | 0.0528  | 0.7751  | 0.0905  | -0.045  | -0.1124 | -0.0386  | 0.0374   | 0.7751        |
| X26             | 0.0108  | 0.0647  | 0.138   | 0.1137  | -0.057  | 0.6974  | -0.0835 | -0.0532 | 0.2607  | 0.0339   | -0.0843  | 0.6974        |
| X28             | 0.376   | 0.0918  | 0.0517  | 0.1925  | -0.0937 | 0.2142  | -0.1618 | -0.1264 | 0.5854  | -0.2726  | 0.0241   | 0.5854        |
| X30             | -0.1266 | 0.0757  | -0.0187 | 0.0178  | -0.2098 | 0.0424  | -0.0337 | -0.1767 | -0.721  | -0.0668  | -0.0894  | 0.0757        |
| X31             | -0.254  | 0.2479  | 0.6426  | -0.0269 | -0.0438 | 0.0686  | -0.2131 | -0.1554 | -0.1552 | 0.037    | 0.0115   | 0.6426        |
| X32             | 0.0815  | 0.0131  | 0.8239  | 0.1119  | 0.0035  | 0.0619  | 0.1016  | 0.0959  | 0.0753  | 0.0357   | 0.108    | 0.8239        |
| X33             | 0.0354  | 0.0209  | 0.6726  | -0.1454 | -0.0075 | 0.0798  | -0.0534 | -0.1362 | 0.0912  | 0.1601   | 0.0324   | 0.6726        |
| X35             | 0.247   | -0.1567 | -0.1744 | -0.0946 | 0.3601  | 0.2154  | -0.093  | 0.5826  | 0.001   | -0.1166  | 0.0049   | 0.5826        |
| X36             | 0.0895  | 0.076   | 0.1228  | 0.0658  | -0.1535 | -0.188  | -0.1188 | 0.6202  | 0.285   | -0.04    | 0.2132   | 0.6202        |
| X38             | -0.2044 | -0.1126 | 0.081   | 0.0005  | 0.2966  | 0.1353  | 0.0262  | -0.6192 | 0.0469  | -0.0395  | 0.2713   | 0.2966        |
| X39             | 0.1058  | 0.0611  | 0.1544  | 0.0652  | 0.0372  | -0.0482 | 0.0295  | -0.0707 | -0.0059 | 0.8229   | -0.0421  | 0.8229        |

Appendix B.1.9 Evaluation of Varimax Rotation for the auditors - amended test 2

| VariableFactor1Factor2Factor3Factor4Factor5Factor6Factor7Factor8Factor9Factor10Factor11 |         |         |         |         |     |         |         |         |          |          |  |  |  |
|---|---------|---------|---------|---------|-----|---------|---------|---------|----------|----------|--|--|--|
| Factor1   | Factor2 | Factor3 | Factor4 | Factor5 |     | Factor7 | Factor8 | Factor9 | Factor10 | Factor11 |  |  |  |
|   | X4      |         |         |         |     |         |         |         |          |          |  |  |  |
|   |         |         | X5      |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         |         |     |         |         |         |          | X6       |  |  |  |
|   | X7      |         |         |         |     |         |         |         |          |          |  |  |  |
|   | 7       |         |         |         |     |         |         |         | Vo       |          |  |  |  |
|   |         |         |         |         |     |         |         |         | X8       |          |  |  |  |
| X9  |         |         |         |         |     |         |         |         |          |          |  |  |  |
|   | X10     |         |         |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         | X11     |     |         |         |         |          |          |  |  |  |
|   |         |         | X12     |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         |         |     | X14     |         |         |          |          |  |  |  |
| X15   |         |         |         |         |     |         |         |         |          |          |  |  |  |
| 7110  | V4.0    |         |         |         |     |         |         |         |          |          |  |  |  |
|   | X16     |         |         |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         | X17     |     |         |         |         |          |          |  |  |  |
|   |         |         | X18     |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         |         |     | X19     |         |         |          |          |  |  |  |
|   |         |         |         |         |     | X20     |         |         |          |          |  |  |  |
|   |         |         |         |         |     |         |         |         |          | X21      |  |  |  |
| X23   |         |         |         |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         |         |     |         |         |         |          |          |  |  |  |
| X24   |         |         |         |         |     |         |         |         |          |          |  |  |  |
|   |         |         |         |         | X25 |         |         |         |          |          |  |  |  |
|   |         |         |         |         | X26 |         |         |         |          |          |  |  |  |
|   |         |         |         |         |     |         |         | X28     |          |          |  |  |  |
|   |         |         |         |         |     |         |         | X30     |          |          |  |  |  |
|   |         | X31     |         |         |     |         |         |         |          |          |  |  |  |
|   |         | X32     |         |         |     |         |         |         |          |          |  |  |  |
|   |         | X33     |         |         |     |         |         |         |          |          |  |  |  |
|   |         | 7.00    |         |         |     |         | V05     |         |          |          |  |  |  |
|   |         |         |         |         |     |         | X35     |         |          |          |  |  |  |
|   |         |         |         |         |     |         | X36     |         |          |          |  |  |  |
|   |         |         |         |         |     |         | X38     |         | Van      |          |  |  |  |
|   |         |         |         |         |     |         |         |         | X39      | <u> </u> |  |  |  |

Appendix B.1.10 Overall Cronbah Alpha for the auditors - amended test 3

- ((i) Removal of items with one factor loading (ii) Removal of items with p value greater than one)

| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | ltem-test<br>correlation | <u>Item-rest</u><br><u>correlation</u> | Average<br>inter-item<br>covariance | <u>Alpha</u> | Test for items with an alpha greater than the global alpha |   |                               |
|-------------|------------|-------------|--------------------------|--|-------------------------------------|--------------|--|---|-------------------------------|
| X1          | 171        | +           | 0.3302                   | 0.222                                  | 0.0985                              | 0.6939       | FALSE  | _ |                               |
| X2          | 176        | +           | 0.1635                   | 0.0875                                 | 0.1042                              | 0.7009       | TRUE   |   | Remove as well due to only    |
| X3          | 176        | +           | 0.308                    | 0.2058                                 | 0.0993                              | 0.6945       | FALSE  | _ | one factor loading            |
| X4          | 175        | +           | 0.1746                   | 0.1109                                 | 0.1041                              | 0.6997       | FALSE  |   |                               |
| X5          | 176        | +           | 0.2003                   | 0.1624                                 | 0.1043                              | 0.6981       | FALSE  |   |                               |
| X6          | 176        | +           | 0.1839                   | 0.1333                                 | 0.1042                              | 0.6988       | FALSE  |   |                               |
| X7          | 176        | +           | 0.2023                   | 0.138                                  | 0.1034                              | 0.6983       | FALSE  |   |                               |
| X8          | 174        | +           | 0.4373                   | 0.3426                                 | 0.0954                              | 0.6854       | FALSE  |   |                               |
| X9          | 173        | +           | 0.5538                   | 0.4698                                 | 0.0908                              | 0.6744       | FALSE  |   |                               |
| X10         | 175        | +           | 0.4775                   | 0.4113                                 | 0.0963                              | 0.6837       | FALSE  |   |                               |
| X11         | 175        | +           | 0.2186                   | 0.1766                                 | 0.1039                              | 0.6975       | FALSE  |   |                               |
| X12         | 169        | +           | 0.2542                   | 0.1624                                 | 0.1013                              | 0.6971       | FALSE  |   |                               |
| X13         | 176        | +           | -0.0476                  | -0.0929                                | 0.1076                              | 0.7054       | TRUE   |   |                               |
| X14         | 174        | +           | 0.334                    | 0.2224                                 | 0.0987                              | 0.6943       | FALSE  |   |                               |
| X15         | 175        | +           | 0.3494                   | 0.2574                                 | 0.0984                              | 0.6911       | FALSE  |   |                               |
| X16         | 176        | +           | 0.1331                   | 0.0998                                 | 0.1053                              | 0.6999       | FALSE  |   |                               |
| X17         | 176        | +           | 0.1723                   | 0.1212                                 | 0.1044                              | 0.6991       | FALSE  |   |                               |
| X18         | 176        | +           | 0.209                    | 0.1765                                 | 0.1044                              | 0.6982       | FALSE  |   |                               |
| X19         | 175        | +           | 0.2777                   | 0.1722                                 | 0.1001                              | 0.6964       | FALSE  |   |                               |
| X20         | 174        | +           | 0.3466                   | 0.2566                                 | 0.0985                              | 0.6909       | FALSE  |   |                               |
| X21         | 176        | +           | 0.1981                   | 0.1587                                 | 0.1043                              | 0.6983       | FALSE  |   |                               |
| X22         | 176        | +           | 0.0587                   | 0.0045                                 | 0.1063                              | 0.7033       | TRUE   |   |                               |
| X23         | 176        | -           | 0.4249                   | 0.3107                                 | 0.0943                              | 0.6866       | FALSE  |   |                               |
| X24         | 175        | -           | 0.4943                   | 0.3859                                 | 0.0911                              | 0.6793       | FALSE  |   |                               |
| X25         | 176        | +           | 0.3404                   | 0.2582                                 | 0.0996                              | 0.6924       | FALSE  |   |                               |
| X26         | 175        | +           | 0.2115                   | 0.1419                                 | 0.1032                              | 0.6984       | FALSE  |   |                               |
| X27         | 176        | +           | 0.2567                   | 0.1192                                 | 0.1016                              | 0.7055       | TRUE   |   |                               |
| X28         | 176        | -           | 0.3169                   | 0.1996                                 | 0.0994                              | 0.6964       | FALSE  |   |                               |
| X29         | 175        | +           | 0.1849                   | 0.0685                                 | 0.1034                              | 0.7043       | TRUE   |   |                               |
| X30         | 175        | +           | 0.3117                   | 0.1867                                 | 0.0983                              | 0.6954       | FALSE  |   |                               |
| X31         | 175        | +           | 0.361                    | 0.2808                                 | 0.0991                              | 0.6907       | FALSE  |   |                               |
| X32         | 175        | +           | 0.2121                   | 0.1561                                 | 0.1036                              | 0.6979       | FALSE  |   |                               |
| X33         | 175        | +           | 0.1819                   | 0.1062                                 | 0.1040                              | 0.7006       | FALSE  |   |                               |
| X34         | 176        | +           | 0.191                    | 0.0901                                 | 0.1034                              | 0.7026       | TRUE   |   |                               |
| X35         | 175        | -           | 0.4117                   | 0.33                                   | 0.0963                              | 0.686        | FALSE  | _ | Remove as well since SEM      |
| X36         | 176        | -           | 0.3402                   | 0.2557                                 | 0.0989                              | 0.6914       | FALSE  | _ | model indicates that it has a |
| X38         | 175        | +           | 0.3481                   | 0.2483                                 | 0.0979                              | 0.6911       | FALSE  | _ | p value greater than 0.10     |
| X39         | 175        | +           | 0.3203                   | 0.2185                                 | 0.0992                              | 0.6942       | FALSE  |   | -                             |
| Test        | t scale    |             |                          |  | 0.1007                              | 0.7009       |  |   |                               |

# Appendix B.1.11 Principal Component Analysis for the auditors - amended test 3

Factor analysis/correlation

Method: principal-component

Rotation: (unrotated)

Number of obs = 159

Retained factors = 9

Number of params = 216

| <u>Factor</u> | Eigenvalue | <u>Difference</u> | <b>Proportion</b> | <u>Cumulative</u> |                |
|---------------|------------|-------------------|-------------------|-------------------|----------------|
|               |            |                   |                   |                   |                |
| Factor1       | 3.5951     | 0.8536            | 0.1332            | 0.1332            |                |
| Factor2       | 2.7414     | 0.6766            | 0.1015            | 0.2347            |                |
| Factor3       | 2.0648     | 0.4288            | 0.0765            | 0.3112            |                |
| Factor4       | 1.6359     | 0.1569            | 0.0606            | 0.3718            |                |
| Factor5       | 1.4790     | 0.1150            | 0.0548            | 0.4265            | Eigenvalue     |
| Factor6       | 1.3640     | 0.1681            | 0.0505            | 0.477             | greater than 1 |
| Factor7       | 1.1959     | 0.0737            | 0.0443            | 0.5213            |                |
| Factor8       | 1.1221     | 0.0228            | 0.0416            | 0.5629            |                |
| Factor9       | 1.0993     | 0.1089            | 0.0407            | 0.6036            |                |
| Factor10      | 0.9903     | 0.0536            | 0.0367            | 0.6403            |                |
| Factor11      | 0.9367     | 0.1014            | 0.0347            | 0.675             |                |
| Factor12      | 0.8353     | 0.0255            | 0.0309            | 0.7059            |                |
| Factor13      | 0.8097     | 0.0678            | 0.03              | 0.7359            |                |
| Factor14      | 0.7420     | 0.0329            | 0.0275            | 0.7634            |                |
| Factor15      | 0.7091     | 0.0415            | 0.0263            | 0.7897            |                |
| Factor16      | 0.6676     | 0.0056            | 0.0247            | 0.8144            |                |
| Factor17      | 0.6620     | 0.0632            | 0.0245            | 0.8389            |                |
| Factor18      | 0.5988     | 0.0244            | 0.0222            | 0.8611            |                |
| Factor19      | 0.5743     | 0.0330            | 0.0213            | 0.8823            |                |
| Factor20      | 0.5413     | 0.0406            | 0.02              | 0.9024            |                |
| Factor21      | 0.5007     | 0.036             | 0.0185            | 0.9209            |                |
| Factor22      | 0.4647     | 0.0517            | 0.0172            | 0.9382            |                |
| Factor23      | 0.4130     | 0.0482            | 0.0153            | 0.9534            |                |
| Factor24      | 0.3648     | 0.0362            | 0.0135            | 0.967             |                |
| Factor25      | 0.3285     | 0.0272            | 0.0122            | 0.9791            |                |
| Factor26      | 0.3014     | 0.0392            | 0.0112            | 0.9903            |                |
| Factor27      | 0.2622     | -                 | 0.0097            | 1                 |                |

Appendix B.1.12 Varimax Rotation for the auditors - amended test 3

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| X4              | 0.0793  | 0.5785  | -0.0354 | 0.2     | -0.1592 | 0.1663  | -0.3381 | 0.11    | 0.0666  | 0.5785        |
| X5              | 0.045   | 0.0336  | -0.1728 | 0.5885  | 0.1261  | 0.2998  | -0.0763 | 0.2088  | 0.1105  | 0.5885        |
| X6              | 0.0034  | 0.155   | 0.2722  | 0.421   | -0.0369 | -0.1672 | 0.2093  | 0.0359  | 0.1277  | 0.421         |
| X7              | -0.1808 | 0.7175  | 0.0154  | 0.0952  | 0.0665  | -0.1148 | 0.224   | 0.0487  | -0.0146 | 0.7175        |
| X8              | 0.0268  | 0.1865  | -0.0651 | 0.1251  | 0.3932  | -0.0408 | 0.3359  | 0.4724  | -0.2366 | 0.4724        |
| X9              | 0.383   | 0.2792  | -0.0957 | -0.0374 | 0.2539  | 0.4085  | 0.2882  | 0.2654  | -0.1195 | 0.4085        |
| X10             | 0.1609  | 0.7383  | 0.2857  | -0.0531 | -0.0275 | 0.2575  | -0.0061 | 0.0984  | -0.0637 | 0.7383        |
| X11             | 0.0024  | 0.112   | -0.047  | 0.1645  | 0.0186  | 0.7946  | 0.0376  | 0.0507  | 0.0403  | 0.7946        |
| X12             | 0.243   | 0.1092  | -0.1067 | 0.4094  | 0.2513  | -0.3071 | -0.2345 | 0.4154  | 0.2928  | 0.4154        |
| X14             | 0.3649  | -0.0009 | -0.0841 | -0.0261 | 0.0131  | 0.0028  | 0.4098  | 0.2249  | 0.3957  | 0.4098        |
| X15             | 0.6432  | 0.2859  | 0.084   | -0.0644 | 0.0782  | -0.1326 | 0.0106  | -0.2277 | 0.0581  | 0.6432        |
| X16             | -0.1646 | 0.5879  | -0.1372 | 0.2481  | 0.2281  | 0.1183  | 0.0691  | -0.1063 | 0.0738  | 0.5879        |
| X17             | -0.0548 | 0.1399  | 0.1443  | 0.1754  | -0.0733 | 0.5266  | 0.0841  | -0.0408 | 0.2671  | 0.5266        |
| X18             | -0.1732 | 0.1536  | 0.2575  | 0.5768  | 0.1725  | 0.3139  | 0.0025  | -0.0434 | -0.1331 | 0.5768        |
| X19             | 0.0092  | -0.0167 | 0.0369  | 0.1928  | 0.0704  | 0.018   | 0.7038  | 0.0191  | -0.1016 | 0.7038        |
| X20             | 0.1421  | 0.2482  | -0.1274 | -0.0466 | -0.1028 | 0.2864  | 0.579   | 0.0209  | 0.1461  | 0.579         |
| X21             | 0.0023  | 0.0677  | 0.1528  | 0.741   | -0.0878 | 0.0794  | 0.1609  | -0.0742 | 0.0581  | 0.741         |
| X23             | -0.7879 | 0.1121  | 0.0524  | -0.0492 | -0.0165 | -0.0893 | -0.0298 | 0.0925  | 0.0594  | 0.1121        |
| X24             | -0.7582 | 0.0609  | -0.0749 | 0.028   | -0.1019 | 0.0265  | -0.03   | -0.1109 | 0.2257  | 0.2257        |
| X25             | 0.1449  | -0.0267 | 0.0895  | 0.0335  | 0.7655  | 0.0308  | 0.1276  | -0.0366 | -0.1138 | 0.7655        |
| X26             | 0.0169  | 0.0537  | 0.1344  | 0.0072  | 0.7177  | -0.003  | -0.1358 | 0.046   | 0.2356  | 0.7177        |
| X28             | -0.3538 | 0.1074  | 0.0522  | 0.1066  | 0.274   | -0.018  | -0.2457 | -0.2694 | 0.516   | 0.516         |
| X30             | 0.2195  | 0.0673  | -0.0315 | -0.0597 | 0.0264  | -0.1125 | -0.0374 | -0.035  | -0.7246 | 0.2195        |
| X31             | 0.2746  | 0.2611  | 0.6519  | 0.0023  | 0.0459  | -0.0742 | -0.1815 | 0.0492  | -0.1742 | 0.6519        |
| X32             | -0.098  | 0.0336  | 0.7699  | 0.239   | 0.0774  | -0.014  | 0.0731  | 0.0371  | 0.0755  | 0.7699        |
| X33             | -0.008  | -0.0374 | 0.7299  | -0.0678 | 0.0972  | 0.0433  | -0.022  | 0.1144  | 0.0692  | 0.7299        |
| X39             | -0.0986 | 0.0482  | 0.1778  | -0.0242 | -0.0513 | 0.0843  | 0.02    | 0.8144  | 0.0083  | 0.8144        |

## Appendix B.1.13 Evaluation of Varimax Rotation for the auditors - amended test 3

| <u>Variable</u>   | Ethical<br>Relativistic | Interpersonal<br>Trust | Professional Scepticism | Reliability | Reputation | Capability | Ethical<br>Behaviour | Service<br>Quality | Independence |
|---|-------------------------|------------------------|-------------------------|-------------|------------|------------|----------------------|--------------------|--------------|
| The audit partner should be actively involved in the engagement   |                         | X4                     |                         |             |            |            |                      |                    |              |
| Management should give adequate support to the audit team so that they do their job well.                                 |                         |                        |                         | X5          |            |            |                      |                    |              |
| An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures.  |                         |                        |                         | X6          |            |            |                      |                    |              |
| It is important that the audit partner gives the client individual attention  |                         | X7                     |                         |             |            |            |                      |                    |              |
| The audit partner should have the client's best interests at heart.   |                         |                        |                         |             |            |            |                      | X8                 |              |
| Client management should contribute more than required during the audit.  |                         |                        |                         |             |            | X9         |                      |                    |              |
| It is important that the regular meetings are held between the client & the audit partner                                 |                         | X10                    |                         |             |            |            |                      |                    |              |
| It is important that clients respond quickly to the auditor's queries   |                         |                        |                         |             |            | X11        |                      |                    |              |
| Auditors should offer other assurance services besides the audit of historical information                                |                         |                        |                         |             |            |            |                      | X12                |              |
| The expertise & competence of the audit firm is more important than the expertise of the audit team.                      |                         |                        |                         |             |            |            | X14                  |                    |              |
| The auditor should be sceptical on whether the client will stick to his word.   | X15                     |                        |                         |             |            |            |                      |                    |              |
| It is important that the audit partner has high ethical standards.  |                         | X16                    |                         |             |            |            |                      |                    |              |
| Ethical training should be mandatory for audit and accountancy students.  |                         |                        |                         |             |            | X17        |                      |                    |              |
| Clients should keep their records accurately  |                         |                        |                         | X18         |            |            |                      |                    |              |
| The auditor should never take risks, irrespective of how small the risk might be.   |                         |                        |                         |             |            |            | X19                  |                    |              |
| The auditor's responsibility is to act in the public interest.  |                         |                        |                         |             |            |            | X20                  |                    |              |
| As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities               |                         |                        |                         | X21         |            |            |                      |                    |              |
| The auditor's ethical decision making varies from one situation to another  | X23                     |                        |                         |             |            |            |                      |                    |              |
| Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.                     | X24                     |                        |                         |             |            |            |                      |                    |              |
| It is understandable that an auditor collects information about clients through their professional and personal networks. |                         |                        |                         |             | X25        |            |                      |                    |              |
| The audit firm is always objective in its judgements.   |                         |                        |                         |             | X26        |            |                      |                    |              |
| The importance of the auditor's independence is overrated.  |                         |                        |                         |             |            |            |                      |                    | X28          |
| Client retention is a determining factor in the auditor's ultimate decisions  |                         |                        |                         |             |            |            |                      |                    | X30          |
| The auditor usually notices inconsistencies in explanations   |                         |                        | X31                     |             |            |            |                      |                    |              |
| The auditor does not like to decide until she/he has looked at all of the readily available information.                  |                         |                        | X32                     |             |            |            |                      |                    |              |
| The auditor frequently questions things that he/she sees or hears   |                         |                        | X33                     |             |            |            |                      |                    |              |
| Auditors have to trust management to be able to perform the audit   |                         |                        |                         |             |            |            |                      | X39                |              |

# Appendix B.2 Statistical results for clients

## Appendix B.2.1 Initial overall Cronbach Alpha for the clients

| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | Item-test<br>correlation | Item-rest<br>correlation | Average<br>Inter-item<br>covariance | <u>Alpha</u>     | Test for items with an alpha greater than the alpha |
|-------------|------------|-------------|--------------------------|--------------------------|-------------------------------------|------------------|---|
| X1          | 143        | +           | 0.2649                   | 0.1862                   | 0.1455                              | 0.7764           | FALSE   |
| X2          | 143        | +           | 0.346                    | 0.2904                   | 0.1445                              | 0.7727           | FALSE   |
| X3          | 143        | +           | 0.1501                   | 0.0634                   | 0.1492                              | 0.7818           | TRUE  |
| X4          | 142        | +           | 0.2375                   | 0.174                    | 0.1469                              | 0.7764           | FALSE   |
| X5          | 143        | +           | 0.1943                   | 0.1526                   | 0.1488                              | 0.7768           | FALSE   |
| X6          | 142        | +           | 0.3243                   | 0.2775                   | 0.1458                              | 0.7735           | FALSE   |
| X7          | 143        | +           | 0.4045                   | 0.3619                   | 0.1445                              | 0.7716           | FALSE   |
| X8          | 143        | +           | 0.4517                   | 0.3829                   | 0.1396                              | 0.7685           | FALSE   |
| X9          | 143        | +           | 0.5598                   | 0.4925                   | 0.1347                              | 0.7626           | FALSE   |
| X10         | 143        | +           | 0.4402                   | 0.3828                   | 0.1414                              | 0.7693           | FALSE   |
| X11         | 143        | +           | 0.3427                   | 0.3016                   | 0.1461                              | 0.7734           | FALSE   |
| X12         | 143        | +           | 0.1726                   | 0.1003                   | 0.1486                              | 0.7793           | TRUE  |
| X13         | 143        | +           | 0.1197                   | 0.0852                   | 0.1503                              | 0.7782           | TRUE  |
| X14         | 143        | +           | 0.3155                   | 0.2201                   | 0.1429                              | 0.7757<br>0.7635 | FALSE<br>FALSE                                      |
| X15<br>X16  | 143        | +           | 0.5307                   | 0.4478                   | 0.1336                              |                  |   |
|             | 143        | +           | 0.0911                   | 0.054                    | 0.1506                              | 0.7787           | TRUE<br>FALSE                                       |
| X17<br>X18  | 142<br>143 | +           | 0.227<br>0.1679          | 0.1893<br>0.1379         | 0.1484<br>0.1498                    | 0.7761<br>0.7774 | FALSE   |
| X19         | 143        |             | 0.1662                   | 0.1379                   | 0.1498                              | 0.7774           | TRUE  |
| X20         | 143        | +           | 0.1002                   | 0.2399                   | 0.1487                              | 0.762            | FALSE   |
| X21         | 143        | +           | 0.0772                   | 0.0442                   | 0.1509                              | 0.7741           | TRUE  |
| X22         | 143        | +           | 0.321                    | 0.2757                   | 0.1461                              | 0.7737           | FALSE   |
| X23         | 143        | · <u>-</u>  | 0.4142                   | 0.3206                   | 0.1384                              | 0.7704           | FALSE   |
| X24         | 143        | _           | 0.4874                   | 0.3939                   | 0.1347                              | 0.7665           | FALSE   |
| X25         | 157        | +           | 0.2127                   | 0.1287                   | 0.1474                              | 0.7789           | TRUE  |
| X26         | 157        | +           | 0.2727                   | 0.2029                   | 0.1461                              | 0.7752           | FALSE   |
| X27         | 156        | +           | 0.2987                   | 0.1923                   | 0.1442                              | 0.7783           | TRUE  |
| X28         | 157        | -           | 0.471                    | 0.3894                   | 0.1346                              | 0.7656           | FALSE   |
| X29         | 157        | +           | 0.3685                   | 0.271                    | 0.1413                              | 0.7737           | FALSE   |
| X30         | 157        | +           | 0.5089                   | 0.4164                   | 0.1357                              | 0.7651           | FALSE   |
| X31         | 155        | +           | 0.3573                   | 0.2692                   | 0.1418                              | 0.7723           | FALSE   |
| X32         | 157        | +           | 0.2604                   | 0.2002                   | 0.1465                              | 0.7749           | FALSE   |
| X33         | 157        | +           | 0.3685                   | 0.2911                   | 0.1426                              | 0.772            | FALSE   |
| X34         | 156        | +           | 0.2521                   | 0.1744                   | 0.1470                              | 0.7771           | FALSE   |
| X35         | 157        | -           | 0.5056                   | 0.4061                   | 0.1341                              | 0.7639           | FALSE   |
| X36         | 156        | -           | 0.387                    | 0.3069                   | 0.1402                              | 0.7721           | FALSE   |
| X38         | 156        | +           | 0.4365                   | 0.3534                   | 0.1397                              | 0.7691           | FALSE   |
| X39         | 156        | +           | 0.3875                   | 0.3007                   | 0.1420                              | 0.7718           | FALSE   |
| Test scale  |            |             |                          |                          | 0.1436                              | 0.7781           |   |

Appendix B.2.2 Removing items with low correlation in clients' questionnaire

| REMO        | VING '     | <u>'X3'</u> |                    |                    |                       | - 1              | REMO        | VING '     | <b>(12</b> ' |                    |                    |                       |                 | REMO\       | /ING 'X    | <u>13'</u>  |                    |                    |                       |                 |
|-------------|------------|-------------|--------------------|--------------------|-----------------------|------------------|-------------|------------|--------------|--------------------|--------------------|-----------------------|-----------------|-------------|------------|-------------|--------------------|--------------------|-----------------------|-----------------|
| 14          | Oha        | C: aua      | Item-test          | Item-rest          | Average<br>Inter-item | Almha            | lt a va     | Oha        | Ci           | Item-test          | Item-rest          | Average<br>inter-item | Almha           | 14.0        | Oha        | C:          | Item-test          | Item-rest          | Average<br>inter-item | Almha           |
| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | <u>correlation</u> | <u>correlation</u> | <u>covariance</u>     | <u>Alpha</u>     | <u>Item</u> | <u>Obs</u> | <u>Sign</u>  | <u>correlation</u> | <u>correlation</u> | <u>covariance</u>     | <u>Alpha</u>    | <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | <u>correlation</u> | <u>correlation</u> | <u>covariance</u>     | <u>Alpha</u>    |
| X1          | 143        | +           | 0.2654             | 0.186              | 0.1514                | 0.7803           | X1          | 143        | +            | 0.2718             | 0.1918             | 0.1569                | 0.7814          | X1          | 143        | +           | 0.2701             | 0.1897             | 0.1650                | 0.7818          |
| X2          | 143        | +           | 0.3482             | 0.2922             | 0.1503                | 0.7765           | X2          | 143        | +            | 0.3321             | 0.2749             | 0.1564                | 0.7783          | X2          | 143        | +           | 0.3311             | 0.2736             | 0.1645                | 0.7786          |
| X4          | 142        | +           | 0.2343             | 0.1701             | 0.1530                | 0.7804           | X4          | 142        | +            | 0.2428             | 0.1781             | 0.1585                | 0.7814          | X4          | 142        | +           | 0.2373             | 0.1723             | 0.1669                | 0.7819          |
| X5          | 143        | +           | 0.1916             | 0.1494             | 0.1549                | 0.7806           | X5          | 143        | +            | 0.1938             | 0.1512             | 0.1607                | 0.7819          | X5          | 143        | +           | 0.1887             | 0.1459             | 0.1691                | 0.7823          |
| X6          | 142        | +           | 0.3181             | 0.2708             | 0.1518                | 0.7775           | X6          | 142        | +            | 0.3137             | 0.2658             | 0.1576                | 0.7789          | X6          | 142        | +           | 0.3036             | 0.2551             | 0.1660                | 0.7794          |
| X7          | 143        | +           | 0.3986             | 0.3553             | 0.1505                | 0.7756           | X7          | 143        | +            | 0.3958             | 0.352              | 0.1561                | 0.777           | X7          | 143        | +           | 0.3932             | 0.3492             | 0.1643                | 0.7773          |
| X8          | 143        | +           | 0.4519             | 0.3824             | 0.1453                | 0.7724           | X8          | 143        | +            | 0.4458             | 0.3751             | 0.1509                | 0.774           | X8          | 143        | +           | 0.4427             | 0.3716             | 0.1588                | 0.7744          |
| X9          | 143        | +           | 0.5498             | 0.4808             | 0.1405                | 0.7672           | X9          | 143        | +            | 0.548              | 0.478              | 0.1457                | 0.7686          | X9          | 143        | +           | 0.5491             | 0.4791             | 0.1532                | 0.7687          |
| X10         | 143        | +           | 0.4373             | 0.3792             | 0.1473                | 0.7733           | X10         | 143        | +            | 0.4266             | 0.3673             | 0.1531                | 0.775           | X10         | 143        | +           | 0.4275             | 0.3681             | 0.1609                | 0.7752          |
| X11         | 143        | +           | 0.3381             | 0.2965             | 0.1521                | 0.7774           | X11         | 143        | +            | 0.332              | 0.2898             | 0.1579                | 0.7788          | X11         | 143        | +           | 0.3274             | 0.285              | 0.1662                | 0.7792          |
| X12         | 143        | +           | 0.1742             | 0.1013             | 0.1546                | 0.7831           | X13         | 143        | +            | 0.1142             | 0.079              | 0.1624                | 0.7833          | X14         | 143        | +           | 0.3074             | 0.2093             | 0.1626                | 0.7819          |
| X13         | 143        | +           | 0.1162             | 0.0813             | 0.1565                | 0.782            | X14         | 143        | +            | 0.3076             | 0.2098             | 0.1546                | 0.7816          | X15         | 143        | +           | 0.5496             | 0.4667             | 0.1506                | 0.768           |
| X14         | 143        | +           | 0.3142             | 0.2178             | 0.1488                | 0.7798           | X15         | 143        | +            | 0.5441             | 0.4608             | 0.1435                | 0.7681          | X16         | 143        | +           | 0.0879             | 0.05               | 0.1711                | 0.7841          |
| X15         | 143        | +           | 0.5397             | 0.4569             | 0.1386                | 0.767            | X16         | 143        | +            | 0.1012             | 0.0635             | 0.1625                | 0.7836          | X17         | 142        | +           | 0.2149             | 0.1761             | 0.1688                | 0.7818          |
| X16         | 143        | +           | 0.0965             | 0.0591             | 0.1567                | 0.7824           | X17         | 142        | +            | 0.2289             | 0.1905             | 0.1603                | 0.7812          | X18         | 143        | +           | 0.1603             | 0.1296             | 0.1703                | 0.7829          |
| X17         | 142        | +           | 0.2311             | 0.1932             | 0.1544                | 0.7799           | X18         | 143        | +            | 0.1717             | 0.1412             | 0.1618                | 0.7824          | X19         | 143        | +           | 0.1687             | 0.0745             | 0.1689                | 0.7876          |
| X18         | 143        | +           | 0.1611             | 0.1308             | 0.1561                | 0.7813           | X19         | 143        | +            | 0.172              | 0.0782             | 0.1605                | 0.7871          | X20         | 142        | +           | 0.3098             | 0.2216             | 0.1628                | 0.7805          |
| X19         | 143        | +           | 0.1592             | 0.0661             | 0.1551                | 0.7863           | X20         | 142        | +            | 0.3068             | 0.2187             | 0.1549                | 0.7803          | X21         | 143        | +           | 0.0715             | 0.0378             | 0.1715                | 0.7843          |
| X20         | 142        | +           | 0.311              | 0.2241             | 0.1491                | 0.7787           | X21         | 143        | +            | 0.0807             | 0.047              | 0.1629                | 0.7839          | X22         | 143        | +           | 0.3029             | 0.256              | 0.1663                | 0.7796          |
| X21         | 143        | +           | 0.0798             | 0.0465             | 0.1570                | 0.7826           | X22         | 143        | +            | 0.3125             | 0.2661             | 0.1579                | 0.779           | X23         | 143        | -           | 0.4198             | 0.3244             | 0.1568                | 0.7758          |
| X22         | 143<br>143 | +           | 0.319              | 0.2732             | 0.1521                | 0.7776           | X23<br>X24  | 143        | -            | 0.4175             | 0.3223             | 0.1492                | 0.7757          | X24         | 143        | -           | 0.5                | 0.4055             | 0.1522                | 0.7714          |
| X23<br>X24  | 143        | -           | 0.4149<br>0.4939   | 0.3205<br>0.4002   | 0.1440<br>0.1399      | 0.7744<br>0.7702 | X24<br>X25  | 143<br>157 | -            | 0.4946<br>0.2149   | 0.3999<br>0.1292   | 0.1450<br>0.1590      | 0.7715<br>0.784 | X25<br>X26  | 157<br>157 | +           | 0.2228<br>0.2808   | 0.1369<br>0.21     | 0.1670<br>0.1657      | 0.784<br>0.7804 |
| X25         | 157        |             | 0.4939             | 0.4002             | 0.1533                | 0.7702           | X26         | 157        | +            | 0.2149             | 0.1292             | 0.1575                | 0.784           | X27         | 156        | +           | 0.2000             | 0.1924             | 0.1637                | 0.7838          |
| X26         | 157        | +           | 0.2141             | 0.1293             | 0.1533                | 0.7627           | X27         | 156        | +            | 0.3002             | 0.2116             | 0.1575                | 0.7835          | X28         | 157        | -           | 0.4889             | 0.1924             | 0.1633                | 0.7636          |
| X27         | 156        | +           | 0.2790             | 0.2093             | 0.1318                | 0.77821          | X28         | 157        | -            | 0.4854             | 0.4007             | 0.1333                | 0.7633          | X29         | 157        | +           | 0.3837             | 0.404              | 0.1522                | 0.7784          |
| X28         | 157        | _           | 0.4811             | 0.3982             | 0.1397                | 0.7621           | X29         | 157        | +            | 0.3771             | 0.279              | 0.1521                | 0.7785          | X30         | 157        | +           | 0.5122             | 0.4203             | 0.1540                | 0.7707          |
| X29         | 157        | +           | 0.3707             | 0.2728             | 0.1470                | 0.7775           | X30         | 157        | +            | 0.5087             | 0.4165             | 0.1321                | 0.7707          | X31         | 155        | +           | 0.3662             | 0.2773             | 0.1606                | 0.7774          |
| X30         | 157        | +           | 0.5131             | 0.4212             | 0.1411                | 0.769            | X31         | 155        | +            | 0.3664             | 0.2777             | 0.1526                | 0.7771          | X32         | 157        | +           | 0.278              | 0.2171             | 0.1659                | 0.7797          |
| X31         | 155        | +           | 0.3535             | 0.2647             | 0.1477                | 0.7764           | X32         | 157        | +            | 0.2764             | 0.2156             | 0.1578                | 0.7794          | X33         | 157        | +           | 0.3923             | 0.3149             | 0.1610                | 0.7764          |
| X32         | 157        | +           | 0.2765             | 0.2162             | 0.1521                | 0.7782           | X33         | 157        | +            | 0.3908             | 0.3135             | 0.1531                | 0.7762          | X34         | 156        | +           | 0.2573             | 0.1787             | 0.1669                | 0.7824          |
| X33         | 157        | +           | 0.3872             | 0.3102             | 0.1477                | 0.775            | X34         | 156        | +            | 0.2569             | 0.1784             | 0.1587                | 0.7822          | X35         | 157        | -           | 0.515              | 0.4137             | 0.1518                | 0.7691          |
| X34         | 156        | +           | 0.252              | 0.1738             | 0.1531                | 0.781            | X35         | 157        | -            | 0.5115             | 0.4092             | 0.1444                | 0.769           | X36         | 156        | _           | 0.3839             | 0.2987             | 0.1596                | 0.7783          |
| X35         | 157        | -           | 0.502              | 0.4006             | 0.1397                | 0.7683           | X36         | 156        | _            | 0.384              | 0.2995             | 0.1518                | 0.778           | X38         | 156        | +           | 0.4463             | 0.3628             | 0.1581                | 0.7741          |
| X36         | 156        | _           | 0.3831             | 0.3007             | 0.1463                | 0.7765           | X38         | 156        | +            | 0.4439             | 0.3604             | 0.1504                | 0.774           | X39         | 156        | +           | 0.4023             | 0.3153             | 0.1607                | 0.7767          |
| X38         | 156        | +           | 0.4469             | 0.364              | 0.1450                | 0.7725           | X39         | 156        | +            | 0.4009             | 0.3138             | 0.1528                | 0.7765          |             |            | -           | 22.023             | 2.0.00             |                       |                 |
| X39         | 156        | +           | 0.3998             | 0.3131             | 0.1474                | 0.7752           |             |            | -            | 3330               | 3.2.30             | 5526                  | 333             |             |            |             |                    |                    |                       |                 |
| Test s      | scale      |             |                    |                    | 0.1492                | 0.7818           | Test so     | cale       |              |                    |                    | 0.1546                | 0.7831          | Test sc     | ale        |             |                    |                    | 0.1624                | 0.7833          |

Appendix B.2.2 Removing items with low correlation in clients' questionnaire (continued)

| REMOVING 'X19' |            |             |                                 |                          |                                     |                  |                  | REMOVING 'X21' |             |                          |                          |                                     |                  |            |            |             |                                 |                                 |                                     |                  |
|----------------|------------|-------------|---------------------------------|--------------------------|-------------------------------------|------------------|------------------|----------------|-------------|--------------------------|--------------------------|-------------------------------------|------------------|------------|------------|-------------|---------------------------------|---------------------------------|-------------------------------------|------------------|
| REMOV          | ING 'X16   | <u>5'</u>   |                                 |                          |                                     |                  |                  |                |             |                          |                          |                                     |                  |            |            |             |                                 |                                 |                                     |                  |
| <u>ltem</u>    | <u>Obs</u> | <u>Sign</u> | <u>Item-test</u><br>correlation | ltem-rest<br>correlation | Average<br>inter-item<br>covariance | <u>Alpha</u>     | -<br><u>Item</u> | <u>Obs</u>     | <u>Sign</u> | ltem-test<br>correlation | ltem-rest<br>correlation | Average<br>inter-item<br>covariance | <u>Alpha</u>     | -<br>Item  | <u>Obs</u> | <u>Sign</u> | <u>Item-test</u><br>correlation | <u>Item-rest</u><br>correlation | Average<br>inter-item<br>covariance | <u>Alpha</u>     |
| X1             | 143        | +           | 0.2666                          | 0.1859                   | 0.1744                              | 0.7828           | X1               | 143            | +           | 0.2661                   | 0.1843                   | 0.1820                              | 0.7874           | - X1       | 143        | +           | 0.2623                          | 0.1804                          | 0.1938                              | 0.789            |
| X2             | 143        | +           | 0.3264                          | 0.2686                   | 0.1738                              | 0.7796           | X2               | 143            | +           | 0.322                    | 0.2634                   | 0.1814                              | 0.7842           | X2         | 143        | +           | 0.3196                          | 0.2607                          | 0.1931                              | 0.7858           |
| X4             | 142        | +           | 0.2343                          | 0.169                    | 0.1763                              | 0.7828           | X4               | 142            | +           | 0.2387                   | 0.1728                   | 0.1838                              | 0.7872           | X4         | 142        | +           | 0.2376                          | 0.1716                          | 0.1956                              | 0.7887           |
| X5             | 143        | +           | 0.1844                          | 0.1415                   | 0.1786                              | 0.7832           | X5               | 143            | +           | 0.1985                   | 0.1553                   | 0.1861                              | 0.7873           | X5         | 143        | +           | 0.1901                          | 0.1467                          | 0.1981                              | 0.7889           |
| X6             | 142        | +           | 0.2984                          | 0.2497                   | 0.1754                              | 0.7804           | X6               | 142            | +           | 0.2967                   | 0.2473                   | 0.1830                              | 0.7849           | X6         | 142        | +           | 0.291                           | 0.2414                          | 0.1948                              | 0.7865           |
| X7             | 143        | +           | 0.3925                          | 0.3483                   | 0.1734                              | 0.7781           | X7               | 143            | +           | 0.4024                   | 0.3581                   | 0.1807                              | 0.7823           | X7         | 143        | +           | 0.3969                          | 0.3523                          | 0.1924                              | 0.7839           |
| X8             | 143        | +           | 0.4425                          | 0.3712                   | 0.1677                              | 0.7752           | X8               | 143            | +           | 0.4555                   | 0.3843                   | 0.1744                              | 0.7792           | X8         | 143        | +           | 0.4557                          | 0.3843                          | 0.1855                              | 0.7807           |
| X9             | 143        | +           | 0.5539                          | 0.4841                   | 0.1615                              | 0.7693           | X9               | 143            | +           | 0.5574                   | 0.4871                   | 0.1682                              | 0.7737           | X9         | 143        | +           | 0.5619                          | 0.492                           | 0.1787                              | 0.775            |
| X10            | 143        | +           | 0.4284                          | 0.3689                   | 0.1698                              | 0.776            | X10              | 143            | +           | 0.4434                   | 0.384                    | 0.1767                              | 0.7799           | X10        | 143        | +           | 0.4426                          | 0.3831                          | 0.1880                              | 0.7814           |
| X11            | 143        | +           | 0.3178                          | 0.2749                   | 0.1756                              | 0.7802           | X11              | 143            | +           | 0.3292                   | 0.2862                   | 0.1830                              | 0.7844           | X11        | 143        | +           | 0.3251                          | 0.2819                          | 0.1948                              | 0.7859           |
| X14            | 143        | +           | 0.3109                          | 0.2128                   | 0.1715                              | 0.7826           | X14              | 143            | +           | 0.3091                   | 0.2097                   | 0.1790                              | 0.7874           | X14        | 143        | +           | 0.3153                          | 0.2161                          | 0.1901                              | 0.7886           |
| X15            | 143        | +           | 0.5541                          | 0.4715                   | 0.1587                              | 0.7685           | X15              | 143            | +           | 0.5637                   | 0.4812                   | 0.1650                              | 0.7727           | X15        | 143        | +           | 0.569                           | 0.4871                          | 0.1752                              | 0.7738           |
| X17            | 142        | +           | 0.1934                          | 0.1542                   | 0.1786                              | 0.783            | X17              | 142            | +           | 0.1856                   | 0.1458                   | 0.1866                              | 0.7876           | X17        | 142        | +           | 0.1752                          | 0.1352                          | 0.1987                              | 0.7893           |
| X18            | 143        | +           | 0.1484                          | 0.1176                   | 0.1800<br>0.1783                    | 0.7839<br>0.7884 | X18<br>X20       | 143            | +           | 0.1237                   | 0.0923                   | 0.1882<br>0.1796                    | 0.7887<br>0.7863 | X18        | 143        | +           | 0.1107                          | 0.0792<br>0.2096                | 0.2004                              | 0.7904           |
| X19<br>X20     | 143<br>142 | +           | 0.1704<br>0.3081                | 0.0761<br>0.2195         | 0.1763                              | 0.7804           | X20<br>X21       | 142<br>143     | +           | 0.3023<br>0.0536         | 0.2124<br>0.0193         | 0.1796                              | 0.7899           | X20<br>X22 | 142<br>143 | +           | 0.2998<br>0.2718                | 0.2096                          | 0.1912<br>0.1957                    | 0.7879<br>0.7871 |
| X21            | 143        | +           | 0.0612                          | 0.0273                   | 0.1719                              | 0.7854           | X21              | 143            | +           | 0.0336                   | 0.0193                   | 0.1837                              | 0.7854           | X23        | 143        | -           | 0.4216                          | 0.2233                          | 0.1836                              | 0.7828           |
| X21            | 143        | +           | 0.0012                          | 0.2438                   | 0.1758                              | 0.7807           | X23              | 143            | -<br>-      | 0.4181                   | 0.3211                   | 0.1037                              | 0.7815           | X23<br>X24 | 143        | _           | 0.4210                          | 0.4196                          | 0.1774                              | 0.7626           |
| X23            | 143        |             | 0.4215                          | 0.3261                   | 0.1654                              | 0.7766           | X24              | 143            | _           | 0.5088                   | 0.4139                   | 0.1670                              | 0.7765           | X25        | 157        | +           | 0.2201                          | 0.1328                          | 0.1960                              | 0.7912           |
| X24            | 143        | _           | 0.5052                          | 0.4111                   | 0.1603                              | 0.7719           | X25              | 157            | +           | 0.2166                   | 0.1293                   | 0.1843                              | 0.7898           | X26        | 157        | +           | 0.2601                          | 0.1881                          | 0.1951                              | 0.7881           |
| X25            | 157        | +           | 0.224                           | 0.1379                   | 0.1763                              | 0.7849           | X26              | 157            | +           | 0.2634                   | 0.1915                   | 0.1832                              | 0.7865           | X27        | 156        | +           | 0.287                           | 0.1757                          | 0.1923                              | 0.7916           |
| X26            | 157        | +           | 0.2822                          | 0.2114                   | 0.1749                              | 0.7812           | X27              | 156            | +           | 0.2889                   | 0.1779                   | 0.1807                              | 0.79             | X28        | 157        | _           | 0.5154                          | 0.43                            | 0.1769                              | 0.7764           |
| X27            | 156        | +           | 0.2977                          | 0.1882                   | 0.1728                              | 0.7849           | X28              | 157            | -           | 0.5126                   | 0.4271                   | 0.1664                              | 0.775            | X29        | 157        | +           | 0.396                           | 0.2978                          | 0.1863                              | 0.7847           |
| X28            | 157        | -           | 0.4949                          | 0.4102                   | 0.1603                              | 0.7711           | X29              | 157            | +           | 0.3958                   | 0.2977                   | 0.1751                              | 0.7832           | X30        | 157        | +           | 0.5355                          | 0.4463                          | 0.1791                              | 0.7764           |
| X29            | 157        | +           | 0.3868                          | 0.2888                   | 0.1683                              | 0.7791           | X30              | 157            | +           | 0.5329                   | 0.4432                   | 0.1685                              | 0.775            | X31        | 155        | +           | 0.3713                          | 0.282                           | 0.1879                              | 0.7841           |
| X30            | 157        | +           | 0.5155                          | 0.4242                   | 0.1624                              | 0.7713           | X31              | 155            | +           | 0.3677                   | 0.2781                   | 0.1768                              | 0.7828           | X32        | 157        | +           | 0.2751                          | 0.2135                          | 0.1946                              | 0.7867           |
| X31            | 155        | +           | 0.3653                          | 0.2762                   | 0.1696                              | 0.7784           | X32              | 157            | +           | 0.2769                   | 0.2154                   | 0.1828                              | 0.7851           | X33        | 157        | +           | 0.3888                          | 0.3106                          | 0.1888                              | 0.7835           |
| X32            | 157        | +           | 0.2777                          | 0.2167                   | 0.1752                              | 0.7806           | X33              | 157            | +           | 0.3904                   | 0.3123                   | 0.1774                              | 0.7819           | X34        | 156        | +           | 0.2579                          | 0.1788                          | 0.1955                              | 0.7892           |
| X33            | 157        | +           | 0.3911                          | 0.3136                   | 0.1700                              | 0.7773           | X34              | 156            | +           | 0.2557                   | 0.1765                   | 0.1839                              | 0.7879           | X35        | 157        | -           | 0.5125                          | 0.4107                          | 0.1781                              | 0.7766           |
| X34            | 156        | +           | 0.2515                          | 0.1727                   | 0.1763                              | 0.7835           | X35              | 157            | -           | 0.5137                   | 0.411                    | 0.1673                              | 0.7749           | X36        | 156        | -           | 0.3971                          | 0.3093                          | 0.1864                              | 0.7847           |
| X35            | 157        | -           | 0.5201                          | 0.42                     | 0.1600                              | 0.7697           | X36              | 156            | -           | 0.394                    | 0.3066                   | 0.1754                              | 0.7834           | X38        | 156        | +           | 0.4454                          | 0.3615                          | 0.1852                              | 0.7811           |
| X36            | 156        | -           | 0.3907                          | 0.3054                   | 0.1681                              | 0.7787           | X38              | 156            | +           | 0.4435                   | 0.3593                   | 0.1742                              | 0.7797           | X39        | 156        | +           | 0.4132                          | 0.3266                          | 0.1877                              | 0.7831           |
| X38            | 156        | +           | 0.4476                          | 0.3642                   | 0.1668                              | 0.7749           | X39              | 156            | +           | 0.4122                   | 0.3254                   | 0.1765                              | 0.7817           |            |            |             |                                 |                                 |                                     |                  |
| X39            | 156        | +           | 0.407                           | 0.3203                   | 0.1694                              | 0.7773           |                  |                |             |                          |                          |                                     |                  |            |            |             |                                 |                                 |                                     |                  |
| Test so        | ale        |             |                                 |                          | 0.1711                              | 0.7841           | Test s           | cale           |             |                          |                          | 0.1783                              | 0.7884           | Test       | scale      |             |                                 |                                 | 0.1893                              | 0.7899           |

Appendix B.2.2 Removing items with low correlation in clients' questionnaire (continued)

| REMO        | VING '     | X25'        |             |             | Avenere                             |        | REMO        | OVING      | <u>'X27'</u> |             |             | A.,                             |              |
|-------------|------------|-------------|-------------|-------------|-------------------------------------|--------|-------------|------------|--------------|-------------|-------------|---------------------------------|--------------|
|             |            |             | Item-test   | Item-rest   | <u>Average</u><br><u>inter-item</u> |        |             |            |              | Item-test   | Item-rest   | <u>Average</u>                  |              |
| <u>Item</u> | <u>Obs</u> | <u>Sign</u> | correlation | correlation | covariance                          | Alpha  | <u>Item</u> | <u>Obs</u> | <u>Sign</u>  | correlation | correlation | <u>inter-item</u><br>covariance | <u>Alpha</u> |
| X1          | 143        | +           | 0.272       | 0.189       | 0.2005                              | 0.7901 | X1          | 143        | +            | 0.2751      | 0.1898      | 0.2053                          | 0.7932       |
| X2          | 143        | +           | 0.3294      | 0.2699      | 0.1999                              | 0.7868 | X2          | 143        | +            | 0.3201      | 0.2586      | 0.2051                          | 0.7902       |
| X4          | 142        | +           | 0.2452      | 0.1782      | 0.2026                              | 0.7899 | X4          | 142        | +            | 0.2339      | 0.1647      | 0.2080                          | 0.7934       |
| X5          | 143        | +           | 0.1996      | 0.1555      | 0.2053                              | 0.7901 | X5          | 143        | +            | 0.1998      | 0.1546      | 0.2105                          | 0.7933       |
| X6          | 142        | +           | 0.3119      | 0.2621      | 0.2015                              | 0.7873 | X6          | 142        | +            | 0.3242      | 0.2734      | 0.2060                          | 0.79         |
| X7          | 143        | +           | 0.4039      | 0.3588      | 0.1993                              | 0.7851 | X7          | 143        | +            | 0.4056      | 0.3593      | 0.2040                          | 0.788        |
| X8          | 143        | +           | 0.4544      | 0.3817      | 0.1923                              | 0.7822 | X8          | 143        | +            | 0.4686      | 0.3948      | 0.1962                          | 0.7847       |
| X9          | 143        | +           | 0.5602      | 0.4888      | 0.1853                              | 0.7765 | X9          | 143        | +            | 0.5741      | 0.5021      | 0.1887                          | 0.7788       |
| X10         | 143        | +           | 0.4408      | 0.3801      | 0.1949                              | 0.7829 | X10         | 143        | +            | 0.4322      | 0.3692      | 0.1999                          | 0.7863       |
| X11         | 143        | +           | 0.3219      | 0.2779      | 0.2021                              | 0.7874 | X11         | 143        | +            | 0.3146      | 0.269       | 0.2072                          | 0.7905       |
| X14         | 143        | +           | 0.3251      | 0.2245      | 0.1966                              | 0.7896 | X14         | 143        | +            | 0.3316      | 0.2285      | 0.2009                          | 0.7926       |
| X15         | 143        | +           | 0.568       | 0.4844      | 0.1816                              | 0.7753 | X15         | 143        | +            | 0.5696      | 0.4836      | 0.1855                          | 0.7784       |
| X17         | 142        | +           | 0.1807      | 0.1401      | 0.2060                              | 0.7905 | X17         | 142        | +            | 0.1787      | 0.137       | 0.2111                          | 0.7936       |
| X18         | 143        | +           | 0.1161      | 0.084       | 0.2079                              | 0.7917 | X18         | 143        | +            | 0.1184      | 0.0855      | 0.2130                          | 0.7947       |
| X20         | 142        | +           | 0.293       | 0.2009      | 0.1987                              | 0.7898 | X20         | 142        | +            | 0.2795      | 0.1841      | 0.2042                          | 0.7938       |
| X22         | 143        | +           | 0.2727      | 0.2234      | 0.2029                              | 0.7884 | X22         | 143        | +            | 0.2677      | 0.2168      | 0.2080                          | 0.7916       |
| X23         | 143        | -           | 0.4329      | 0.3353      | 0.1896                              | 0.7837 | X23         | 143        | -            | 0.4546      | 0.3562      | 0.1927                          | 0.7857       |
| X24         | 143        | -           | 0.5136      | 0.4174      | 0.1838                              | 0.7792 | X24         | 143        | -            | 0.5275      | 0.4301      | 0.1870                          | 0.7816       |
| X26         | 157        | +           | 0.256       | 0.1825      | 0.2024                              | 0.7896 | X26         | 157        | +            | 0.2605      | 0.1848      | 0.2073                          | 0.7927       |
| X27         | 156        | +           | 0.2748      | 0.1617      | 0.2004                              | 0.7941 | X28         | 157        | -            | 0.5164      | 0.4284      | 0.1865                          | 0.7802       |
| X28         | 157        | -           | 0.52        | 0.4343      | 0.1827                              | 0.7772 | X29         | 157        | +            | 0.3913      | 0.2868      | 0.1980                          | 0.7899       |
| X29         | 157        | +           | 0.3943      | 0.2947      | 0.1934                              | 0.7865 | X30         | 157        | +            | 0.5406      | 0.4444      | 0.1894                          | 0.7806       |
| X30         | 157        | +           | 0.5434      | 0.4531      | 0.1851                              | 0.7773 | X31         | 155        | +            | 0.3764      | 0.283       | 0.1996                          | 0.789        |
| X31         | 155        | +           | 0.3659      | 0.275       | 0.1952                              | 0.786  | X32         | 157        | +            | 0.2822      | 0.2182      | 0.2067                          | 0.791        |
| X32         | 157        | +           | 0.2697      | 0.2071      | 0.2021                              | 0.7883 | X33         | 157        | +            | 0.3831      | 0.3001      | 0.2007                          | 0.7883       |
| X33         | 157        | +           | 0.3894      | 0.3101      | 0.1958                              | 0.7849 | X34         | 156        | +            | 0.2503      | 0.1666      | 0.2082                          | 0.7943       |
| X34         | 156        | +           | 0.262       | 0.1815      | 0.2026                              | 0.7905 | X35         | 157        | -            | 0.4908      | 0.3821      | 0.1903                          | 0.7829       |
| X35         | 157        | -           | 0.4992      | 0.3935      | 0.1853                              | 0.7788 | X36         | 156        | -            | 0.4143      | 0.3268      | 0.1965                          | 0.7883       |
| X36         | 156        | -           | 0.4068      | 0.3198      | 0.1926                              | 0.7856 | X38         | 156        | +            | 0.4398      | 0.3505      | 0.1970                          | 0.7861       |
| X38         | 156        | +           | 0.4423      | 0.3564      | 0.1921                              | 0.7826 | X39         | 156        | +            | 0.4376      | 0.3471      | 0.1978                          | 0.7863       |
| X39         | 156        | +           | 0.4218      | 0.334       | 0.1940                              | 0.784  |             |            |              |             |             |                                 |              |
| Test s      | cale       |             |             |             | 0.1960                              | 0.7912 | Test        | scale      |              |             |             | 0.2004                          | 0.7941       |

## Appendix B.2.3 Principal Component Analysis - clients test 1

Factor analysis/correlation

Method: principal-component factors

Rotation: (unrotated)

Number of obs

Retained factors

Number of params

= 133

| <u>Factor</u> | <u>Eigenvalue</u> | <u>Difference</u> | <u>Proportion</u> | <u>Cumulativ</u> | <u>/e</u>      |
|---------------|-------------------|-------------------|-------------------|------------------|----------------|
| Factor1       | 4.6151            | 1.7097            | 0.1538            | 0.1538           |                |
| Factor2       | 2.9053            | 0.3837            | 0.0968            | 0.2507           |                |
| Factor3       | 2.5216            | 1.0259            | 0.0841            | 0.3347           |                |
| Factor4       | 1.4957            | 0.0256            | 0.0499            | 0.3846           |                |
| Factor5       | 1.4701            | 0.1336            | 0.0490            | 0.4336           | Eigenvalue     |
| Factor6       | 1.3365            | 0.0286            | 0.0445            | 0.4781           | greater than 1 |
| Factor7       | 1.3079            | 0.0706            | 0.0436            | 0.5217           |                |
| Factor8       | 1.2373            | 0.0965            | 0.0412            | 0.5630           |                |
| Factor9       | 1.1408            | 0.0095            | 0.0380            | 0.6010           |                |
| Factor10      | 1.1313            | 0.1654            | 0.0377            | 0.6387           |                |
| Factor11      | 0.9659            | 0.0573            | 0.0322            | 0.6709           |                |
| Factor12      | 0.9086            | 0.0372            | 0.0303            | 0.7012           |                |
| Factor13      | 0.8714            | 0.0629            | 0.0290            | 0.7302           |                |
| Factor14      | 0.8085            | 0.0651            | 0.0270            | 0.7572           |                |
| Factor15      | 0.7434            | 0.0267            | 0.0248            | 0.7820           |                |
| Factor16      | 0.7167            | 0.0108            | 0.0239            | 0.8059           |                |
| Factor17      | 0.7059            | 0.0540            | 0.0235            | 0.8294           |                |
| Factor18      | 0.6519            | 0.0663            | 0.0217            | 0.8511           |                |
| Factor19      | 0.5856            | 0.0689            | 0.0195            | 0.8706           |                |
| Factor20      | 0.5167            | 0.0294            | 0.0172            | 0.8879           |                |
| Factor21      | 0.4873            | 0.0098            | 0.0162            | 0.9041           |                |
| Factor22      | 0.4775            | 0.0476            | 0.0159            | 0.9200           |                |
| Factor23      | 0.4299            | 0.0236            | 0.0143            | 0.9343           |                |
| Factor24      | 0.4062            | 0.0546            | 0.0135            | 0.9479           |                |
| Factor25      | 0.3516            | 0.0478            | 0.0117            | 0.9596           |                |
| Factor26      | 0.3038            | 0.0187            | 0.0101            | 0.9697           |                |
| Factor27      | 0.2851            | 0.0333            | 0.0095            | 0.9792           |                |
| Factor28      | 0.2518            | 0.0369            | 0.0084            | 0.9876           |                |
| Factor29      | 0.2149            | 0.0587            | 0.0072            | 0.9948           |                |
| Factor30      | 0.1562            |                   | 0.0052            | 1.0000           |                |

Appendix B.2.4 Varimax Rotation - clients test 1

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Factor10 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------------|
| X1              | 0.1355  | -0.0399 | 0.1082  | 0.1149  | -0.0087 | -0.0866 | 0.3181  | 0.4273  | 0.1761  | 0.1935   | 0.4273        |
| X2              | 0.1135  | -0.0117 | -0.1632 | 0.0232  | 0.056   | 0.1399  | 0.8034  | 0.1539  | 0.0661  | 0.0465   | 0.8034        |
| X4              | -0.0554 | -0.099  | -0.0567 | 0.7617  | -0.1072 | 0.1379  | -0.1566 | -0.0987 | 0.1138  | 0.17     | 0.7617        |
| X5              | 0.0883  | -0.0265 | -0.0121 | 0.109   | 0.0315  | 0.1397  | 0.0274  | 0.209   | -0.0088 | 0.7118   | 0.7118        |
| X6              | -0.0791 | 0.0888  | -0.1133 | 0.2786  | 0.2447  | 0.3155  | -0.0102 | 0.3531  | -0.0399 | 0.3886   | 0.3886        |
| X7              | 0.1915  | 0.0976  | 0.0661  | 0.7635  | 0.0949  | 0.1126  | 0.1725  | 0.2177  | -0.0508 | 0.0204   | 0.7635        |
| X8              | 0.2169  | -0.0519 | -0.1495 | 0.1148  | 0.1152  | 0.0864  | 0.3858  | 0.6564  | 0.1253  | 0.1409   | 0.6564        |
| X9              | 0.0772  | 0.3204  | -0.346  | 0.2716  | 0.1174  | -0.0887 | 0.0078  | 0.4901  | 0.2116  | -0.0778  | 0.4901        |
| X10             | 0.0842  | 0.4291  | 0.0227  | 0.5159  | 0.2521  | -0.1073 | 0.3266  | 0.0048  | -0.1667 | 0.0271   | 0.5159        |
| X11             | -0.0776 | 0.3143  | -0.0838 | 0.2712  | 0.2015  | -0.0133 | 0.1583  | -0.0328 | -0.0411 | 0.5195   | 0.5195        |
| X14             | 0.0754  | 0.0197  | -0.0981 | -0.0173 | -0.0188 | -0.1117 | 0.1477  | 0.1089  | 0.7686  | -0.1522  | 0.7686        |
| X15             | 0.4637  | 0.4431  | -0.2685 | 0.0357  | 0.0669  | -0.0147 | -0.1704 | 0.0682  | 0.101   | -0.1954  | 0.4637        |
| X17             | 0.1791  | -0.004  | 0.1774  | 0.0856  | 0.0866  | 0.7887  | 0.1473  | 0.0068  | -0.0995 | 0.0701   | 0.7887        |
| X18             | -0.0883 | -0.0261 | -0.0063 | 0.1065  | 0.0258  | 0.6352  | 0.0205  | 0.0417  | -0.1556 | 0.3132   | 0.6352        |
| X20             | -0.0014 | 0.6866  | -0.0765 | 0.1915  | -0.0655 | 0.0705  | -0.1946 | 0.0523  | -0.1738 | -0.0102  | 0.6866        |
| X22             | -0.1787 | 0.3289  | -0.2793 | 0.0724  | 0.0468  | 0.6119  | -0.0477 | 0.0487  | 0.1803  | -0.2285  | 0.6119        |
| X23             | -0.0375 | -0.0933 | 0.8904  | 0.0856  | -0.0852 | 0.0311  | -0.0667 | -0.0988 | 0.0223  | -0.0465  | 0.8904        |
| X24             | -0.3378 | 0.0572  | 0.7622  | -0.1018 | 0.0265  | -0.002  | -0.0549 | 0.1357  | -0.1537 | -0.0194  | 0.7622        |
| X26             | -0.2995 | 0.4291  | 0.1797  | 0.1711  | 0.1062  | 0.2592  | 0.0183  | -0.1063 | 0.4515  | 0.1751   | 0.4515        |
| X28             | -0.6208 | -0.0664 | 0.3518  | -0.1719 | 0.0756  | 0.0818  | -0.1134 | -0.1489 | -0.1889 | 0.1999   | 0.3518        |
| X29             | 0.4462  | 0.3428  | -0.0814 | -0.114  | 0.171   | -0.0041 | -0.5225 | 0.1013  | -0.1428 | 0.0803   | 0.4462        |
| X30             | 0.794   | -0.001  | -0.1339 | 0.0825  | 0.0878  | 0.0813  | 0.0484  | 0.017   | -0.0026 | 0.1132   | 0.794         |
| X31             | 0.2841  | -0.1105 | 0.0395  | -0.0383 | 0.6239  | 0.1197  | 0.0609  | 0.2771  | 0.1266  | -0.2054  | 0.6239        |
| X32             | -0.0497 | 0.0307  | -0.1006 | 0.0268  | 0.7996  | 0.0516  | 0.0138  | -0.028  | -0.0926 | 0.16     | 0.7996        |
| X33             | -0.1285 | 0.4967  | 0.0055  | 0.0321  | 0.5373  | -0.0092 | 0.0435  | -0.0781 | 0.1138  | 0.1168   | 0.5373        |
| X34             | 0.1783  | 0.1099  | -0.2189 | 0.1151  | 0.1738  | -0.0411 | 0.1044  | -0.5938 | 0.0633  | -0.1525  | 0.1783        |
| X35             | -0.2183 | -0.2493 | 0.0997  | -0.2062 | -0.4527 | -0.1849 | 0.323   | 0.1042  | -0.2172 | 0.0468   | 0.323         |
| X36             | -0.2603 | 0.1793  | 0.1968  | 0.0243  | -0.1068 | 0.0811  | 0.1177  | -0.1119 | -0.5402 | -0.331   | 0.1968        |
| X38             | 0.3502  | 0.6357  | -0.055  | -0.2481 | 0.0345  | 0.1235  | 0.0358  | -0.0955 | 0.16    | 0.068    | 0.6357        |
| X39             | 0.4608  | 0.1728  | -0.0576 | 0.0075  | -0.1744 | -0.0398 | 0.294   | -0.0529 | 0.3574  | 0.2929   | 0.4608        |

Appendix B.2.4 Evaluation of Varimax Rotation - clients test 1

|         |         |         |         | <u>Var</u> | <u>iable</u> |         |         |         |          |
|---------|---------|---------|---------|------------|--------------|---------|---------|---------|----------|
| Factor1 | Factor2 | Factor3 | Factor4 | Factor5    | Factor6      | Factor7 | Factor8 | Factor9 | Factor10 |
|         |         |         |         |            |              | 2//0    | X1      |         |          |
|         |         |         | V/4     |            |              | X2      |         |         |          |
|         |         |         | X4      |            |              |         |         |         | VE       |
|         |         |         |         |            |              |         |         |         | X5<br>X6 |
|         |         |         | X7      |            |              |         |         |         | 70       |
|         |         |         | XI      |            |              |         | X8      |         |          |
|         |         |         |         |            |              |         | X9      |         |          |
|         |         |         | X10     |            |              |         | 7.0     |         |          |
|         |         |         |         |            |              |         |         |         | X11      |
|         |         |         |         |            |              |         |         | X14     |          |
| X15     |         |         |         |            |              |         |         |         |          |
|         |         |         |         |            | X17          |         |         |         |          |
|         |         |         |         |            | X18          |         |         |         |          |
|         | X20     |         |         |            |              |         |         |         |          |
|         |         |         |         |            | X22          |         |         |         |          |
|         |         | X23     |         |            |              |         |         |         |          |
|         |         | X24     |         |            |              |         |         |         |          |
|         |         |         |         |            |              |         |         | X26     |          |
| X28     |         |         |         |            |              | )/00    |         |         |          |
| V20     |         |         |         |            |              | X29     |         |         |          |
| X30     |         |         |         | X31        |              |         |         |         |          |
|         |         |         |         | X32        |              |         |         |         |          |
|         |         |         |         | X33        |              |         |         |         |          |
|         |         |         |         | 7.00       |              |         | X34     |         |          |
|         |         |         |         | X35        |              |         | 7.0-1   |         |          |
|         |         |         |         | 7.00       |              |         |         | X36     |          |
|         | X38     |         |         |            |              |         |         |         |          |
| X39     |         |         |         |            |              |         |         |         |          |

# Appendix B.2.5 Overall Cronbach Alpha - clients amended test 2

(Removal of items resulting in error)

|             |            |             | Item-test   | Item-rest   | <u>Average</u><br>inter-item |              | Test for items with an alpha greater than |   |
|-------------|------------|-------------|-------------|-------------|------------------------------|--------------|---|---|
| <u>ltem</u> | <u>Obs</u> | <u>Sign</u> | correlation | correlation | covariance                   | <u>Alpha</u> | the global alpha                          |   |
| X1          | 143        | +           | 0.2649      | 0.1862      | 0.1455                       | 0.7764       | FALSE                                     |   |
| X2          | 143        | +           | 0.346       | 0.2904      | 0.1445                       | 0.7727       | FALSE                                     |   |
| X3          | 143        | +           | 0.1501      | 0.0634      | 0.1492                       | 0.7818       | TRUE                                      | After running SEM with this variable model was resulting in error, so reran entire model without it |
| X4          | 142        | +           | 0.2375      | 0.174       | 0.1469                       | 0.7764       | FALSE                                     | The running of the run and run able model mad recalling in error, ee relair erial error manear in   |
| X5          | 143        | +           | 0.1943      | 0.1526      | 0.1488                       | 0.7768       | FALSE                                     |   |
| X6          | 142        | +           | 0.3243      | 0.2775      | 0.1458                       | 0.7735       | FALSE                                     |   |
| X7          | 143        | +           | 0.4045      | 0.3619      | 0.1445                       | 0.7716       | FALSE                                     |   |
| X8          | 143        | +           | 0.4517      | 0.3829      | 0.1396                       | 0.7685       | FALSE                                     |   |
| X9          | 143        | +           | 0.5598      | 0.4925      | 0.1347                       | 0.7626       | FALSE                                     |   |
| X10         | 143        | +           | 0.4402      | 0.3828      | 0.1414                       | 0.7693       | FALSE                                     |   |
| X11         | 143        | +           | 0.3427      | 0.3016      | 0.1461                       | 0.7734       | FALSE                                     |   |
| X12         | 143        | +           | 0.1726      | 0.1003      | 0.1486                       | 0.7793       | TRUE                                      |   |
| X13         | 143        | +           | 0.1197      | 0.0852      | 0.1503                       | 0.7782       | TRUE                                      |   |
| X14         | 143        | +           | 0.3155      | 0.2201      | 0.1429                       | 0.7757       | FALSE                                     |   |
| X15         | 143        | +           | 0.5307      | 0.4478      | 0.1336                       | 0.7635       | FALSE                                     |   |
| X16         | 143        | +           | 0.0911      | 0.054       | 0.1506                       | 0.7787       | TRUE                                      |   |
| X17         | 142        | +           | 0.227       | 0.1893      | 0.1484                       | 0.7761       | FALSE                                     |   |
| X18         | 143        | +           | 0.1679      | 0.1379      | 0.1498                       | 0.7774       | FALSE                                     |   |
| X19         | 143        | +           | 0.1662      | 0.0741      | 0.1487                       | 0.782        | TRUE                                      |   |
| X20         | 142        | +           | 0.3253      | 0.2399      | 0.1428                       | 0.7741       | FALSE                                     |   |
| X21         | 143        | +           | 0.0772      | 0.0442      | 0.1509                       | 0.7789       | TRUE                                      |   |
| X22         | 143        | +           | 0.321       | 0.2757      | 0.1461                       | 0.7737       | FALSE                                     |   |
| X23         | 143        | -           | 0.4142      | 0.3206      | 0.1384                       | 0.7704       | FALSE                                     |   |
| X24         | 143        | -           | 0.4874      | 0.3939      | 0.1347                       | 0.7665       | FALSE                                     |   |
| X25         | 157        | +           | 0.2127      | 0.1287      | 0.1474                       | 0.7789       | TRUE                                      |   |
| X26         | 157        | +           | 0.2727      | 0.2029      | 0.1461                       | 0.7752       | FALSE                                     |   |
| X27         | 156        | +           | 0.2987      | 0.1923      | 0.1442                       | 0.7783       | TRUE                                      |   |
| X28         | 157        | -           | 0.471       | 0.3894      | 0.1346                       | 0.7656       | FALSE                                     |   |
| X29         | 157        | +           | 0.3685      | 0.271       | 0.1413                       | 0.7737       | FALSE                                     |   |
| X30         | 157        | +           | 0.5089      | 0.4164      | 0.1357                       | 0.7651       | FALSE                                     | After running SEM with this variable model was resulting in error, so reran entire model without it |
| X31         | 155        | +           | 0.3573      | 0.2692      | 0.1418                       | 0.7723       | FALSE                                     |   |
| X32         | 157        | +           | 0.2604      | 0.2002      | 0.1465                       | 0.7749       | FALSE                                     |   |
| X33         | 157        | +           | 0.3685      | 0.2911      | 0.1426                       | 0.772        | FALSE                                     |   |
| X34         | 156        | +           | 0.2521      | 0.1744      | 0.1470                       | 0.7771       | FALSE                                     |   |
| X35         | 157        | -           | 0.5056      | 0.4061      | 0.1341                       | 0.7639       | FALSE                                     |   |
| X36         | 156        | -           | 0.387       | 0.3069      | 0.1402                       | 0.7721       | FALSE                                     |   |
| X38         | 156        | +           | 0.4365      | 0.3534      | 0.1397                       | 0.7691       | FALSE                                     |   |
| X39         | 156        | +           | 0.3875      | 0.3007      | 0.1420                       | 0.7718       | FALSE                                     |   |
| Test s      | cale       |             |             |             | 0.1436                       | 0.7781       |   |   |

## Appendix B.2.6 Principal Component Analysis - clients amended test 2

Factor analysis/correlation Number of obs = 133
Method: principal-component factors Retained factors = 9
Rotation: (unrotated) Number of params = 216

| <u>Factor</u> | <u>Eigenvalue</u> | Difference | <b>Proportion</b> | Cumulative |                |
|---------------|-------------------|------------|-------------------|------------|----------------|
| Factor1       | 4.4138            | 1.5216     | 0.1576            | 0.1576     |                |
| Factor2       | 2.8922            | 0.6617     | 0.1033            | 0.2609     |                |
| Factor3       | 2.2305            | 0.7606     | 0.0797            | 0.3406     |                |
| Factor4       | 1.4699            | 0.0479     | 0.0525            | 0.3931     | Eigenvalue     |
| Factor5       | 1.4220            | 0.0981     | 0.0508            | 0.4439     | greater than 1 |
| Factor6       | 1.3239            | 0.0548     | 0.0473            | 0.4912     |                |
| Factor7       | 1.2692            | 0.1001     | 0.0453            | 0.5365     |                |
| Factor8       | 1.1691            | 0.0520     | 0.0418            | 0.5782     |                |
| Factor9       | 1.1171            | 0.1447     | 0.0399            | 0.6181     |                |
| Factor10      | 0.9724            | 0.0830     | 0.0347            | 0.6529     |                |
| Factor11      | 0.8894            | 0.0162     | 0.0318            | 0.6846     |                |
| Factor12      | 0.8733            | 0.0405     | 0.0312            | 0.7158     |                |
| Factor13      | 0.8327            | 0.0403     | 0.0297            | 0.7456     |                |
| Factor14      | 0.7924            | 0.0729     | 0.0283            | 0.7739     |                |
| Factor15      | 0.7195            | 0.0141     | 0.0257            | 0.7996     |                |
| Factor16      | 0.7054            | 0.0452     | 0.0252            | 0.8247     |                |
| Factor17      | 0.6601            | 0.0727     | 0.0236            | 0.8483     |                |
| Factor18      | 0.5874            | 0.0621     | 0.0210            | 0.8693     |                |
| Factor19      | 0.5254            | 0.0339     | 0.0188            | 0.8881     |                |
| Factor20      | 0.4915            | 0.0239     | 0.0176            | 0.9056     |                |
| Factor21      | 0.4676            | 0.0355     | 0.0167            | 0.9223     |                |
| Factor22      | 0.4321            | 0.0206     | 0.0154            | 0.9378     |                |
| Factor23      | 0.4115            | 0.0557     | 0.0147            | 0.9524     |                |
| Factor24      | 0.3558            | 0.0434     | 0.0127            | 0.9652     |                |
| Factor25      | 0.3124            | 0.0495     | 0.0112            | 0.9763     |                |
| Factor26      | 0.2629            | 0.0266     | 0.0094            | 0.9857     |                |
| Factor27      | 0.2364            | 0.0724     | 0.0084            | 0.9941     |                |
| Factor28      | 0.1639            |            | 0.0059            | 1.0000     |                |

Appendix B.2.7 Varimax Rotation - clients amended test 2

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| X1              | 0.1315  | -0.0878 | 0.0971  | 0.1548  | -0.0247 | 0.5237  | -0.074  | 0.2141  | 0.1663  | 0.5237        |
| X4              | -0.0416 | -0.1711 | -0.0749 | 0.7153  | -0.1176 | -0.1806 | 0.1907  | 0.1209  | 0.1642  | 0.7153        |
| X5              | 0.1002  | -0.0691 | -0.0341 | 0.1004  | 0.0288  | 0.2375  | 0.1759  | -0.0085 | 0.6688  | 0.6688        |
| X6              | -0.1093 | 0.0443  | -0.1354 | 0.2687  | 0.2398  | 0.3314  | 0.3513  | -0.037  | 0.3626  | 0.3626        |
| X7              | 0.1856  | 0.0698  | 0.0564  | 0.7656  | 0.0814  | 0.2633  | 0.1336  | -0.0455 | 0.028   | 0.7656        |
| X8              | 0.2139  | -0.0389 | -0.1621 | 0.1259  | 0.1005  | 0.7553  | 0.0891  | 0.106   | 0.1176  | 0.7553        |
| X9              | -0.0363 | 0.2613  | -0.3845 | 0.3202  | 0.1189  | 0.4309  | -0.0595 | 0.2649  | -0.103  | 0.4309        |
| X10             | 0.0681  | 0.3711  | 0.0476  | 0.595   | 0.2461  | 0.106   | -0.1294 | -0.1046 | 0.089   | 0.595         |
| X11             | -0.0483 | 0.2626  | -0.0666 | 0.2864  | 0.1982  | 0.0431  | -0.0151 | -0.0297 | 0.5712  | 0.5712        |
| X14             | 0.1047  | -0.0084 | -0.0994 | -0.0286 | -0.02   | 0.1371  | -0.1134 | 0.769   | -0.137  | 0.769         |
| X15             | 0.3807  | 0.5125  | -0.3001 | 0.0439  | 0.0987  | 0.0259  | -0.0143 | 0.074   | -0.2175 | 0.5125        |
| X17             | 0.2071  | 0.0225  | 0.1951  | 0.0805  | 0.0858  | 0.0748  | 0.7741  | -0.1023 | 0.0573  | 0.7741        |
| X18             | -0.0792 | -0.0545 | 0.0007  | 0.1028  | 0.0245  | 0.0244  | 0.6436  | -0.1374 | 0.2966  | 0.6436        |
| X20             | -0.0931 | 0.7069  | -0.0935 | 0.2158  | -0.0324 | -0.0306 | 0.0758  | -0.1638 | 0.0079  | 0.7069        |
| X22             | -0.2296 | 0.305   | -0.2676 | 0.082   | 0.0533  | -0.007  | 0.6088  | 0.2201  | -0.212  | 0.6088        |
| X23             | -0.0089 | -0.093  | 0.883   | 0.0681  | -0.0843 | -0.1042 | 0.0345  | 0.0142  | -0.0534 | 0.883         |
| X24             | -0.3799 | 0.0069  | 0.7551  | -0.066  | 0.0201  | 0.0982  | 0.0003  | -0.1038 | -0.0252 | 0.7551        |
| X26             | -0.2826 | 0.3471  | 0.1965  | 0.1752  | 0.1149  | -0.1122 | 0.2602  | 0.4908  | 0.2315  | 0.4908        |
| X28             | -0.5574 | -0.0736 | 0.3757  | -0.2203 | 0.0748  | -0.184  | 0.0769  | -0.2237 | 0.2509  | 0.3757        |
| X30             | 0.7802  | 0.0724  | -0.1581 | 0.0862  | 0.1009  | 0.0765  | 0.0791  | -0.0425 | 0.0525  | 0.7802        |
| X31             | 0.256   | -0.0867 | 0.0218  | -0.0385 | 0.6196  | 0.3219  | 0.1209  | 0.1003  | -0.2481 | 0.6196        |
| X32             | -0.0436 | 0.0037  | -0.0919 | 0.0306  | 0.7985  | 0.003   | 0.0481  | -0.1059 | 0.1708  | 0.7985        |
| X33             | -0.1841 | 0.3927  | 0.0161  | 0.1166  | 0.5486  | -0.0722 | -0.019  | 0.204   | 0.147   | 0.5486        |
| X34             | 0.2091  | 0.0591  | -0.1795 | 0.1734  | 0.1817  | -0.5413 | -0.0703 | 0.1317  | -0.1163 | 0.2091        |
| X35             | -0.195  | -0.2902 | 0.1285  | -0.1503 | -0.4843 | 0.2003  | -0.2021 | -0.1476 | 0.0552  | 0.2003        |
| X36             | -0.2893 | 0.1768  | 0.2334  | 0.0871  | -0.1124 | -0.0837 | 0.0486  | -0.4792 | -0.2883 | 0.2334        |
| X38             | 0.3215  | 0.6961  | -0.0485 | -0.2154 | 0.0693  | -0.0389 | 0.0875  | 0.1507  | 0.0919  | 0.6961        |
| X39             | 0.5206  | 0.1871  | -0.0479 | 0.0229  | -0.1665 | 0.1092  | -0.0519 | 0.3566  | 0.2976  | 0.5206        |

# Appendix B.2.8 Evaluation of Varimax Rotation - clients amended test 2

|         |         |         |         | Variables |         |         |         |         |
|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| Factor1 | Factor2 | Factor3 | Factor4 | Factor5   | Factor6 | Factor7 | Factor8 | Factor9 |
|         |         |         |         |           | X1      |         |         |         |
|         |         |         | X4      |           |         |         |         |         |
|         |         |         |         |           |         |         |         | X5      |
|         |         |         |         |           |         |         |         | X6      |
|         |         |         | X7      |           |         |         |         |         |
|         |         |         |         |           | X8      |         |         |         |
|         |         |         |         |           | X9      |         |         |         |
|         |         |         | X10     |           |         |         |         |         |
|         |         |         |         |           |         |         |         | X11     |
|         |         |         |         |           |         |         | X14     |         |
|         | X15     |         |         |           |         |         |         |         |
|         |         |         |         |           |         | X17     |         |         |
|         |         |         |         |           |         | X18     |         |         |
|         | X20     |         |         |           |         |         |         |         |
|         |         |         |         |           |         | X22     |         |         |
|         |         | X23     |         |           |         |         |         |         |
|         |         | X24     |         |           |         |         |         |         |
|         |         |         |         |           |         |         | X26     |         |
| X28     |         |         |         |           |         |         |         |         |
| X30     |         |         |         |           |         |         |         |         |
|         |         |         |         | X31       |         |         |         |         |
|         |         |         |         | X32       |         |         |         |         |
|         |         |         |         | X33       |         |         |         |         |
|         |         |         |         |           | X34     |         |         |         |
|         |         |         |         | X35       |         |         |         |         |
|         |         |         |         |           |         |         | X36     |         |
|         | X38     |         |         |           |         |         |         |         |
| X39     |         |         |         |           |         |         |         |         |

Appendix B.2.9 Overall Cronbach Alpha for clients amended test 3

|             |            |              | ltom tost             | ltom root                       | Average                         |              | Test for items with                    |  |
|-------------|------------|--------------|-----------------------|---------------------------------|---------------------------------|--------------|--|--|
| <u>ltem</u> | <u>Obs</u> | <u>Sign</u>  | Item-test correlation | <u>Item-rest</u><br>correlation | <u>inter-item</u><br>covariance | <u>Alpha</u> | an alpha greater than the global alpha |  |
| itom        | <u> </u>   | <u>Oigii</u> | <u>oorrelation</u>    | <u>oorrelation</u>              | <u>oovananoe</u>                | Alpha        | the global dipha                       |  |
| X1          | 143        | +            | 0.2649                | 0.1862                          | 0.1455                          | 0.7764       | FALSE                                  |  |
| X2          | 143        | +            | 0.346                 | 0.2904                          | 0.1445                          | 0.7727       | FALSE                                  | After running SEM with this variable model was resulting in error, so reran entire model without it  |
| Х3          | 143        | +            | 0.1501                | 0.0634                          | 0.1492                          | 0.7818       | TRUE                                   | ·  |
| X4          | 142        | +            | 0.2375                | 0.174                           | 0.1469                          | 0.7764       | FALSE                                  |  |
| X5          | 143        | +            | 0.1943                | 0.1526                          | 0.1488                          | 0.7768       | FALSE                                  |  |
| X6          | 142        | +            | 0.3243                | 0.2775                          | 0.1458                          | 0.7735       | FALSE                                  |  |
| X7          | 143        | +            | 0.4045                | 0.3619                          | 0.1445                          | 0.7716       | FALSE                                  |  |
| X8          | 143        | +            | 0.4517                | 0.3829                          | 0.1396                          | 0.7685       | FALSE                                  |  |
| X9          | 143        | +            | 0.5598                | 0.4925                          | 0.1347                          | 0.7626       | FALSE                                  |  |
| X10         | 143        | +            | 0.4402                | 0.3828                          | 0.1414                          | 0.7693       | FALSE                                  |  |
| X11         | 143        | +            | 0.3427                | 0.3016                          | 0.1461                          | 0.7734       | FALSE                                  |  |
| X12         | 143        | +            | 0.1726                | 0.1003                          | 0.1486                          | 0.7793       | TRUE                                   |  |
| X13         | 143        | +            | 0.1197                | 0.0852                          | 0.1503                          | 0.7782       | TRUE                                   |  |
| X14         | 143        | +            | 0.3155                | 0.2201                          | 0.1429                          | 0.7757       | FALSE                                  |  |
| X15         | 143        | +            | 0.5307                | 0.4478                          | 0.1336                          | 0.7635       | FALSE                                  |  |
| X16         | 143        | +            | 0.0911                | 0.054                           | 0.1506                          | 0.7787       | TRUE                                   |  |
| X17         | 142        | +            | 0.227                 | 0.1893                          | 0.1484                          | 0.7761       | FALSE                                  |  |
| X18         | 143        | +            | 0.1679                | 0.1379                          | 0.1498                          | 0.7774       | FALSE                                  |  |
| X19         | 143        | +            | 0.1662                | 0.0741                          | 0.1487                          | 0.782        | TRUE                                   |  |
| X20         | 142        | +            | 0.3253                | 0.2399                          | 0.1428                          | 0.7741       | FALSE                                  |  |
| X21         | 143        | +            | 0.0772                | 0.0442                          | 0.1509                          | 0.7789       | TRUE                                   |  |
| X22         | 143        | +            | 0.321                 | 0.2757                          | 0.1461                          | 0.7737       | FALSE                                  |  |
| X23         | 143        | -            | 0.4142                | 0.3206                          | 0.1384                          | 0.7704       | FALSE                                  |  |
| X24         | 143        | -            | 0.4874                | 0.3939                          | 0.1347                          | 0.7665       | FALSE                                  |  |
| X25         | 157        | +            | 0.2127                | 0.1287                          | 0.1474                          | 0.7789       | TRUE                                   |  |
| X26         | 157        | +            | 0.2727                | 0.2029                          | 0.1461                          | 0.7752       | FALSE                                  | After running SEM with this variable model was resulting in a p-value greater than 0.10  |
| X27         | 156        | +            | 0.2987                | 0.1923                          | 0.1442                          | 0.7783       | TRUE                                   |  |
| X28         | 157        | -            | 0.471                 | 0.3894                          | 0.1346                          | 0.7656       | FALSE                                  | lan e organisa era era era era era era era era era er  |
| X29         | 157        | +            | 0.3685                | 0.271                           | 0.1413                          | 0.7737       | FALSE                                  | After running SEM with this variable model was resulting in error, so reran entire model without it  |
| X30         | 157        | +            | 0.5089                | 0.4164                          | 0.1357                          | 0.7651       | FALSE                                  |  |
| X31         | 155        | +            | 0.3573                | 0.2692                          | 0.1418                          | 0.7723       | FALSE                                  |  |
| X32         | 157        | +            | 0.2604                | 0.2002                          | 0.1465                          | 0.7749       | FALSE                                  |  |
| X33         | 157        | +            | 0.3685                | 0.2911                          | 0.1426                          | 0.772        | FALSE                                  | 1.46 · OFM 20.01 · 1.1 · |
| X34         | 156        | +            | 0.2521                | 0.1744                          | 0.1470                          | 0.7771       | TRUE                                   | After running SEM with this variable model was resulting in a p-value greater than 0.10  |
| X35         | 157<br>156 | -            | 0.5056                | 0.4061                          | 0.1341                          | 0.7639       | FALSE                                  |  |
| X36         | 156<br>456 | -            | 0.387                 | 0.3069                          | 0.1402                          | 0.7721       | FALSE                                  |  |
| X38         | 156        | +            | 0.4365                | 0.3534                          | 0.1397                          | 0.7691       | FALSE                                  |  |
| X39         | 156        | +            | 0.3875                | 0.3007                          | 0.1420                          | 0.7718       | FALSE                                  |  |
| Test sca    | ıle        |              |                       |                                 | 0.1436                          | 0.7781       |  |  |

## Appendix B.2.10 Principal Component Analysis - clients amended test 3

Factor analysis/correlation

Method: principal-component factors

Retained factors = 9

Rotation: (unrotated)

Number of obs = 134

Retained factors = 9

Number of params = 198

| <u>Factor</u> | <u>Eigenvalue</u> | Difference | Proportion | Cumulative |                |
|---------------|-------------------|------------|------------|------------|----------------|
| Factor1       | 4.3289            | 1.6012     | 0.1665     | 0.1665     |                |
| Factor2       | 2.7277            | 0.6364     | 0.1049     | 0.2714     |                |
| Factor3       | 2.0913            | 0.6361     | 0.0804     | 0.3518     |                |
| Factor4       | 1.4552            | 0.0702     | 0.0560     | 0.4078     |                |
| Factor5       | 1.3849            | 0.1146     | 0.0533     | 0.4611     | Eigenvalue     |
| Factor6       | 1.2703            | 0.0993     | 0.0489     | 0.5099     | greater than 1 |
| Factor7       | 1.1710            | 0.0296     | 0.0450     | 0.5550     | g. care. man   |
| Factor8       | 1.1414            | 0.0840     | 0.0439     | 0.5989     |                |
| Factor9       | 1.0574            | 0.1598     | 0.0407     | 0.6395     |                |
| Factor10      | 0.8976            | 0.0126     | 0.0345     | 0.6741     |                |
| Factor11      | 0.8850            | 0.0251     | 0.0340     | 0.7081     |                |
| Factor12      | 0.8599            | 0.0421     | 0.0331     | 0.7412     |                |
| Factor13      | 0.8178            | 0.0852     | 0.0315     | 0.7726     |                |
| Factor14      | 0.7327            | 0.0629     | 0.0282     | 0.8008     |                |
| Factor15      | 0.6698            | 0.0793     | 0.0258     | 0.8266     |                |
| Factor16      | 0.5904            | 0.0081     | 0.0227     | 0.8493     |                |
| Factor17      | 0.5823            | 0.0400     | 0.0224     | 0.8717     |                |
| Factor18      | 0.5424            | 0.0638     | 0.0209     | 0.8925     |                |
| Factor19      | 0.4786            | 0.0063     | 0.0184     | 0.9109     |                |
| Factor20      | 0.4724            | 0.0414     | 0.0182     | 0.9291     |                |
| Factor21      | 0.4310            | 0.0196     | 0.0166     | 0.9457     |                |
| Factor22      | 0.4114            | 0.0923     | 0.0158     | 0.9615     |                |
| Factor23      | 0.3191            | 0.0528     | 0.0123     | 0.9738     |                |
| Factor24      | 0.2663            | 0.0266     | 0.0102     | 0.9840     |                |
| Factor25      | 0.2397            | 0.0641     | 0.0092     | 0.9932     |                |
| Factor26      | 0.1757            |            | 0.0068     | 1.0000     |                |

Appendix B.2.11 Varimax Rotation - clients amended test 3

| <u>Variable</u> | Factor1 | Factor2 | Factor3 | Factor4 | Factor5 | Factor6 | Factor7 | Factor8 | Factor9 | Greatest cell |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------------|
| X1              | 0.0571  | -0.0328 | 0.1232  | 0.083   | 0.6165  | -0.0648 | -0.0605 | 0.1988  | 0.192   | 0.6165        |
| X4              | -0.0811 | -0.1222 | -0.0798 | 0.7255  | -0.1255 | -0.1328 | 0.1823  | 0.1605  | 0.0981  | 0.7255        |
| X5              | 0.0873  | -0.0411 | -0.0096 | 0.0605  | 0.2707  | -0.0078 | 0.1729  | 0.6954  | -0.0276 | 0.6954        |
| X6              | -0.0866 | 0.0666  | -0.1274 | 0.2169  | 0.3681  | 0.2044  | 0.3481  | 0.3839  | -0.1224 | 0.3839        |
| X7              | 0.1931  | 0.0557  | 0.0357  | 0.7794  | 0.277   | 0.0932  | 0.1084  | 0.0071  | -0.0937 | 0.7794        |
| X8              | 0.2012  | -0.0682 | -0.1526 | 0.1095  | 0.7424  | 0.1082  | 0.0873  | 0.1386  | 0.082   | 0.7424        |
| X9              | -0.0554 | 0.3013  | -0.3583 | 0.2766  | 0.4586  | 0.0892  | -0.0158 | -0.0622 | 0.2697  | 0.4586        |
| X10             | 0.0575  | 0.4074  | 0.0661  | 0.5898  | 0.1017  | 0.2369  | -0.1173 | 0.0982  | -0.0452 | 0.5898        |
| X11             | -0.035  | 0.2507  | -0.0449 | 0.317   | -0.0248 | 0.2172  | -0.0238 | 0.5778  | 0.0246  | 0.5778        |
| X14             | 0.0459  | 0.0286  | -0.0597 | -0.0285 | 0.1515  | -0.0564 | -0.0468 | -0.0857 | 0.8369  | 0.8369        |
| X15             | 0.3979  | 0.4712  | -0.2923 | 0.0672  | -0.008  | 0.1192  | 0.0016  | -0.2204 | 0.145   | 0.4712        |
| X17             | 0.1991  | -0.009  | 0.219   | 0.1078  | 0.0374  | 0.0972  | 0.7663  | 0.0877  | -0.073  | 0.7663        |
| X18             | -0.0381 | -0.0761 | -0.0027 | 0.0951  | 0.0248  | 0.0187  | 0.6194  | 0.3094  | -0.2199 | 0.6194        |
| X20             | -0.0264 | 0.7308  | -0.0813 | 0.1598  | -0.0217 | -0.0588 | 0.0942  | 0.0236  | -0.1943 | 0.7308        |
| X22             | -0.2231 | 0.3549  | -0.241  | 0.0411  | 0.0188  | 0.019   | 0.6508  | -0.1593 | 0.1851  | 0.6508        |
| X23             | 0.0003  | -0.107  | 0.8786  | 0.0822  | -0.1125 | -0.085  | 0.0208  | -0.0588 | -0.0084 | 0.8786        |
| X24             | -0.3549 | 0.0369  | 0.7702  | -0.098  | 0.0688  | -0.0071 | 0.0169  | 0.0055  | -0.1191 | 0.7702        |
| X28             | -0.5167 | -0.075  | 0.3846  | -0.1784 | -0.3139 | 0.1029  | 0.0642  | 0.2651  | -0.1909 | 0.3846        |
| X30             | 0.7719  | 0.0193  | -0.1661 | 0.1044  | 0.1051  | 0.0993  | 0.0696  | 0.0259  | -0.0043 | 0.7719        |
| X31             | 0.2139  | -0.0772 | 0.0274  | -0.0615 | 0.3861  | 0.6031  | 0.137   | -0.2408 | 0.1002  | 0.6031        |
| X32             | -0.0433 | 0.0084  | -0.113  | 0.0421  | 0.0287  | 0.8089  | 0.0153  | 0.1443  | -0.1477 | 0.8089        |
| X33             | -0.1928 | 0.476   | 0.0423  | 0.0617  | -0.0088 | 0.4987  | 0.0155  | 0.1822  | 0.1967  | 0.4987        |
| X35             | -0.214  | -0.2679 | 0.1121  | -0.2171 | 0.2753  | -0.4953 | -0.2284 | 0.0426  | -0.2514 | 0.2753        |
| X36             | -0.2896 | 0.2245  | 0.2246  | 0.0116  | 0.0019  | -0.1257 | 0.0317  | -0.3008 | -0.5516 | 0.2246        |
| X38             | 0.4151  | 0.6264  | -0.0547 | -0.2196 | -0.0557 | 0.0757  | 0.0875  | 0.0855  | 0.1047  | 0.6264        |
| X39             | 0.5517  | 0.1609  | -0.0748 | -0.0019 | 0.1807  | -0.182  | -0.071  | 0.2754  | 0.2505  | 0.5517        |

Appendix B.2.12 Evaluation of Varimax Rotation - clients amended test 3

|         |         |         |         | Variable |         |         |         |         |
|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| Factor1 | Factor2 | Factor3 | Factor4 | Factor5  | Factor6 | Factor7 | Factor8 | Factor9 |
|         |         |         |         | X1       |         |         |         |         |
|         |         |         | X4      |          |         |         |         |         |
|         |         |         |         |          |         |         | X5      |         |
|         |         |         |         |          |         |         | X6      |         |
|         |         |         | X7      |          |         |         |         |         |
|         |         |         |         | X8       |         |         |         |         |
|         |         |         |         | X9       |         |         |         |         |
|         |         |         | X10     |          |         |         |         |         |
|         |         |         |         |          |         |         | X11     |         |
|         |         |         |         |          |         |         |         | X14     |
|         | X15     |         |         |          |         |         |         |         |
|         |         |         |         |          |         | X17     |         |         |
|         |         |         |         |          |         | X18     |         |         |
|         | X20     |         |         |          |         |         |         |         |
|         |         |         |         |          |         | X22     |         |         |
|         |         | X23     |         |          |         |         |         |         |
|         |         | X24     |         |          |         |         |         |         |
| X28     |         |         |         |          |         |         |         |         |
| X30     |         |         |         |          |         |         |         |         |
|         |         |         |         |          | X31     |         |         |         |
|         |         |         |         |          | X32     |         |         |         |
|         |         |         |         |          | X33     |         |         |         |
|         |         |         |         |          | X35     |         |         |         |
|         |         |         |         |          |         |         |         | X36     |
|         | X38     |         |         |          |         |         |         |         |
| X39     |         |         |         |          |         |         |         |         |

# Appendix C Statistical results for t-tests performed

# Appendix C.1 t-test for auditors

| <u>AUDI</u> | <u>rors</u>   | t-statistic | <u>p-value</u> |
|-------------|---|-------------|----------------|
| <u>ltem</u> |   |             |                |
|             |   |             |                |
| X1          | It is realistic to expect prompt rescheduling of missed deadlines.  | -2.02       | 0.05           |
| Х3          | Management should provide the auditor with the relevant information without being asked for it.                           | -0.86       | 0.39           |
| X4          | The audit partner should be actively involved in the engagement.  | -0.43       | 0.67           |
| X5          | Management should give adequate support to the audit team so that they do their job well.                                 | -0.20       | 0.84           |
| X6          | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures.  | -2.67       | 0.01           |
| X7          | It is important that the audit partner gives the client individual attention.   | 0.62        | 0.54           |
| X8          | The audit partner should have the client's best interests at heart.   | 0.04        | 0.97           |
| X9          | The client should contribute more than required during the audit.   | -0.79       | 0.43           |
| X10         | It is important that the regular meetings are held between the client & the audit partner.                                | -0.52       | 0.60           |
| X11         | It is important that clients respond quickly to the auditor's queries.  | -0.46       | 0.65           |
| X12         | Auditors should offer other assurance services besides the audit of historical information.                               | 0.18        | 0.86           |
| X14         | The expertise & competence of the audit firm is more important than the expertise of the audit team.                      | 0.63        | 0.53           |
| X15         | The auditor should be sceptical on whether the client will stick to his word.   | -0.17       | 0.87           |
| X16         | It is important that the audit partner has high ethical standards.  | 1.83        | 0.07           |
| X17         | Ethical training should be mandatory for audit and accountancy students.  | 0.01        | 0.99           |
| X18         | Clients should keep their records accurately.   | -1.82       | 0.07           |
| X19         | The auditor should never take risks, irrespective of how small the risk might be.   | 0.17        | 0.87           |
| X20         | The auditor's responsibility is to act in the public interest.  | -0.81       | 0.42           |
| X21         | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities.              | -0.63       | 0.53           |
| X23         | The auditor's ethical decision making varies from one situation to another.   | 0.80        | 0.42           |
| X24         | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.                     | 0.48        | 0.63           |
| X25         | It is understandable that an auditor collects information about clients through their professional and personal networks. | 0.14        | 0.89           |
| X26         | The audit firm is always objective in its judgements.   | -0.08       | 0.93           |
| X28         | The importance of the auditor's independence is overrated.  | -0.13       | 0.90           |
| X30         | Client retention is a determining factor in the auditor's ultimate decisions  | -0.80       | 0.42           |
| X31         | The auditor usually notices inconsistencies in explanations.  | 0.21        | 0.83           |
| X32         | The auditor does not like to decide until she/he has looked at all of the readily available information.                  | -1.42       | 0.16           |
| X33         | The auditor frequently questions things that he/she sees or hears.  | -0.62       | 0.54           |
| X35         | It is understandable that the auditor has doubts about the accuracy of the information received from clients.             | 2.66        | 0.01           |
| X36         | To be sceptical is the same as distrust.  | 0.57        | 0.57           |
| X38         | Increased control over the profession will increase trust in the auditor.   | -0.93       | 0.36           |
| X39         | Auditors have to trust management to be able to perform the audit.  | -0.09       | 0.93           |

# Appendix C.2 t-test for clients

| Compa | <u>inies</u>   | t-statistic | <i>p</i> -value |
|-------|--|-------------|-----------------|
| Item  |  |             |                 |
|       |  |             |                 |
| X1    | It is realistic to expect prompt rescheduling of missed deadlines.   | 1.96        | 0.05            |
| X2    | The auditor should strive to create minimum disruption as practically possible during the audit.                         | -0.93       | 0.36            |
| X4    | The audit partner should be actively involved in the engagement.   | 0.82        | 0.41            |
| X5    | Management should give adequate support to the audit team so that they do their job well.                                | -1.69       | 0.09            |
| X6    | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures. | -0.17       | 0.86            |
| X7    | It is important that the audit partner gives the client individual attention.  | -0.26       | 0.80            |
| X8    | The audit partner should have the client's best interests at heart.  | 0.69        | 0.49            |
| X9    | The client should contribute more than required during the audit.  | -0.04       | 0.97            |
| X10   | It is important that the regular meetings are held between the client & the audit partner.                               | 0.66        | 0.51            |
| X11   | It is important that clients respond quickly to the auditor's queries.   | -1.31       | 0.19            |
| X14   | The expertise & competence of the audit firm is more important than the expertise of the audit team.                     | -0.02       | 0.98            |
| X15   | The auditor should be sceptical on whether the client will stick to his word.  | -0.53       | 0.60            |
| X17   | Ethical training should be mandatory for audit and accountancy students.   | -1.64       | 0.10            |
| X18   | Clients should keep their records accurately.  | -0.84       | 0.40            |
| X20   | The auditor's responsibility is to act in the public interest.   | 0.04        | 0.97            |
| X22   | The auditor's code of ethics gives guidance and a sense of direction.  | -0.59       | 0.56            |
| X23   | The auditor's ethical decision making varies from one situation to another.  | 0.50        | 0.62            |
| X24   | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.                    | 1.64        | 0.10            |
| X26   | The audit firm is always objective in its judgements.  | 0.11        | 0.91            |
| X28   | The importance of the auditor's independence is overrated.   | -0.17       | 0.86            |
| X29   | A long-term relationship between the client and the auditor will decrease the auditor's independence and objectivity.    | 0.19        | 0.85            |
| X30   | Client retention is a determining factor in the auditor's ultimate decisions   | 0.33        | 0.74            |
| X31   | The auditor usually notices inconsistencies in explanations.   | 0.90        | 0.37            |
| X32   | The auditor does not like to decide until she/he has looked at all of the readily available information.                 | -1.83       | 0.07            |
| X33   | The auditor frequently questions things that he/she sees or hears.   | 0.63        | 0.51            |
| X34   | Professional scepticism depends on past experiences.   | -0.09       | 0.93            |
| X35   | It is understandable that the auditor has doubts about the accuracy of the information received from clients.            | -0.19       | 0.85            |
| X36   | To be sceptical is the same as distrust.   | -0.13       | 0.90            |
| X38   | Increased control over the profession will increase trust in the auditor.  | -1.13       | 0.26            |
| X39   | Auditors have to trust management to be able to perform the audit.   | -0.32       | 0.75            |

# Appendix C.2 t-test comparing auditors to clients

| <u>Variable</u> |   |      | <u>Auditor</u>       |                       |      | Client               |                       | t-statistic | p-value |
|-----------------|---|------|----------------------|-----------------------|------|----------------------|-----------------------|-------------|---------|
|                 |   | Mean |                      | Standard<br>Deviation | Mean |                      | Standard<br>Deviation |             |         |
| X1              | It is realistic to expect prompt rescheduling of missed deadlines   | n/a  |                      | n/a                   | 2.32 | Agree                | 0.11                  | n/a         | n/a     |
| X4              | The audit partner should be actively involved in the engagement   | 1.8  | Agree                | 0.07                  | 2.25 | Agree                | 0.09                  | -3.68       | 0.00    |
| X5              | Management should give adequate support to the audit team so that they do their job well (Question for client analysis)                       | 1.35 | Strongly Agree       | 0.42                  | 1.51 | Strongly Agree       | 0.06                  | -2.29       | 0.02    |
| X6              | An internal review on a selection of audit files, ensures that the audit firm maintains high quality control procedures.                      | 1.62 | Agree                | 0.06                  | 1.98 | Agree                | 0.07                  | -3.83       | 0.00    |
| X7              | It is important that the audit partner gives the client individual attention  | 1.83 | Agree                | 0.07                  | 1.91 | Agree                | 0.07                  | -0.81       | 0.42    |
| X8              | The audit partner should have the client's best interests at heart.   | 2.64 | Agree<br>somewhat    | 0.12                  | 2.05 | Agree                | 0.11                  | 3.50        | 0.00    |
| X9              | Client management should contribute more than required during the audit. (Question for client analysis)                                       | 3.38 | Agree<br>somewhat    | 0.12                  | 3.25 | Agree<br>somewhat    | 0.12                  | 0.74        | 0.46    |
| X10             | It is important that the regular meetings are held between the client & the audit partner   | 2.3  | Agree                | 0.09                  | 2.39 | Agree                | 0.09                  | -0.69       | 0.49    |
| X11             | It is important that clients respond quickly to the auditor's queries (Question for client analysis)  | 1.62 | Agree                | 0.05                  | 2.01 | Agree                | 0.06                  | -4.99       | 0.00    |
| X12             | Auditors should offer other assurance services besides the audit of historical information  | 2.62 | Agree<br>somewhat    | 0.11                  | n/a  |                      | n/a                   | n/a         | n/a     |
| X14             | The expertise & competence of the audit firm is more important than the expertise of the audit team.  | 4.15 | Undecided            | 0.13                  | 3.6  | Undecided            | 0.14                  | 2.89        | 0.00    |
| X15             | The auditor should be sceptical on whether the client will stick to his word.   | 2.71 | Agree<br>somewhat    | 0.11                  | 3.91 | Undecided            | 0.15                  | -6.59       | 0.00    |
| X16             | It is important that the audit partner has high ethical standards.  | 1.18 | Strongly Agree       | 0.04                  | n/a  |                      | n/a                   | n/a         | n/a     |
| X17             | Ethical training should be mandatory for audit and accountancy students.  | 1.52 | Strongly Agree       | 0.06                  | 1.55 | Strongly Agree       | 0.05                  | -1.74       | 0.08    |
| X18             | Clients should keep their records accurately (Question for client analysis)   | 1.3  | Strongly Agree       | 0.04                  | 1.38 | Strongly Agree       | 0.04                  | -1.82       | 0.07    |
| X19             | The auditor should never take risks, irrespective of how small the risk might be.   | 2.74 | Agree<br>somewhat    | 0.12                  | n/a  | A 2222               | n/a                   | n/a         | n/a     |
| X20             | The auditor's responsibility is to act in the public interest.  | 2.18 | Agree                | 0.11                  | 2.77 | Agree<br>somewhat    | 0.13                  | -3.58       | 0.00    |
| X21             | As a professional the auditor should ensure that he/she performs his work to the best of his/ her abilities                                   | 1.3  | Strongly Agree       | 0.04                  | n/a  |                      | n/a                   | n/a         | n/a     |
| X22             | The auditor's code of ethics gives guidance and a sense of direction.   | n/a  |                      | n/a                   | 1.94 | Agree                | 0.07                  | 0.00        | 1.00    |
| X23             | The auditor's ethical decision making varies from one situation to another  | 4.8  | Disagree<br>somewhat | 0.14                  | 5.11 | Disagree<br>somewhat | 0.15                  | -1.45       | 0.15    |
| X24             | Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action. (Question for client analysis)          | 3.7  | Undecided            | 0.15                  | 4.08 | Undecided            | 0.15                  | -1.78       | 0.08    |
| X25             | It is understandable that an auditor collects information about clients through their professional and personal networks                      | 2.47 | Agree                | 0.1                   | n/a  |                      | n/a                   | n/a         | n/a     |
| X26             | The audit firm is always objective in its judgements.   | 2.13 | Agree                | 0.08                  | n/a  |                      | n/a                   | n/a         | n/a     |
| X28             | The importance of the auditor's independence is overrated.  | 3    | Agree somewhat       | 0.13                  | 3.68 | Undecided            | 0.14                  | -3.57       | 0.00    |
| X30             | Client retention is a determining factor in the auditor's ultimate decisions.   | 4.6  | Disagree somewhat    | 0.14                  | 2.89 | Agree somewhat       | 0.13                  | 3.78        | 0.00    |
| X31             | The auditor usually notices inconsistencies in explanations   | 4.6  | Disagree somewhat    | 0.09                  | 3.32 | Agree somewhat       | 0.12                  | -4.07       | 0.00    |
| X32             | The auditor does not like to decide until she/he has looked at all of the readily available information.                                      | 1.99 | Agree                | 0.06                  | 2.27 | Agree                | 0.08                  | -2.83       | 0.00    |
| X33             | The auditor frequently questions things that he/she sees or hears   | 2.25 | Agree                | 0.08                  | 2.75 | Agree<br>somewhat    | 0.1                   | -3.83       | 0.00    |
| X35             | It is understandable that the auditor has doubts about the accuracy of the information received from clients                                  | n/a  |                      | n/a                   | 4.35 | Undecided            | 0.13                  | n/a         | n/a     |
| X36             | To be sceptical is the same as distrust   | n/a  |                      | n/a                   | 3.24 | Agree<br>somewhat    | 0.13                  | n/a         | n/a     |
| X37             | In my opinion it is absolutely important to trust the auditor from the start, even if it means taking a risk                                  | 2.87 | Agree<br>somewhat    | 0.1                   | 2.78 | Agree<br>somewhat    | 0.12                  | 0.73        | 0.46    |
| X38             | Increased control over the profession will increase trust in the auditor  | n/a  |                      | n/a                   | 2.78 | Agree<br>somewhat    | 0.12                  | n/a         | n/a     |
| X39             | Auditors have to trust management to be able to perform the audit   | 3.61 | Undecided            | 0.12                  | 2.62 | Agree<br>somewhat    | 0.11                  | 6.21        | 0.00    |
| X40             | The function of audited financial statements is to increase the creditworthiness of a company   | 3.86 | Undecided            | 0.15                  | 2.76 | Agree<br>somewhat    | 0.12                  | 5.84        | 0.00    |
| X41             | The audit is useful, because it provides feedback to managers who sometimes unintentionally bias their decision-making to show better results | 3.31 | Agree<br>somewhat    | 0.13                  | 3.13 | Agree<br>somewhat    | 0.14                  | 0.98        | 0.33    |
| X42             | Discovering a breach or a misstatement is a measure of usefulness of the audit  | 3.49 | Agree somewhat       | 0.13                  | 2.94 | Agree<br>somewhat    | 0.13                  | 3.04        | 0.00    |