Gordon Institute of Business Science
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Factors that influence the effectiveness of joint audits.

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ABSTRACT

Research Purpose: The area of joint audits became increasingly popular after the global financial crisis in 2010. This was after the European Commission proposed to mandate joint audits. South Africa is one of a few countries in the world were joint audits were once mandated for financial services firms. Although empirical research has increased, little has been done on theoretical research. This research investigates the factors influencing on the success of joint audits using an interorganisational theory, the resource dependence theory and concepts from joint audit literature research.

Research Methodology: The study adopted a quantitative descriptive approach. A self-administered online questionnaire was sent to a group of individuals with experience on joint audits. The questionnaire was based on interorganisational literature and research already conducted on joint audits. The group of individuals included individuals from companies that have been audited, individuals who have formed part of joint audits and regulators.

Research Findings: The results of the research established important factors influencing joint audits. A suggested model which can be used by joint auditors, audited companies and regulators was developed from these findings. Opinion shopping ranked highest as the most important factor influencing joint audits, followed by similarity and goals where it was found that joint audits work best when firms are of a similar size, each firm has a unique value proposition and goals are clear. Market uncertainty was the next most influencing factor followed by the level of difficulty of the audit and lastly freeriding. Results suggested that gender does not to have any influence on the success of joint audits.

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KEYWORDS

Joint Audits
Interorganisational Collaboration
Social loafing
Opinion shopping
Resource Dependence Theory

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DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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9 November 2015

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TABLE OF CONTENTS

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LIST OF FIGURES

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LIST OF TABLES

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LIST OF ABBREVIATIONS

Abbreviation	Description
Abil	African Bank Limited
ANOVA	Analysis of variance
Big 4	Top four audit firms globally – Deloitte, KPMG, EY and PWC
CFA	Confirmatory Factor Analysis
EC	European Commission
IFRS	International Financial Reporting Standards
IOC	Interorganisational Collaboration
PSG	Professional Standards Group
PCAOB	Public Company Accounting Oversight Board
SAICA	South African Institute of Chartered Accountants
SARB	South African Reserve Bank
SEM	Structural Equation Modelling

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Chapter One: Introduction to the Research Problem

1.1 Research Title

Factors that influence the effectiveness of joint audits.

1.2 Research Background and Problem

Despite the conventional wisdom that “two heads are better than one” or as the European Commission (EC) noted, “four eyes are better than two” (European Commission, 2010), the need for joint audits has resulted in substantial debate on whether or not it compromises the quality of the audit provided (Deng, Lu, Simunic, & Ye, 2014). Some have argued that the main benefit of joint audits is they reduce the market concentration currently presented by having only four big auditors globally (Velte & Azibi, 2015). Mandatory joint audits therefore give smaller audit firms a chance of working with big corporates (Velte & Azibi, 2015).

Following the global financial crisis, the EC issued a Green Paper titled ‘Audit Policy: Lessons from the Crisis’. Their aim was to encourage voluntary joint audits after initially proposing to mandate joint audits (European Commission, 2010). The EC has continued to incentivise companies to take up voluntary joint auditors by proposing that companies with voluntary joint auditors extend their mandatory auditors rotation from the required 10 years to 24 years (Velte & Azibi, 2015). The recommendations by the EC came after the quality of the audit provided by auditors came into question following the Enron scandal and the ensuing collapse of Arthur Andersen, which at the time of its collapse had been one of the top five audit firms in the world (André, Broye, Pong, & Schatt, 2015). The recommendation by the EC to mandate joint audits has been heavily debated by bodies all over the world where reasons for opposition included concerns around the limited research available supporting arguments that there is an improvement in the quality of audit provided when there are joint auditors (Ratzinger-Sakel, Audousset-Coulier, Kettunen, & Lesage, 2012). Since the EC issued the green paper, joint audits have been recommended on a voluntary basis in countries like India, Germany, Switzerland, and the U.K (Deng et al., 2014; Velte & Azibi, 2015). France, Denmark and South Africa have had joint audits mandated by law at some point in time for the financial services sector (Ratzinger-Sakel, Audousset-Coulier, Kettunen, & Lesage, 2013). It should however be noted that Denmark abolished joint audits in 2005, citing concerns over its effectiveness and relevance suggesting that joint audits may not be beneficial in all cases (Deng et al., 2014).

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Section 61(1)(b) of the repealed South African Reserve Bank (SARB) Banks Act of 1990 required that all banks with assets of at least R10 billion appoint two or more independent auditors on a mandatory basis (South African Reserve Bank, 2015). This regulation had been in place since 1973. The reason for this law was to ensure that independence during an audit is maintained as well as to make sure that auditors with a diverse set of skills are able to cover the complex banking audit (South African Reserve Bank, 2015). The law was however abolished in the amendment of the Banks Act in 2003 (Ratzinger-Sakel et al., 2012). Despite the removal of the law from the Banks Act, all the biggest four banks in South Africa have continued appointing joint auditors. Some have argued that appointing joint auditors is the 'unwritten rule' banks in South Africa continue to be incentivised to comply with if they are to be in the good books of the SARB (Accountancy SA, 2014). The approach and extensive involvement by the SARB in banking affairs could be the reason why South Africa is ranked second on 'availability of financial services' and ranked third on the 'soundness of its banks' in the 2013-2014 Global Competitiveness Report (Schwab, 2014). Although the SARB has maintained that joint audits result in a significant improvement in the quality of audit provided, the subject is still being heavily debated in South Africa by bodies such as South African Institute of Chartered Accountants (SAICA), large audit firms and The Banking Council South Africa (South African Reserve Bank, 2015). Many of the bodies have cited concerns over the increase in fees of joint audits, reduced choice of audit firms in the event that some of the audit firms merge and the general international trend of moving away from joint audits such as the ban in Denmark (South African Reserve Bank, 2015).

The failure of African Bank Limited (Abil) in 2014, a South African bank which did not have joint auditors at the time of its collapse, sparked a significant amount of debate in the news on the role played by the auditor (Lefifi, 2014). This failure provided more compelling reasons for the SARB to support the need for joint audits. Questions were raised on why Deloitte, Abil's auditor at the time of its collapse had not raised concerns over how Abil was overcharging its customers (Brand-Jonker, 2014). Other discussions and debates in the news cited concerns over why Deloitte had not raised a concern that Abil was underproviding for its non-performing loans (NPLs) hence showing more profits than it actually had (Ronbeck, 2014). While there has been a substantial amount of criticism for Deloitte, others have argued that it was in fact Deloitte who had notified the regulator and the credit agencies of the ensuing problems at Abil (Lefifi, 2014). The argument in support of Deloitte was made stronger when the curator at Abil kept Deloitte on-board as the auditors responsible for providing assurance during the time of curatorship hence indirectly showing a

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vote of confidence for Deloitte (Lefifi, 2014). The discussion on the failure of Abil soon moved from the question of whether or not Deloitte had any responsibility in the failure of Abil but rather a view that the failure of Abil could have potentially been prevented if there were joint auditors as the quality of the audit would have been improved (Lefifi, 2014). The understanding of the need for joint auditors, when joint audits are effective and when they are not, is therefore important for management and regulators internationally but more importantly in South Africa where joint audit is still dominant for the top four banks.

1.3 Research Motivation

Empirical research done on joint audits has significantly increased since the global financial crisis (Deng et al., 2014). These studies have mainly been aimed at establishing whether joint audits have an impact on outcomes such as quality, independence, and audit fees. The results have been mixed and inconclusive. An example is the conclusion that audit fees are increased when there are joint auditors (André et al., 2015; Holm & Thinggaard, 2012; Ratzinger-Sakel et al., 2013) while other researchers have argued that fees are lower in a joint audit (Ittonen & Peni, 2012). Another example is the conclusion that audit quality is better in a joint audit (Zerni, Haapamäki, Järvinen, & Niemi, 2012) while other researchers have argued that the quality of audits in a joint audit is lower (Lesage, Ratzinger-Sakel, & Kettunen, 2012). The first ever theoretical research contribution to the understanding of joint audits (Deng et al., 2014), applied game theory to the problem to demonstrate that audit quality may not always be improved.

Interorganisational collaboration (IOC) which is the collaboration between any two firms has been known to have high failure rates (Gulati, Wohlgezogen, & Zhelyazkov, 2012). The failure has in some instances been cited to be as high as 50% (Gulati et al., 2012). This high failure rate in collaborations is an indication of how complex and risky collaborations are and highlights the dangers that come with any form of collaboration between two or more firms (Gulati et al., 2012). Multiple perspectives have been discussed in literature of the reasons for the failure of IOC. While other researchers have argued that the reason for the high failure rate in IOC is a lack of coordination between two firms (Gulati et al., 2012), other reasons have been the misappropriation of each other's resources (Aldrich, 1976; Hallen, Katila, & Rosenberger, 2014; Hillman, Withers, & Collins, 2009; Pfeffer & Salancik, 2003). Given the fact that IOC's in themselves are complex and risky, it is therefore no surprise that the research on whether or not joint audits result in an improved audit quality has had mixed results.

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This research report aims to contribute to the understanding of joint audits, not by dwelling on whether or not joint audits improve audit quality, but instead by investigating the implications of theoretical contributions that have been made in the fields of inter-organisational collaboration and inter-organisational relationships to identify specific conditions where joint audits work and where they do not. It is thus hoped that these investigations and findings will help to understand why there are mixed views on joint audits.

In addition, this research will argue that a joint audit is a form of interorganisational collaboration and therefore an understanding and application of interorganisational collaboration theory will improve our understanding of joint audits. A review of theoretical contributions in the area of interorganisational collaboration will be used to generate hypotheses which will be tested in the case of joint audits. The tests will be based on a survey of professionals with exposure to joint audits. One of the contributions this research will make will be in respect to the analysis of the effectiveness of joint audits based on theory as there has only been one theoretical research done on joint audits to date (Deng et al., 2014).

1.4 Research Scope

The aim of this research is to contribute to the identification of the factors which are associated with joint audit outcomes and specific conditions where joint audits works and where it does not. The research excluded dual audits and double audits. Research did not include other factors associated with the improvement in quality of single audits even when single audits include two groups working together. Individuals from all over the world in multiple industries were covered in the research as long as they have exposure to joint audits. The IOC theory used was the resource dependence theory and other constructs from the theoretical review on joint audits. A questionnaire was sent to selected individuals with experience working on joint audits. The snow balling sampling nature of the research meant that respondents ended up being from any part of the world.

1.5 Research Objectives

The main objectives of the research were:

- To establish whether the effects of a presence of a unique value proposition in the case of one or both of the audit firms involved in a joint audit leads to an effective joint audit. In addition, to establish whether mutual dependence between these two

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auditors results in reduced freeriding (or social loafing), reduction in the misappropriation and abuse of resources by the auditor without critical resources which in turn leads to an effective joint audit.

- To establish whether opinion shopping (or confirmation bias) by the audited client will result in a compromised quality of the joint audit provided.

- To establish if the factors increasing risk and market uncertainty (e.g. new regulations, interest rate increases, new and complex IFRS statements) are associated with improved collaboration and hence improved quality of joint audits. Lack of high market uncertainty would therefore result in decreased quality of joint audits.

- To establish if there are certain conditions such as similarity of audit firms which, if present, would result in a successful joint audit.

- To establish if certain conditions such as familiarity of audit firms which, if present, would result in a successful joint audit.

- To illustrate that the success of joint audits is different when joint audits are mandated as opposed to when they are done on a voluntary basis.

1.6 Research Layout

The structure of the report will be a follows:

- **Chapter One** – Chapter One introduces the research title relating to the factors that influence the effectiveness of joint audits. This chapter gives background on the topic and discusses the research motivation, research problem and the scope of the research.

- **Chapter Two** – This chapter presents arguments supporting the relevance for the research by presenting empirical and theoretical research already done in the area of joint audits. The chapter also presents theory on IOC, mainly the resource dependence theory. The six research questions all derived from literature will be introduced in this chapter.

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- **Chapter Three** – This chapter is a summary of the research questions in chapter two.

- **Chapter Four** – This chapter discusses the descriptive quantitative research methodology used in the research. The measurement instrument used, which is a survey questionnaire is also discussed. The population of the research as well as the sampling methodology applied is discussed together with the data analysis done.

- **Chapter Five** – Chapter Five presents the findings of the data collected which is done mainly in a descriptive matter.

- **Chapter Six** – Chapter Six discusses the results presented in chapter five and how these results answer the research problem in Chapter One and how the findings also relate to the research questions discussed in chapters two to three.

- **Chapter Seven** – This chapter concludes the research by revisiting the research objectives and discussing the extent to which these objectives were answered by the research findings. Recommendations which are based on the findings in Chapter Five and Six are also presented. The chapter concludes with some suggestions for future research.

- **Chapter Eight** – All literature and sources of information used in this research is presented here.

- **Appendices** – Appendices one contains the questionnaire used shown in the different research questions sections. Appendix 2 has the consistency matrix. Consistency matrix shows how the research problem, the literature, the research methodology and the proposed method of analysis are all aligned.

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Chapter Two: Literature Review and Hypothesis

2.1 Introduction

The purpose of this section is to review the empirical and theoretical work that has been done in the area of joint audit and interorganisational collaboration. This will be done with a view to generating testable hypotheses on factors associated with effective joint audit outcomes.

2.2 Definition

A joint audit is defined as an "*audit in which financial statements are audited by two or more independent auditors in a way that involves coordination of the audit, planning, shared audit effort, cross reviews, mutual quality controls and issuance of one single auditor's report signed by the auditors who are jointly liable*" (Ratzinger-Sakel et al., 2013). A joint audit is thus not the same as a 'dual audit' where the audit firms independently issue audit reports or a 'double audit' where the audit work is fully performed twice (Ratzinger-Sakel et al., 2013).

2.3 Joint Audits – A Review of Empirical Research

A review of empirical research done on the impact of joint audits on outcomes such as audit fees and audit quality (audit precision) found that results varied significantly and could not be relied on (Ratzinger-Sakel et al., 2013; Velte & Azibi, 2015). A theoretical overlay is therefore required to understand the differing results from empirical research and the contexts in which they are applicable.

Some findings from various researchers had concluded that companies with voluntary joint auditors generally had a more conservative approach with their earnings, had less abnormal accruals, better credit ratings and were generally perceived not to fail or become insolvent in the short term (Velte & Azibi, 2015; Zerni et al., 2012). Additionally, some researchers postulated that the higher quality of work the company receives from joint audits was the reason for the higher audit fees in joint audits (Holm & Thinggaard, 2010; Ratzinger-Sakel et al., 2013; Zerni et al., 2012). This claim that fees were higher due to an improvement in quality was dismissed when it was found that even though audit fees were higher, there was no conclusive increase in the audit quality provided on joint audits (André et al., 2015). This observation that joint audits do not improve audit quality had been supported three years earlier in another empirical research study (Lesage & Ratzinger-Sakel, 2012).

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The finding that joint audits result in higher fees was however contradicted when an analysis of 715 non-financial companies listed in Denmark, Finland and Sweden concluded that joint audits in fact reduce audit fees paid by the company (Ittonen & Peni, 2012). This finding was supported using game theory (Deng et al., 2014), where it was proven that joint audits fees are lower than single audit fees.

2.4 Joint Audits - A Review of Theoretical Research

It became evident that there was no conclusive finding on the impact of joint audit on the fees, quality and effectiveness of the audit hence necessitating additional research based on solid theoretical studies (Ratzinger-Sakel et al., 2013). Given that the only other theoretical research done to investigate whether or not joint audits were successful was done using game theory, this research aims to find the factors that impact on joint audits using interorganisational collaboration theories.

It can be argued that the engagement of two audit firms working together to produce and sign a single set of financial statements is a form of interorganisational collaboration. Findings from the associated theoretical work may therefore be used to generate testable hypotheses about joint audit. One of the longstanding definition of interorganisational collaboration is defined as “a review of common sets of expectations, and collaboration, voluntary or mandated, which is achieved between two or more organisations” (Schopler, 1987). Joint audits are characterised by two auditors jointly liable for an audit report (Ratzinger-Sakel et al., 2013). The engagement of two auditors with a common set of expectations to deliver to the client i.e. a single set of signed financial statements is therefore an act of collaboration.

2.5 Interorganisational Collaboration

From the various possible theories that have been used to understand interorganisational collaboration, this research will aim to understand interorganisational collaboration using the resource dependence theory. Longstanding theories that have been used to analyse interorganisational collaboration and relationships (Golonka, 2013; Koschmann, 2008; Tashman & Rivera, 2015) include:

- Resource dependence theory,
- Transaction cost economics,

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- Strategic choice theory,
- Stakeholder theory,
- Learning theory,
- Institutional theory and
- Boundary theory

Various researchers have found that interorganisational collaboration between two organisations, also termed dyads, is best understood using the resource dependence theory (Hallen et al., 2014; Hillman et al., 2009; Provan, Fish, & Sydow, 2007; Salancik & Pfeffer, 1978; Stock, 2006). Other researchers have however argued that the transaction cost theory is better than the resource dependence theory as it addresses solutions that do not necessarily result in the two firms collaborating (Hillman et al., 2009). The solution from the transaction cost theory which encourages other options not involving collaboration stems from the argument that the psychological make-up of exchange partners is not immediately visible and involves a great deal of opportunism and that all exchange partners should be treated with caution as they are likely to be opportunists making any form of collaboration susceptible to abuse (Gulati et al., 2012). Transaction cost theory is however mainly used to understand mergers and the prediction of potential partners for the mergers (Hillman et al., 2009). Because joint audits are more a form of collaboration than they are a merger as the audit firms are not expected to merge and operate as one entity, an approach based on concepts from the transaction cost economics theory is therefore not preferred. Although other theories such as the strategic choice theory, stakeholder theory, learning theory, institutional theory and boundary all have some elements which are covered by the resource dependence theory, the resource dependence theory was the one with elements closely related to addressing the joint audit problem discussed in chapter one.

The resource dependence theory was first developed in the seventies (Aldrich & Pfeffer, 1976; Salancik & Pfeffer, 1978); and has continued to be one of the most cited theories since (Hallen et al., 2014; Hillman et al., 2009). The theory states that organisations are not internally self-sufficient and have to draw on interorganisational collaborations to be able to secure necessary resources (Hallen et al., 2014; Hillman et al., 2009; Pfeffer, 1982; Salancik & Pfeffer, 1978). The mandatory requirement for joint audit in countries like France, the proposal encouraging joint audit by the EC and the SARB view that joint audits result in a diverse set of skills hence maintaining independence and a high quality audit all support the core of the resource dependence theory that a single auditor does not have the ‘resources’ to deliver a high quality audit.

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2.6 Free Riding and Social Loafing

The core principle of the resource dependence theory is that organisations collaborate to reduce the shortfalls in critical resources (Hallen et al., 2014). It was also found that collaboration occurs between firms that depend on each other as a way to reduce dependence on the environment (Hallen et al., 2014; Hillman et al., 2009). One of the reasons for organisations collaborating is for 'asymmetry' which means to take advantage of the other organisation resources (Aldrich, 1976). Another reason for collaborating is that the environment is not always dependable and hence firms always need other firms to rely on and from which they can gain control over their significant resources (Hallen et al., 2014).

The debate and different empirical results on joint audits had already resulted in additional questions on what the ideal configuration of joint audits should be. Questions included whether outcomes on joint audits were different, for instance, when joint audits were done by two big firms relative to joint audits done by one big firm and one small firm (Ratzinger-Sakel et al., 2013). Using game theory, it was determined that joint audits generate the same audit quality as single audits for an audit with two big firms (Deng et al., 2014). However, it was found that audit quality is lower in joint audits where there is one big auditor and one small auditor. The reason for the lower audit quality in an audit with one big firm and one small firm was ascribed to the 'free riding problem' or 'social loafing'. Free riding in joint audits is defined as a situation where one of the audit firms saves on its own resources for example technology costs, and abuses the other audit firm's resources (Deng et al., 2014).

The concept of social loafing is a phenomenon that has been around since 1913 (Simms & Nichols, 2014). It was first proved in an experiment that when a group of people pull a rope together, the total output produced was less than when the individuals in the group separately pulled the rope (Simms & Nichols, 2014). It was also shown that there was a general tendency for individuals to be less productive when in a group or even when they have the perception of working in a group (Simms & Nichols, 2014). Social loafing has been described as a 'social disease' which is caused by a lack of coordination or motivation when there are groups working together which allows a perfect setting for people to 'hide in the crowd' (Simms & Nichols, 2014). Gender was also another factor that was seen to have an influence on social loafing where it was found that men tend to loaf more than women (Simms & Nichols, 2014). Various tests carried out showed that when certain

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conditions are present such as, some level of uniqueness, self-evaluation, similarity in the effort exerted and clear goals and commitment to the task, social loafing was reduced (Simms & Nichols, 2014).

Other factors which significantly decreased social loafing included how well each contribution to the group could be measured or the perception that it could be measured (Simms & Nichols, 2014). The visibility of each of the group or individual contribution was seen to also reduce social loafing (Simms & Nichols, 2014). A number of researchers have emphasised the importance of commitment and interest to the task as important factors which needs to be present in order to make collaboration successful. There has however been an insignificant amount of focus on the importance of other factors such as coordination and cooperation to the success of collaboration and reduction in social loafing (Gulati et al., 2012). Coordination is when exchange partners can readjust their actions for the greater good of the collaboration while interorganisational cooperation is the combined pursuit of similar agreed upon goals by both partners (Gulati et al., 2012).

It was also argued that another successful way of reducing the free riding problem in joint audits is by having each organisation bring a unique proposition to the table without any attempt to 'free ride' the other organisations resources. This way, both firms can depend on each other as each organisation has something to offer. The reason for uniqueness being a factor seen to reduce social loafing was because performance in a collaborative environment was seen to increase when individuals felt that no one else is able to match their contribution (Das, Sen, & Sengupta, 1998). The contrary was however found in some studies where it was shown that social loafing in group settings continued to occur even when individuals were presented with unique tasks (Simms & Nichols, 2014) which led to another school of thought known as mutual dependence.

Mutual dependence is defined as "*the power differential between two organizations*" (Casciaro & Piskorski, 2005). Initial studies on the social loafing concept found that smaller organisations gained more power by benefiting from collaborations with bigger firms relative to organisations of the same size because of smaller organisations using the resources of the larger organisation (Das et al., 1998). This was however later opposed by other findings which found that it was the larger organisations which benefited from the smaller organisations as they become more powerful and independent when they were in a position to control the resources of the smaller organisations (Nienhüser, 2008). Mutual dependence was a different angle of thought as the argument was that it is not always about a smaller organisation taking advantage of the larger organisation or about the larger

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organisation controlling the resources of the smaller organisation. Mutual dependence concluded using the application of the resource dependence theory that interorganisational collaborations work best when there is no unbalanced power between the organisations but instead the two organisations can mutually depend on each other (Simms & Nichols, 2014). Resource dependence theory also added that one of the key factors which influence the effectiveness of interorganisational collaboration is a situation where there is no one organisation with more influence on another organisations resources but both firms can have the sum of their dependencies captured (Simms & Nichols, 2014) . Social loafing was also found to be significantly reduced whenever there was a level of interdependence between groups (Simms & Nichols, 2014).

It is worth noting that although mutual dependence differs from the case of unique value propositions as it emphasises support on same tasks as opposed to sub-division and specialisation, literature has shown that the two are not mutually exclusive as they can both be present (Simms & Nichols, 2014).

This finding leads to the first research hypothesis:

Hypothesis 1 – Relative to joint audits, audit quality is higher when each of the two firms can be mutually dependent and offer a unique proposition

2.7 Opinion shopping or confirmation bias

Opinion shopping is defined as a situation where the company has an opportunity to internally shop for opinions between the two audit firms, or multiple audit partners, similar to lottery drawing, until the company gets the auditors pressurised to come to the companies own desired opinion (Deng et al., 2014). Opinion shopping can also be described as ‘confirmatory bias’ or ‘myside bias’. Psychological research has shown that people will continue to look for evidence to support their own point of view and in turn, disregard evidence that doesn’t support their point of view (Rabin & Schrag, 1999). This bias was especially found to be present in situations where the decision to be made was ambiguous and where the risk for losses was higher (Kosnik, 2015). Where the risk for losses by an organisation was reduced, the extent of opinion shopping or confirmation bias was also found to be significantly less (Kosnik, 2015). Audit firms are also more likely to be susceptible to opinion shopping in the event that the audited client is economically important to the audit firm (Chen, Peng, Xue, Yang, & Ye, 2015).

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It was found that audited companies will continue chasing for their desired audit opinion even if it would result in misstated financial statements (Tong, 2006). Although opinion shopping is a characteristic which was found to be predominantly present whenever there was a joint audit as joint audits provided the perfect setting for opinion shopping (Deng et al., 2014), it was also found to be present in single audits where there were multiple partners (Chen et al., 2015). This type of opinion shopping is termed 'partner-level' opinion shopping. It was found that audited clients generally had a tendency to pressurise the removal of audit partners not supporting their point of view (Chen et al., 2015). A popular example is the story of Carl Bass, a member of Arthur Andersen's Professional Standards Group (PSG) responsible for the audit of Anderson's then client Enron (Chen et al., 2015). Carl Bass was reluctantly removed from the audit of Enron after the senior management at Enron complained about their dissatisfaction with working with Carl Bass (Chen et al., 2015). Complaints about Carl Bass had come after Carl raised some concerns over some of the accounting practices in place at Enron (Chen et al., 2015). The subsequent collapse of Enron can only support the theory that the concerns that Carl Bass had raised, which caused him to be moved from the Enron audit, had indeed been valid (Chen et al., 2015).

At least 17% of auditor's dismissals were found to be due to an opinion shopping attempt by the audited client and resistance from the dismissed auditor (Lennox, 2002). Despite the audit committee's role of maintaining the integrity of the reporting process, it was found that independent audit committee members did not have control over the dismissal of auditors even when the dismissal was due to opinion shopping (Lennox, 2002). Opinion shopping was found to be driven by senior managers who often would dismiss the views of audit committee members who oppose their views often in an attempt to prevent losses such as a fall in share price or a fall in executive's remuneration in the event of a negative audit opinion (Chen et al., 2015). These senior managers would go to the extent of ignoring the views of the incumbent auditors preferring the views of new auditors especially when these incumbent auditors were proposing to issue a negative audit opinion (Chen et al., 2015; Lennox, 2002). It was found that incoming auditors had a greater tendency to issue clean audit opinions in comparison to outgoing auditors in an attempt to be in good books with management (Chen et al., 2015). These actions by management would often result in the independent auditors choosing to resign from these committees instead of being associated with opinion shopping (Lennox, 2002). Dismissal of auditors as a result of opinion shopping was also found to coincidentally occur closer to the reporting period than any other dismissals (Lennox, 2002).

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Partner-level opinion shopping has been found to be better controlled than opinion shopping which happens between two audit firms. The one way some regulators have started monitoring partner-level opinion shopping is by making it compulsory to have the names of the audit partners in the audit reports (Chen et al., 2015). This way, investors, analysts and other stakeholders can query whether the same auditor will be continuing on an audit in the following year and demand explanations if for some reason, the same partner is not continuing with the audit (Chen et al., 2015). Other regulatory bodies such as the Public Company Accounting Oversight Board (PCAOB) in the United States of America also ask for a full report to be filed whenever an audit partner is replaced for any reason that is not mandatory rotation (Chen et al., 2015). This is done with the main purpose of preventing the auditor being moved as a result of opinion shopping (Chen et al., 2015). Despite concerns from the regulator that audits are susceptible to opinion shopping, empirical research on opinion shopping remains low (Chen et al., 2015).

The statement below by Francis Bacon said over five centuries ago sums up what confirmation bias and opinion shopping is and how hard it is to change:

"*The human understanding when it has once adopted an opinion draws all things else to support and agree with it. And though there be a greater number and weight of instances to be found on the other side, yet these it either neglects and despises, or else by some distinction sets aside and rejects, in order that by this great and pernicious predetermination the authority of its former conclusion may remain inviolate.*" (Bacon & Anderson, 1960).

This discussion leads to the second research hypothesis:

Hypothesis 2 – Audit quality is higher in a single audit than a joint audit due to a reduction in opinion shopping.

2.8 Market Uncertainty

The main cause of market instability has been shown to be due to unknown factors which cause market uncertainty (Slovik, 2011). The market uncertainty theory argues that all markets have known information such as knowledge, information and experience as well as some unknown information (Slovik, 2011). The challenge is that there is a possibility that the unknown market factors could be so significant that they could potentially alter the views of the information that has been known all along (Slovik, 2011). The theory argues that over

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time, the unknown set of information reduces and becomes known (Slovik, 2011). The global financial crisis however challenged the theory that unknown information reduces with time as information becomes known. The failure to predict the global financial crisis showed that time is not a definite factor that helps with making unknown market uncertainty factors known (Slovik, 2011). Market uncertainty is not the same as market risks as market risk is based on the potential of what could happen on the basis of information that is already known while uncertainty is based on unknown information (Slovik, 2011).

The resource dependence theory states that dependency between two groups is particularly beneficial where market related uncertainty is high and the task at hand is more difficult (Pfeffer, 1982; Podolny, 1994; Stock, 2006). Other theories supporting the success of collaboration in the event of high market uncertainty include the boundary theory which states that organisations cushion themselves from changes in the environment or any uncertainty that would have a negative impact on the organisation through collaboration (Aldrich & Herker, 1977; Cross, Yan, & Louis, 2000).

Strategic choice theory has also shown how changes in the external environment or uncertainty in the environment is a motivator for organisations to be able to collaborate with other organisations in order to be able to achieve their goals (Jarillo, 1989; Kogut, 1988; Shan, 1990). Collaborating in an environment of high uncertainty has been shown to provide some stability to the exchange partners (Jarillo, 1989; Kogut, 1988; Shan, 1990). This strategy of forming and managing relationships in a high market uncertainty environment has been described as an ‘adaptive response’ (Aldrich, 1976). Using the social construct concept, other researchers supported collaboration in high uncertainty when it was found that the more complex the task performed, the more successful the collaborations were between teams (Simms & Nichols, 2014). It was however found that this success is not observed when there is fatigue within the group (Simms & Nichols, 2014). The concept of collaboration thriving in an environment of high uncertainty was however contradicted by other researchers showing that when individuals are given a hard task, they work on it just as hard as they work on an easy one and the level of difficulty of a task did not have any impact on successful collaborations (Das et al., 1998).

The principle of uncertainty resulting in greater collaboration was also investigated outside of the normal business context where uncertainty in nature also called ‘ecological uncertainty’ was observed (Tashman & Rivera, 2015). Using the resource dependence theory, research in the United States ski resort industry concluded that uncertainty in nature can be controlled

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by having intensive natural-resource practices which support a substantial amount of collaborating (Tashman & Rivera, 2015).

These research findings lead to the third research hypothesis:

Hypothesis 3 – Audit quality is higher for joint audits performed under conditions of market uncertainty.

2.9 Similarity

The concept of free riding in audit was not observed on collaborations where the two firms were similar (Deng et al., 2014). It had already been concluded twenty years earlier using the resource dependence theory that organizations overcome shortfalls in critical resources by being more exclusive in selecting exchange partners (Chandler, Haunschild, Rhee, & Beckman, 2013; Podolny, 1994). In being exclusive, it was observed that organisations selected only partners that were similar to themselves, thereby guaranteeing the organisation of resources from organisations they can trust and depend on (Chandler et al., 2013).

The concept of exclusivity in partnership selection was reviewed at great length in a review of social exchanges where it was found that exchange partners that are of higher status perceive the goods received or exchanged from similarly higher status exchange partners as goods of a superior quality (Cook, Cheshire, Rice, & Nakagawa, 2013). This view was found to be balanced when they looked at lower status exchange partners who also thought that the goods from higher status partners were of a higher quality and would make the lower status partners results more reliable (Oliver, 1990). Not only was the produce from higher status partners found to be reliable (Oliver, 1990), it was found that higher status partners were under pressure to deliver more as any potential reputational damage would be costly for them (Gulati et al., 2012). It was also found that the higher status exchanges were actively sought after and there was a general preference for all parties to have their exchange with higher status exchange partners (Cook et al., 2013). The lower level partners with any affiliations with higher level partners were generally positively viewed while the higher status partners with any affiliations with lower partners were penalised by having their status reduced (Sauder, Lynn, & Podolny, 2012). The findings were supported by researchers who found that one of the main reasons or organisations collaborating was ‘legitimacy’ where organisations aimed to collaborate to improve on their image, prestige and reputation (Oliver, 1990).

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This view of lower status exchange partners only valuing the goods from higher status exchange partners and the conclusion that exchange partners will only prefer exchanges with higher status partners (Cook et al., 2013; Sauder et al., 2012) contradicts the earlier findings by Podolny that collaboration happens best when partners are similar regardless of the their status (Podolny, 1994).

Other researchers supporting the predictions of the resource dependence theory that similarity leads to success in collaborations found that industries heavily dependent on a substantial amount of women tended to also have female board members and directors (Davis & Cobb, 2010) and were also more successful than those without female board members. This finding supported the theory that when there is similarity in gender, collaboration also tended to be better (Davis & Cobb, 2010).

It was however found in audit that the preference of joint auditors chosen by the audited company was based mainly on either the size of the audited company or the make-up of the ownership structures of the audited company and not necessarily the similarity of both of the auditors (Ratzinger-Sakel et al., 2013). Companies with ownership structures that were not concentrated or those with less family structures were generally found to appoint at least one Big 4 auditor (KPMG, Deloitte, PWC and EY) (Ratzinger-Sakel et al., 2013). Smaller companies on the other hand were found to have no incentive or motive to hire a Big 4 auditor while big companies selected at least one Big 4 auditor (Ratzinger-Sakel et al., 2013). In medium sized firms, it was found that whenever there was an audit committee, this motivated the hiring of at least one Big 4 audit firm. The pairing of the audit firms in a joint audit however did not consider the quality of the audit provided (Ratzinger-Sakel et al., 2013).

These theoretical findings therefore support the fourth research hypothesis:

Hypothesis 4 – In the context of joint audits, audit quality is higher when the two firms are similar in size, culture and gender.

2.10 Familiarity

A significant amount of research conducted has shown that the two most significant features found to be present in a high uncertainty environment where partners are transacting are trustworthiness and honesty (Cook et al., 2013). It was also found that

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there is a wide distrust for partners that are new to the collaborative network or dyad with only 11% of business collaborations being collaboration between new acquaintances and the majority being friends, relatives other people with previous acquaintances (Cook et al., 2013) . When two parties are collaborating in an environment of high uncertainty, the focus tends to shift from the uncertainty to the potential exchange partners themselves (Podolny, 1994). One theoretical explanation for this is a behaviour termed 'satisficing'. Satisficing is described as the observation that in a situation of high uncertainty and risk, parties tend to focus on who their potential exchange partner is with the aim of choosing to transact only with those parties they have had previous transactions with in the past after usually years of observing how they work (March, 1991).

The focus has however started shifting from merely friendship or relationship based on trust to a trust that is based on reputation, performance and proven competence (Cook et al., 2013). This is because collaborations merely based on acquaintance, or 'blind commitment' tended to lead to a greater amount of inefficiency in the collaboration (Cook et al., 2013). Collaboration based on satisficing (Podolny, 1994) support the new focus of trust in exchange partners being based on competence (Cook et al., 2013) as partners comfort would have come from years of cultivating long lasting exchange relationships and they can use those years as a tangible basis for evaluating the potential collaboration.

The positive relationship between familiarity and successful collaboration was also supported by the social loafing concept which found that social loafing is drastically reduced when individuals are familiar with the task at hand and familiar with each other (Das et al., 1998). It was also discovered that when there was familiarity within a group, there was an increased amount of cohesiveness which resulted in a greater amount of collaboration (Simms & Nichols, 2014). Transaction cost theory which argues that all exchange partners are universally opportunists concludes that the one way to reduce this opportunism is by having prior experiences where the partners have worked together previously (Gulati et al., 2012).

This leads to the fifth hypothesis;

Hypothesis 5 – Joint audits will improve the quality of audit if the parties have transacted together in the past.

2.11 Mandated vs Voluntary

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There are various reasons why organisations collaborate. One of the reasons for collaborations is due to 'necessity' as a result of a legal or a regulatory requirement from higher authorities resulting in unnatural collaborations that would not ordinarily have naturally occurred (Oliver, 1990). Other reasons for the motivation of voluntary audit have been mainly linked to the desire by regulators to curb any potential irregularities that may occur in corporates especially after the global financial crisis (European Commission, 2010). Studies that explicitly compare mandated and voluntary collaborations are not very common (for a review see for e.g., (Oliver, 1990)). This is because most collaborations are voluntary as opposed to mandated. The results from the limited studies have shown that there is a difference in interaction when collaborations are mandated as opposed to voluntary. Although mandated collaborations have increased the number of collaborations thereby giving opportunities to smaller firms, these collaborations have also been seen to reduce the quality produced by the collaboration (Aldrich, 1976).

It was found that the more minority shareholders a company had, the more it was likely to employ joint auditors (Zerni et al., 2012). In some countries such as Sweden, the law gave the right to the minority shareholders to appoint their own second auditor as long as the appointment was supported by at least 10% of the shareholders (Ratzinger-Sakel et al., 2013). A significant amount of literature has focused solely on either voluntary or mandatory joint audits. The empirical research investigating the impact of joint audits on the different types of audits namely, voluntary and mandated joint audits has been inconclusive (for a review, see, (Ratzinger-Sakel et al., 2013)).

The resource dependence theory is vague on whether mandatory as opposed to voluntary collaborations have an impact on the effectiveness of collaborations (Pfeffer, 1982). The core argument however of the resource dependence theory is that in order for organisations to be more effective, they have to collaborate (Salancik & Pfeffer, 1978) which by default can be viewed as a mandatory collaboration. As such it is worth revisiting this finding which leads to the sixth hypothesis:

Hypothesis 6 – Voluntary joint audits are perceived to be more effective than mandatory joint audits

2.12 Limitations of the Theory

Although the resource dependence theory has been seen as one of the best interorganisational collaboration theory for dyads, it has been criticised. One of the main

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criticisms of the theory is that it is rigid and narrow in that dependence can only be solved though collaboration, as a way of managing external dependencies while not giving options on how organisations can survive without collaboration (Casciaro & Piskorski, 2004; Davis & Cobb, 2010; Zheng, Singh, & Mitchell, 2014). The fact that the resource dependence theory does not give options on how organisations can survive without collaboration is an area of concern for researchers. However, the aim of this research is not to understand how joint auditors can get rid of dependency by becoming single auditors but instead, to understand how if certain conditions are present, joint audits can be effective.

Another criticism of the resource dependence theory has been the lack of empirical research supporting the basic principles which support the theory (Davis & Cobb, 2010). Pfeffer himself acknowledged this when he released the second edition of the resource dependence theory in 2003 as he started off by saying the following:

"My colleague and co-author Jerry Salancik was fond of saying, "*success ruins everything*". To some extent, the very success of resource dependence theory has also been a problem. The idea, seemingly now widely accepted, that organizations are constrained and affected by their environments and that they act to attempt to manage resource dependencies, has become almost so accepted and taken for granted that it is not as rigorously explored and tested as it might be" (Pfeffer & Salancik, 2003: xxxiii).

Other researchers have however disagreed with the statement from Pfeffer after establishing that there have in fact been extensive empirical tests done on the organisational collaboration using the resource dependence theory and the impact of the environment (Hillman et al., 2009). It is hoped that this research will contribute to this conversation by performing empirical tests on some of the key findings of the resource dependency theory.

2.13 Conclusion

In summary the six research questions are derived from a combination of resource dependence theory, joint audit theoretical research findings and in other instances both as depicted in Figure 1 below.

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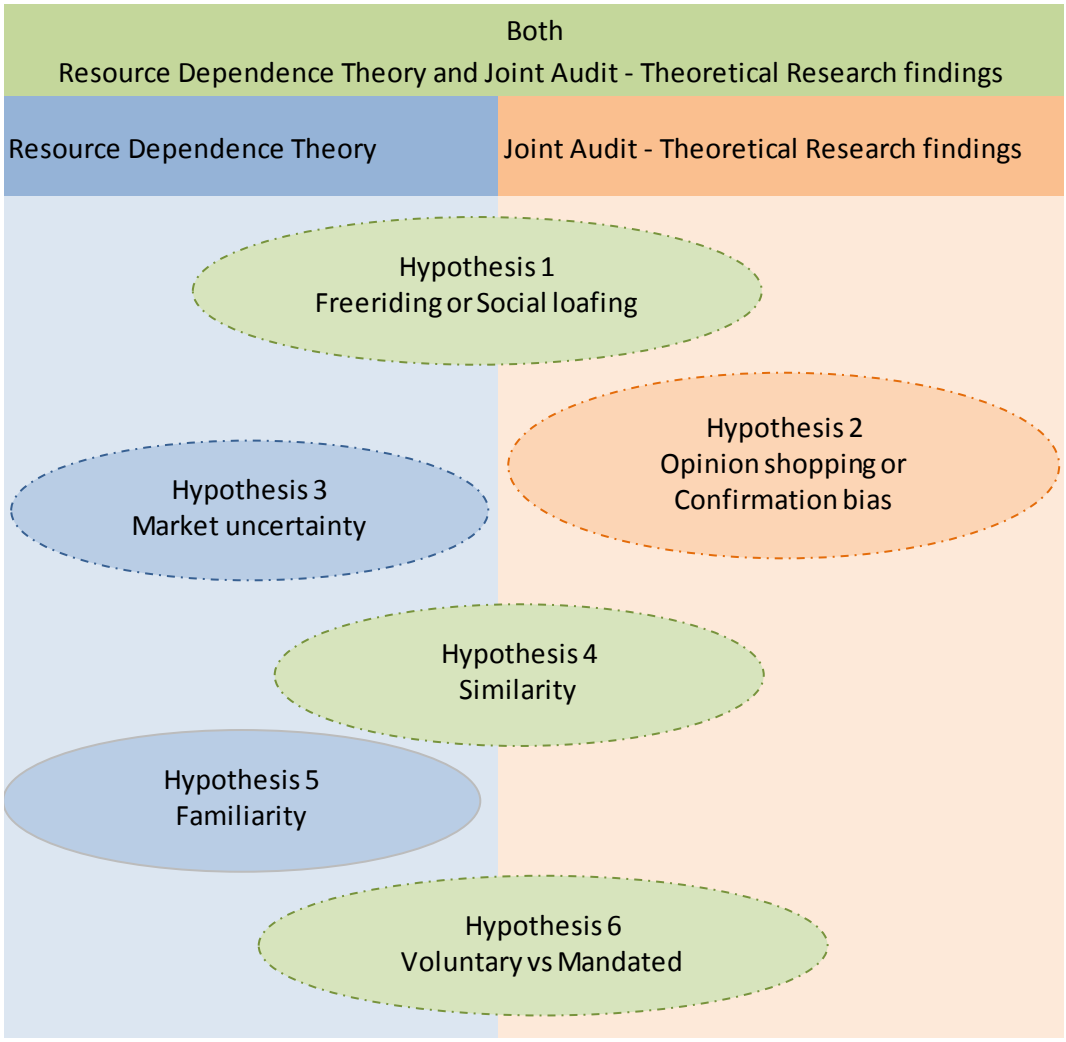

Figure 1 - Research questions theoretical background

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Chapter Three: Research Questions

3.1 Summary of Research Questions

The six research questions have been discussed in detail and integrated in the literature review in Chapter 2. These have been based on interorganisational collaboration theory, the resource dependence theory, as well as constructs from the research already done on joint audits.

3.2 Resource Dependence Theory

Hypothesis three and five are only based on the resource dependence theory. Conditions for these hypotheses could not be found in any of the joint audits literature.

3.3 Joint Audit Literature

Hypothesis two is the only research question based solely on joint audits literature. This opinion shopping condition was not one of the conditions of the resource dependence theory.

3.4 Combined Resource Dependence Theory and Joint Audit Literature

Hypothesis one, four and six is derived from the resource dependence theory. Theories tested in these hypotheses also include constructs from some findings made from joint audits literature.

3.5 Summary of Hypotheses

Below is a summary of the research questions discussed in chapter two. The research questions can be summarised as follows;

Hypothesis 1 – Freeriding or Social Loafing

Relative to joint audits, audit quality is higher when each of the two firms can be mutually dependent and offer a unique proposition.

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Hypothesis 2 – Opinion Shopping or Confirmation Bias

Audit quality is higher in a single audit than a joint audit due to a reduction in opinion shopping.

Hypothesis 3 – Market Uncertainty

Relative to joint audits performed under conditions of relative market certainty, joint audits performed under conditions of market uncertainty enjoy greater collaboration between auditors which results in increased audit effectiveness.

Hypothesis 4 - Similarity

In the context of joint audits, audit quality is higher when the two firms are similar in size, culture and gender.

Hypothesis 5 - Familiarity

Joint audits will improve the quality of audit if the parties have transacted together in the past.

Hypothesis 6 – Mandatory vs Voluntary

Voluntary joint audits are more effective than mandatory joint audits

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Chapter Four: Research Methodology

4.1 Introduction

The previous chapters have discussed the objective of this research by coming up with six research questions or factors likely to influence the success of joint audits. The aim of the research was to establish whether an association exists between these factors and the success of joint audits. This chapter provides more detail on the methodology used to test the research questions and also discuss the limitations of the methodology used. The research was quantitative descriptive which is the recommended approach for surveys. Data was collected using a questionnaire (Saunders & Lewis, 2012).

4.2 Choice of Methodology

A quantitative descriptive methodology was used in this study. The reason for the choice in methodology of quantitative was because the research aim was to understand the relationship between independent variables and dependant (or outcome) variables. Quantitative studies typically establish accurate associations between independent and dependent variables (Saunders & Lewis, 2012) namely the factors affecting the success of joint audits (free riding, opinion shopping, market uncertainty, similarity, familiarity and mandated vs voluntary audit) and the outcome being the success of the joint audit itself. A descriptive research design entailed having the subjects measured once as opposed to experimental research design where subjects are measured before and after a treatment (Saunders & Lewis, 2012). Descriptive studies also seek to accurately describe situations, the ‘what’ as opposed to ‘why’ the situation is happening (Saunders & Lewis, 2012). The research aim was to describe the factors influencing the success of joint audit and to what degree these factors do influence the success of joint audits and not why the factors were of any influence. Survey’s questionnaires were sent online via the Survey Monkey tool. Online surveys were easier to distribute than physical surveys. These surveys were self-administered and all responses were anonymous hence also reducing an element of bias that might have been present if the surveys were completed in the presence of the researcher.

4.3 Unit of Analysis

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The unit of analysis for the research was any individual who has had exposure working in a joint audit environment, whether in their capacity as an auditor or an audited client. The auditing professionals included the following individuals;

- Audit managers
- Audit senior managers
- Audit associate directors
- Audit partners

4.4 Population

Population is defined as a complete set of a group with similar characteristics which can be made up of people, organisations or even objects (Saunders & Lewis, 2012). The population of relevance was all individual professionals who have had any experience on joint audit engagements. These individuals included those who had acted in their capacity as the auditors performing the audit as a joint auditor as well as individuals who had been audited. Individuals completing the questionnaire were not restricted to which part of the world they came from.

4.5 Sampling Method and Size

Because it was not practical to collect data from the whole population as there was no known reliable database or platform with a complete list of all individuals who have exposure to joint audits, a sample of individuals was selected from the population. A sample is defined as a subgroup of the total population (Saunders & Lewis, 2012). A complete list of all the members in a population is also known as the sampling frame (Saunders & Lewis, 2012).

The sampling technique used was a combination of non-probability quota sampling and non-probability snowball sampling. Probability sampling, a method which randomly selects a sample from a complete list of population, could not be used as this method would have only been relevant if there was a sampling frame (Saunders & Lewis, 2012). Given that the sampling frame was not known, non-probability sampling, a technique of sampling used when there is no sampling frame, was the most relevant method to be used (Saunders & Lewis, 2012). The term ‘non-probability’ sampling comes from the fact that there was no equal chance or probability of selection of each member in the population and selection was done on convenience or judgement (Saunders & Lewis, 2012). Selection of the

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samples was done on easy accessibility to the individuals with experience on joint audits which therefore was a selection of convenience.

Quota sampling, which is defined as a type of non-probability sampling which ensures that the sample selection contains certain preferred characteristics (Saunders & Lewis, 2012), was the most relevant technique which was used. It was necessary to first determine which individuals had some exposure and experience working on joint audits hence excluding those with no experience. Once these individuals with exposure to joint audits were identified, snowball sampling was applied. Snowball sampling is defined as a type of non-probability sampling where the first respondents or sample identify subsequent respondents or sample members with similar characteristics and forward the measuring instrument to them (Saunders & Lewis, 2012). The individuals with experience on joint audits were therefore asked to send questionnaires to other professionals who they knew had joint audit experience.

The questionnaire was sent to as many potential respondents as possible (200 in total) with an intention of getting at least 50 completed responses. The final number of respondents who completed the questionnaire was 66 which equates to a response rate of 33%. Each respondent answered the same set of standard questions. The standard questions were however not always in the same order as the questions were randomly reordered every time a new respondent was answering the questions. The measurement instrument was a survey sent to individuals with joint audit experience across the different levels of seniority.

4.6 Data Gathering

Data gathering was done using surveys as a two-step process. The first process involved coming up with questions from the six research questions discussed in chapters two and three. This ensured that questions had ‘construct validity’. Construct validity is the extent to which questions actually collect data and measure what they are supposed to be measuring (Saunders & Lewis, 2012) hence ensuring that the research question is answered. Each hypothesis question had a section in the questionnaire (see appendix 1). The questions were however randomly mixed when respondents were answering to disguise the group that the question belonged in.

The second process was to conduct a pilot study with individuals with joint audit experience and test whether the questions were valid, made sense and were properly designed. Checks included checking for grammar and spelling errors, survey link access and general

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understanding of the questions. These checks were done to ensure that the questions had 'content validity' and could not be misinterpreted. Content validity is the extent to which a data tool such as a questionnaire provides enough data, and meets its entire objectives (Saunders & Lewis, 2012).

The questionnaire comprised of the following sections:

- Demographic data – the respondent's years of experience working on joint audits, their gender, age and type of experience (whether the respondent was an auditor, audited client, a regulator or both). Where the respondent did not have any experience working on joint audits, they could select 'not applicable' hence ensuring that their responses were excluded from the analysis.

- Section one – Questions asked in this section were randomly mixed and covered all the research questions except hypothesis five on familiarity and hypothesis six on voluntary vs mandated joint audits. These questions were close ended questions based on a five-point Likert scale; The scale and its ordinal coding was as follows:

  1 = 'Not at all influential'
  2 = 'Slightly influential'
  3 = 'Somewhat influential'
  4 = 'Very influential'
  5 = 'Extremely influential'

- Section two – Questions asked in this section were randomly mixed and covered all the research questions except hypothesis two on opinion shopping. These questions were close ended questions based on a five-point likert scale; The scale and its ordinal coding was as follows:

  1 = 'Strongly disagree'
  2 = 'Disagree'
  3 = 'Neither agree or disagree'
  4 = 'Agree'
  5 = 'Strongly agree'

The total number of questions on the questionnaire including demographics was 52. Once the questions were finalised, questionnaires were sent out to potential respondents. The

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respondents were first contacted telephonically, personally and on email before the link was sent to them on email using Survey Monkey (see Appendix 1). The email with the link included the overview of the study as well as the aim of the research together with contact details of the researcher and the supervisor. The email also included a request for the respondent to forward the link to any additional respondents with experience working on joint audits.

An online tool ensured that feedback was quickly collected, multiple respondents could simultaneously complete the questionnaire, updates on surveys completed were real time and that the data could easily be transferred into an analysis tool. Appendix 2 shows the consistency matrix with the literature used per research question as well as the data analysis technique used per research question.

4.7 Data Analysis

Both descriptive and inferential statistics was performed on the data. A 'deduction' research approach which is the most appropriate method used when testing a theoretical proposition was used (Saunders & Lewis, 2012). This is because all the questions designed for the survey were testing the resource dependence theory and some constructs from the literature done on joint audits (see chapter two).

Descriptive statistics done included checking that the data is complete and that there were no missing values, some frequency analysis and testing the links between data and demographics was done. Frequency analysis included tests on average values, median and standard deviation. Data analysis method used was the structural equation modelling (SEM), specifically confirmatory factor analysis (CFA). This method is the most relevant method to be used when concepts based on theory are tested and when large number of variables need to be classified (Markus, 2012). It is therefore the most relevant given that a combination of resource dependence theory, some constructs from other theories such as boundary theory and game theory was used to test the research questions summarised in chapter three.

A set of questions which were constructed to make up each hypothesis were randomly mixed on the questionnaire. These questions were the 'observed variables'. Joint audit effectiveness and the hypothesis questions was the 'latent variable'. Observed variables (also termed measured variables) are represented by a rectangle in Figure 2 while latent variables will be measured by a circle (see Figure 2).

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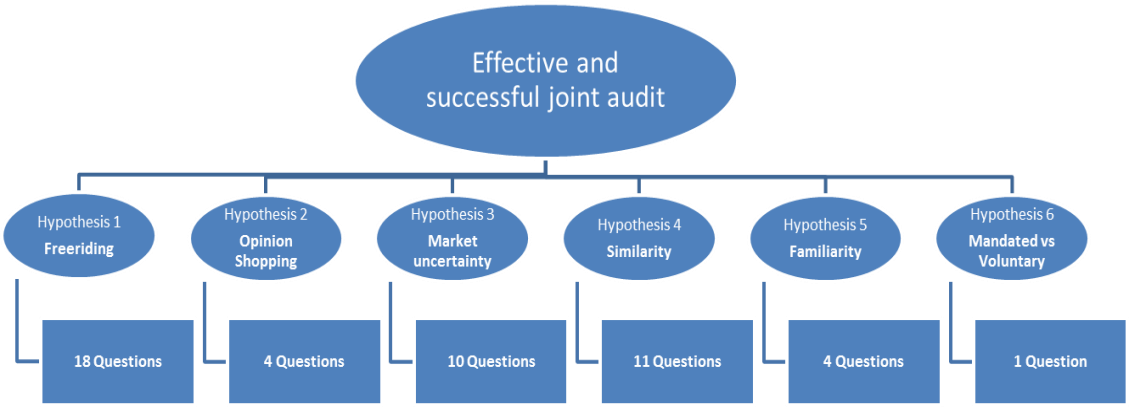

Figure 2 - Illustration of CFA for effective joint audit

The analysis of the broad set of questions from the six research questions was scientifically grouped using factor analysis. The analysis of data identified significant constructs. In addition, analysis also identified new constructs with Eigen value greater than 1 which were not originally identified as being part of the original hypothesis or as part of a the original group. Factor analysis output provided an indication of the relative importance of the different underlying factors affecting the effectiveness of joint audits. The reliability and validity of the constructs identified using factor analysis was tested using Cronbach's alpha coefficient test. Figure 3 below shows the interpretation of the survey using Cronbach alpha.

Cronbach's Alpha (α)	Internal consistency
≥ .9	Excellent
.9 > α ≥ .8	Good
.8 > α ≥ .7	Acceptable
.7 > α ≥ .6	Questionable
.6 > α ≥ .5	Poor
< .5	Unacceptable

Figure 3 - Cronbach's Alpha Interpretation Guideline

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In this research, a Cronbach's alpha coefficient of greater or equal to 0.6 was taken as an acceptable score showing reliability of the respective section of the questionnaire.

Another data analysis method used to test the correlation or the strength of relationship between the variables was the Spearman's Ranked-Order (Rho) correlation test. This method is used to test correlations on ordinal data (Saunders & Lewis, 2012) similar to the data used in this research i.e. 'strongly disagree' to 'strongly agree; and 'not at all influential' to 'extremely influential'. As shown in Figure 4, a relationship of zero meant that there was no relationship between the two variables. A relationship of -1 or +1 meant that there was a negative and a positive relationship respectively. In order to test the possibility of the correlation occurring by chance, a chi-square test was done. This is a significance testing method which illustrates the possibility of the correlation happening by chance (Saunders & Lewis, 2012). If the probability was small (0.05 or less), this meant that the relationship was statistically significant and there was a rejection of the null hypothesis (Saunders & Lewis, 2012).

ANOVA tests were performed to test for statistically significant mean differences between the demographics and the 48 questions in hypothesis one to six. Where the significance test showed a result less than 0.05, this meant that the difference in mean was statistically significant.

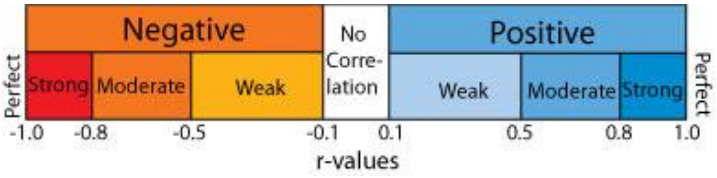

Figure 4 - Interpretation of correlation coefficients

Below is the summary of the data analysis method carried out for all the research questions;

Table 1 - Summary of data analysis approach

Research question	Data Analysis	Motivation for method used
Demographics – Questions 1 to 4	Descriptive analysis	Demographics tests done were to determine how data was spread across the different levels of experience on joint audits, age and gender of the

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		respondents. It was also important to differentiate the views of the audited clients from the auditors which was a factor tested on demographics.
	ANOVA	ANOVA tests were run to test if there were any statistically significant mean differences between the demographics and the 48 questions in hypothesis one to six.
Hypothesis one to hypothesis six (all)	Descriptive Analysis	Descriptive analysis was done to test for the mean, median and the standard deviation of each variable
	CFA and Cronbach Alpha Coefficient	CFA was relevant as a large number of variables needed to be classified into the different categories. Cronbach was used to test the validity and reliability of the classification of the six different hypothesis sections tested
	Spearman's Ranked Order (Rho) correlation and chi-test	Spearman's ranked order was used to test for the correction of the different factors in hypothesis one to six to the variable of 'a successful joint audit'. Chi-test was used to confirm whether any of the correlation found was not by chance but in fact had been statistically significant

4.8 Methodology Limitations

Below are the limitations identified for the research methodology;

- Although the research was meant to cover responses from all over the world, surveys sent were limited to South Africa resulting in potential findings from other parts of the world being omitted from the research.

- The distribution between audited client, auditing firm and regulator was not balanced.

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- There were only a few responses from the regulator. Given that the law of mandating joint audits in South Africa was once put in place by the regulator, it would have been critical to obtain the regulators view on this view as having an influence on the success of joint audits.

- The questionnaire constantly referred to 'the success and effectiveness of joint audits'. It is important to note that the definition of 'success' or 'high quality' can be subjective from person to person. Since success was not defined in the research, this might have potentially created a bias in the results obtained.

- The absence of one central place where joint auditors and audited clients could be found presented a targeted objectivity risk as surveys were sent only to those respondents which the researcher had access to and other respondents which the original sampled respondents also had access to (snow balling).

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Chapter Five: Presentation of Research Results

5.1 Introduction

Chapter Four explained the methodology used to analyse the data gathered. This chapter introduces the findings from the questionnaire. The questionnaire was designed with the aim of answering the six hypotheses questions in chapter two and three. Of the 200 questionnaires sent, a total of 66 responses were received. Of the 66 responses received, 63 responses had all the questions answered.

The survey questionnaire which was used to collect data was divided into two sections. Section one had four questions relating to demographic data which included the years of experience respondents had worked on joint audits, the age, gender and the type of experience the respondents had. The experience included whether the respondents were working as joint auditors, an audited client or a regulator. There were no responses from the regulator. The remainder of section one and section two included 48 questions which were all randomly mixed when respondents were answering. The 48 questions tested the research questions discussed in chapter two and three. The questions on the questionnaire can be summarised as follows;

Table 2 - Summary of questionnaire data

Type	**Levels**	**Number of questions**
Demographic questions	Mixed	4 questions
Level of influence questions	1 – not at all influential 2 – slightly influential 3 – somewhat influential 4 – very influential 5 – extremely influential	26 questions
Level of agreement question	1 – Strongly disagree 2 – Disagree 3 – Neither agree or disagree 4 – Agree 5 – Strongly agree	22 questions

Statistical tests were applied to the data using SPSS.

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5.2 A Description of the Sample Obtained

Below is the frequency description of the data obtained

5.2.1 Years of Experience Working on Joint Audits

Table 3 shows the years of experience of the respondents working on joint audits. 28.8% of respondents had worked on joint audits for 3-5 years. This was followed by 27.3% of respondents who had worked on joint audits for 5-10 years, 24.2% for 1-3 years, 12.1% over 10 years and 6% for less than a year. One response was not completed. Years of experience for respondents with over 3 years of joint audits experience show a cumulative response rate of over 68%. Since the assumption is that the longer respondents work on joint audits, the more they gain understanding in this field, the higher cumulative percentage of 68% gave credibility to the responses given that this came from a majority of individuals with more years of experience and better understanding of joint audits than those with lesser experience.

Table 3 - Years of experience working on joint audits

	Frequency	Percent	Valid Percent	Cumulative Percent
Missing	1	1.5	1.5	1.5
1-3 years	16	24.2	24.2	25.8
3.-5 years	19	28.8	28.8	54.5
5-10 years	18	27.3	27.3	81.8
Less than 1 year	4	6.1	6.1	87.9
Over 10 years	8	12.1	12.1	100
Total	66	100.0	100.0	

5.2.2 Age of Respondents

Table 4 below shows the frequencies and percentages of the respondents based on their age. Over half of the respondents, 56.1% were between the ages of 25 to 34 years old followed by 22.7% of the respondents between the ages of 35 to 44 years old, 10.6% between ages 45 to 54 years old. 4.5% between the ages of 18 to 24 years old and 3%

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who were 55 and older. There were two missing answers from respondents. The spread of the age of the respondents from 18 to over 55 years meant that the sample was fairly represented.

Table 4 - : Age of respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
Missing	2	3.0	3.0	3.0
18 to 24	3	4.5	4.5	7.6
25 to 34	37	56.1	56.1	63.6
35 to 44	15	22.7	22.7	86.4
45 to 54	7	10.6	10.6	97.0
55 and older	2	3.0	3.0	100.0
Total	66	100.0	100.0	

5.2.3 Gender

Figure 5 below shows the percentage of respondents based gender. 33% of the respondents were female while the majority, 64%, were male. 3% of the respondents did not select their gender.

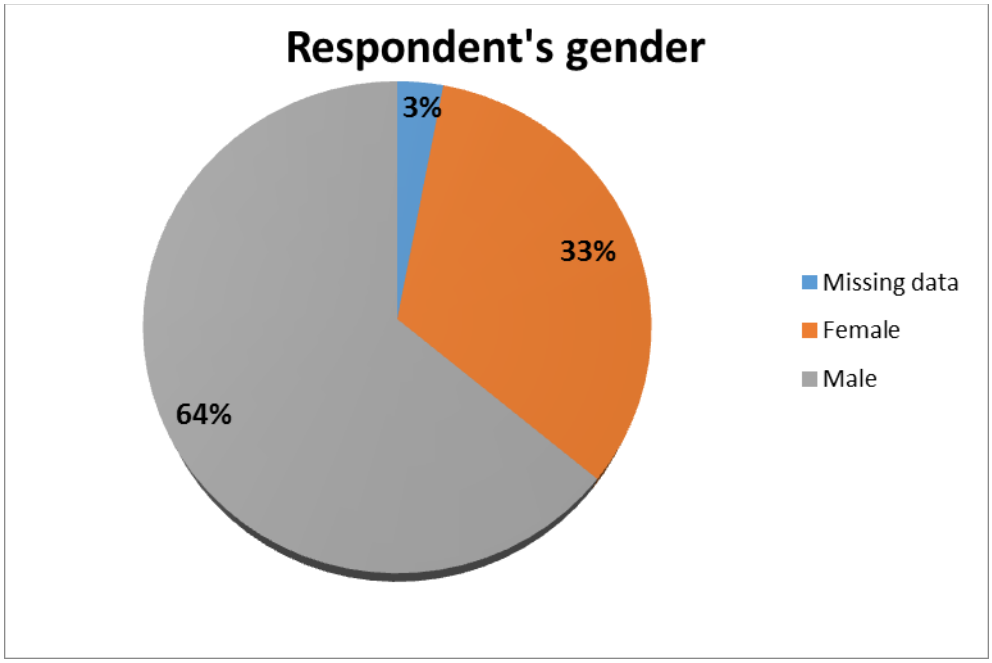

Figure 5 - Respondent's gender

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5.2.4 Type of Experience

Figure 6 below shows the percentage of the respondents based on the type of experience working on joint audits. The question allowed for multiple responses and hence the total is over 100%. The majority of respondents, 77%, had experience working as auditors on joint audits followed by 42% of respondents who had worked as audited clients. Most respondents who were in companies with joint auditors had at one point also formed part of a joint audit. There were no responses from the regulator. 5% of respondents chose 'other' as the type of experience they had working on joint audits. The spread between clients who were audited and the joint auditors allowed for a well-represented sample. The regulator's view on joint audits would have allowed for a different view and would have made the sample more diversified.

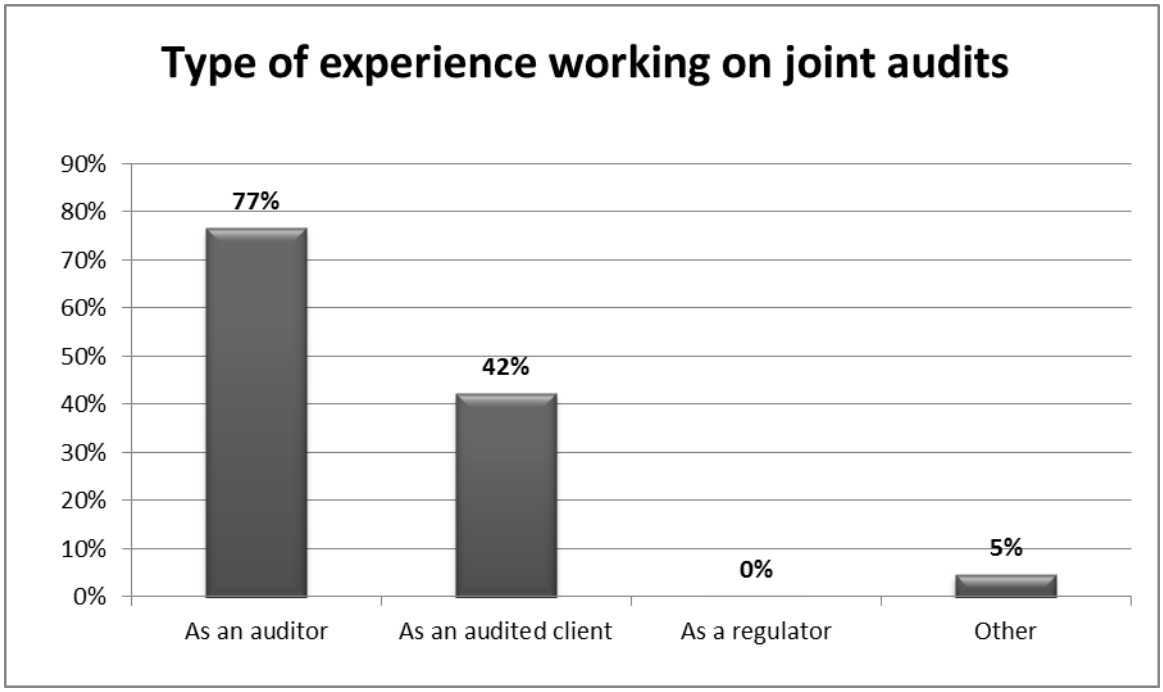

Figure 6- Type of experience

5.3 Descriptive Analysis of Responses Per Hypothesis

From the questions asked, below is an analysis of the responses per the original hypotheses questions discussed in chapter two and three. The descriptive analysis includes discussions on questions with the highest mean, the lowest mean as well as some questions with unexpected or interesting results. The ordinal value of 3.00 in the questionnaire indicated a neutral response where respondents neither agreed nor

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disagreed with the questions. Ordinal value of 1.00 and 2.00 indicated that respondents mainly strongly disagreed or disagreed respectively while a value of 4.00 and 5.00 indicated that respondents mainly agreed or strongly agreed. For the questions with ordinal values based on the influential Likert scale, an ordinal value of 1.00 meant that the factor was not at all influential, 2.00 slightly influential, 3.00 meant somewhat influential, 4.00 very influential and 5.00 extremely influential.

5.3.1 Freeriding or Social Loafing

The average mean for the freeriding hypothesis was 3.12 meaning that most respondents were more or less neutral with a few agreeing or citing the factors listed as part of this hypothesis as somewhat influential. On question one in table 5 below, 42% of respondents thought that unequal contribution to the audit by the audit firm was very influential followed by 24% who saw it as somewhat influential and only 6% thinking that this was not at all influential. Question 7 in Table 5 had the highest mean of 3.88 for this hypothesis with a total of 91% of respondents citing that clarity of audit goals was somewhat influential, very influential or extremely influential. 49% of those respondents thought that clarity of audit goals was very influential to the success of an audit and 27% thought it was extremely influential and 15% responded that this was somewhat influential.

Question 5 in Table 5 had the second highest mean of 3.74. 50% and 17% of respondents thought that visibility of each individual audit firm contribution was very influential and extremely influential respectively. There were no respondents who thought that this factor was not at all influential. It is therefore no surprise that question 3 in table 5 which refers to cross review of each of the joint auditors work, a factor closely related to question 7 had the third highest mean of 3.65. Thirty six percent of respondents thought that this was very influential to the success of an audit followed by 26% who thought this was extremely influential. The next question with the fourth highest mean of 3.62 was question 9 in table 5 where a total of 88% respondents thought that the ability of each audit firm to bring a unique value proposition to the table was somewhat influential, very influential or extremely influential.

Question 8 asking whether the gender of the team members had any influence on the quality of joint audits had the lowest mean of 1.66. More than half, 59%, of respondents thought that the gender of the team members was not at all influential to the quality of the audit while 21% thought that gender was slightly influential and a small number, 2%, of respondents thought that gender was extremely influential. The second lowest mean was

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on question 17 where 49% of respondents strongly disagreed with the statement that the quality of joint audits is improved when there is limited to no interaction between the two firms during the audit and 32% disagreed making the total of those that disagreed 81%. A surprising finding was on question 18 which was the opposite of question 17. 18% respondents neither agreed nor disagreed that joint audits quality is improved when there is an excessive amount of interaction between the two firms during an audit, 33% agreed and 17% strongly agreed. 5% of respondents did not answer this question. Since question 18 was the opposite of question 17, it was surprising to see that total percentage of agree and strongly agree was 50% for question 18 as opposed to 80% total for strongly disagree and disagree for question 17.

The third lowest mean was on question 4 where 21% of respondents thought that the abuse of the counterpart audit firm's resources by one of the joint auditor was not influential with 20% stating that it was slightly influential and 32% somewhat influential. The fourth lowest mean was on question 16 where a total of 47% together disagreed with the statement that joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit. 5% of respondents did not respond to this question.

Other interesting findings were on question 12 where 26% of respondents disagreed with the statement that an auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap in the audit, 6% strongly disagreed and 39% neither agreed nor disagreed. This was the one question where respondents were mostly neutral. Another interesting finding was on question 13 where almost half of the respondents disagreed with the statement that an auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap.

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Table 5 - Freeriding descriptive stats

Freeriding/Social loafing												
	Question	N	Mean	Std. Deviation	Original hypothesis	% Missing data	% Not at all influential	% Slightly influential	% Somewhat influential	% Very influential	% Extremely influential	% Total
1	Unequal contribution to the audit from any of the two firms	66	3,44	1.083	1. Freeriding		6	14	24	42	14	100
2	Overreliance on the counterpart auditor by the other auditor	66	3,45	1.070	1. Freeriding		5	17	21	44	14	100
3	Cross review of each of the joint auditors work	66	3,65	1.130	1. Freeriding		3	17	18	36	26	100
4	Abuse of the counterpart audit firm's resources by one of the joint auditor	66	2,76	1.266	1. Freeriding		21	20	32	17	11	100
5	Visibility of each individual audit firms contribution	66	3,74	.847	1. Freeriding		0	9	24	50	17	100
6	Ability of each individual auditor to self-evaluate	66	3,36	1.062	1. Freeriding		8	11	30	41	11	100
7	Clarity of audit goals	66	3,88	1.045	1. Freeriding		6	3	15	49	27	100
8	The gender of the team members on the audit	65	1,66	.957	1. Freeriding		59	21	11	8	2	100
9	The ability of each audit firm to bring a unique value proposition to the table	66	3,62	1.049	1. Freeriding		6	6	26	44	18	100
10	Inability to use the counterpart firms resources by the other joint auditor	66	2,79	1.234	1. Freeriding		21	17	32	23	8	100
11	The level of interdependence and joint use of resources between the joint firms	66	3,3	1.150	1. Freeriding		11	14	20	47	9	100
						% Missing data	% Strongly disagree	% Disagree	% Neither agree or disagree	% Agree	% Strongly agree	% Total
12	In general, audit quality is better when there is one auditor than when there are joint auditors	62	2,94	1.038	1. Freeriding	6	6	26	39	14	9	100
13	An auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap	62	2,84	1.176	1. Freeriding	6	9	38	14	26	8	100
14	An auditor in a joint audit exerts the same amount of effort regardless of their view of the other auditor covering the potential gap	63	3,29	1.038	1. Freeriding	5	2	26	23	35	11	100
15	The difficulty in coordinating between the two auditors compromises on the quality of the audit	62	3,61	1.178	1. Freeriding	6	3	20	12	35	24	100
16	Joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit	63	2,78	1.224	1. Freeriding	5	15	32	14	29	6	100
17	Joint audit quality is improved when there is limited to no interaction between the two firms during the audit.	63	1,75	.967	1. Freeriding	5	49	32	8	6	2	100
18	Joint audit quality is improved when there is an excessive amount of interaction between the two firms during the audit.	63	3,37	1.168	1. Freeriding	5	5	23	18	33	17	100
	Average mean		3,12									

5.3.2 Opinion shopping or confirmation bias

The average mean for this hypothesis was 3.33. This means that most respondents thought that most of the questions making up this hypothesis were influential to the quality

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and the success of joint audits. Question 20 in figure 7 had the highest mean of 3.88. 20% of respondents thought that differing views or interpretation by auditors on any critical principles and concepts is extremely influential to the quality of the audit followed by 54% who thought that this was very influential and 18% thinking it was somewhat influential. Only 3% of respondents thought this was not at all influential. One respondent skipped the question. The influence of the audited client playing off the firms against each other, question 22 in figure 7, had the second highest mean of 3.29. 14%, 41% and 23% of respondents thought that this was extremely influential, very influential and somewhat influential respectively. Question 21 had the lowest mean in the hypothesis of 2.98 with 21% stating that penalising of the audit firm which does not support the audited client's view is not at all influential and 17% stating that this was slightly influential.

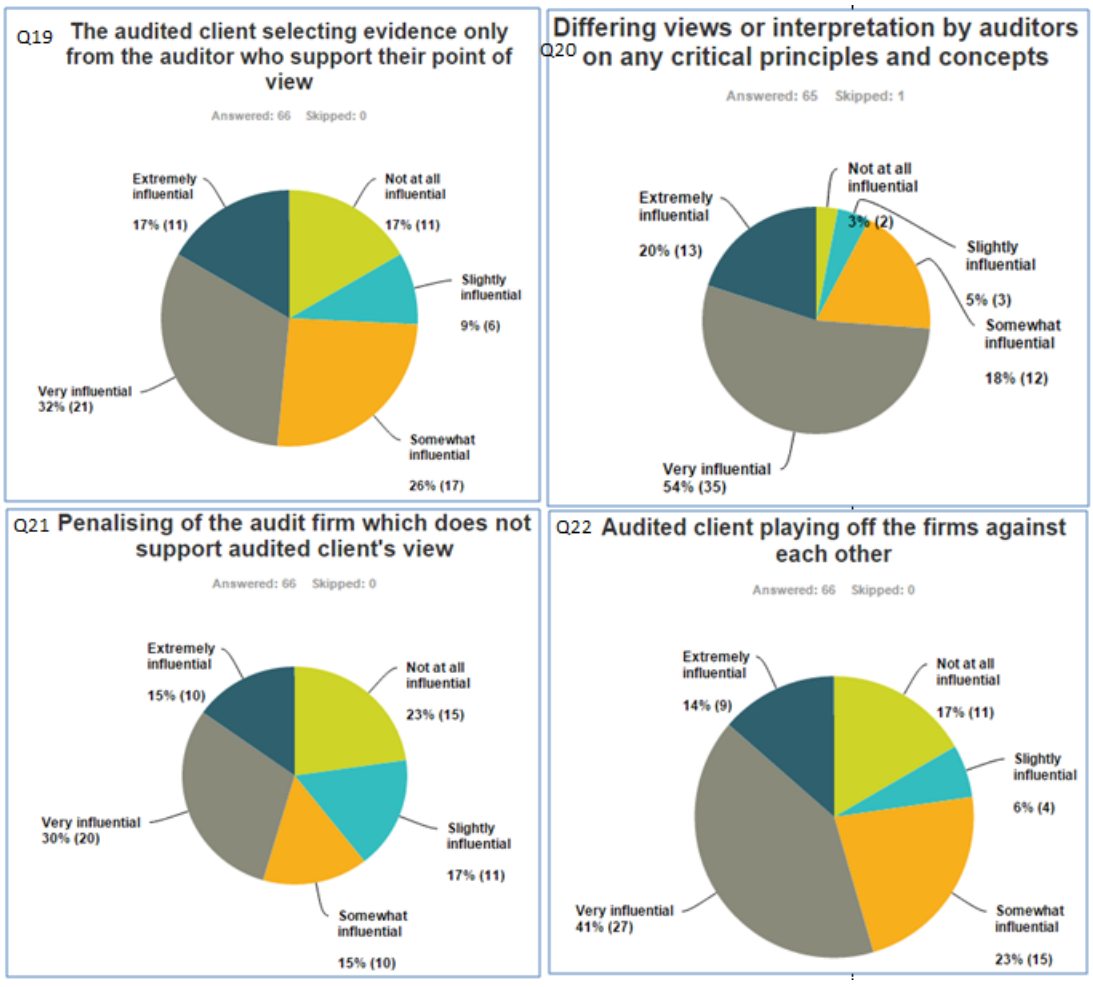

Figure 7 - Opinion shopping descriptive stats

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5.3.3 Market Uncertainty

The average mean for the questions in this hypothesis was 3.15 showing that the majority of respondents were between neutral and agreeing or thought the questions asked were between somewhat influential and very influential to the success of joint audits. The highest mean of 3.7 was on question 27 in table 6 where 18% of respondents thought that auditor's auditing a client involved in complex transactions was influential to the success of joint audits followed by 55% who thought it was very influential and 12% somewhat influential. Question 25 and question 28 had the second and the third highest mean of 3.63 and 3.58 respectively. These 2 questions relating to the influence of increased regulatory requirements in an environment on joint audits and the degree of difficulty of the audit are closely related to question 27 on complex transactions. Audit fatigue or tiredness from any of the two auditors in an audit which is question 24 in table 6 was found to be extremely influential by 12% of respondents followed by 46% of respondents who found it to be very influential and 23% somewhat influential.

Question 30 in table 6 had the smallest mean of 1.89 where 33% of respondents strongly disagreed with the statement that joint audits will only be successful if there is intense rivalry or competition between the two joint auditors, followed by 46% of respondents who disagreed and 12% of respondents who neither agreed nor disagreed. 5% of respondents skipped this question. The second lowest mean of 2.54 was on question 32 where 8% of respondents strongly disagreed and 36% disagreed with the statement that the quality of joint audits was better when the audit being carried out is easy. 44% of respondents neither agreed nor disagreed with the statement that joint audits are effective when the audit being carried out is easy. Although 8% of the respondents agreed with this statement, none of the respondents strongly agreed. 5% of respondents skipped this question. An interesting observation was on question 29 where respondents seemed to have mixed views on the question of whether joint audits were successful in an environment with high market pressure for instance down-rating by credit agencies and interest rate hikes. 35% of respondents neither agreed nor disagreed while 30% agreed and 18% disagreed.

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Table 6- Market uncertainty descriptive stats

Market uncertainty												
	Question	N	Mean	Std. Deviation	Original hypothesis	% Missing data	% Not at all influential	% Slightly influential	% Somewhat influential	% Very influential	% Extremely influential	% Total
23	The type of industry which the audited client is in	65	3,14	1.285	3. Market Uncer	1,5	17	12	23	35	12	100
24	Audit fatigue or tiredness from any of the two auditors	66	3,39	1.149	3. Market Uncer		11	9	23	46	12	100
25	Increased regulatory requirements in that environment	65	3,63	.993	3. Market Uncer	1,5	3	9	27	41	18	100
26	New and complex reporting standards	65	3,23	1.012	3. Market Uncer	1,5	5	21	26	41	6	100
27	Auditors auditing a client involved in complex transactions	66	3,7	1.067	3. Market Uncer		6	9	12	55	18	100
28	The degree of difficulty of the audit	66	3,58	1.082	3. Market Uncer		8	8	20	50	15	100
						% Missing data	% Strongly disagree	% Disagree	% Neither agree or disagree	% Agree	% Strongly agree	% Total
29	Joint audits will be successful in an environment with high market pressure e.g. down-rating by credit agencies, interest rate hikes etc.	63	3,13	1.008	3. Market Uncer	5	6	18	35	30	6	100
30	Joint audits will only be successful if there is intense rivalry or competition between the two joint auditors	63	1,89	.863	3. Market Uncer	5	33	46	12	3	2	100
31	Joint audit quality is better when the audit being carried out is hard	63	3,05	1.084	3. Market Uncer	5	8	23	30	27	8	100
32	Joint audit quality is better when the audit being carried out is easy	63	2,54	.758	3. Market Uncer	5	8	36	44	8	0	100
	Average mean		3,13									

5.3.4 Similarity

The average mean for the similarity hypothesis was 2.84. This means that the majority of respondents were mostly neutral in their responses, disagreed with the questions or thought that factors were between slightly influential and somewhat influential. Question 33 in table 7 had the highest mean of 3.7 where 20% of respondents thought that the difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm was extremely influential followed by 49% who thought it was very influential and 17% somewhat influential. 9% and 41% of respondents also strongly agreed and agreed respectively with question 39 that joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms). The responses to questions 33 and question 39 were in line with question 40 where 20% and 55% of respondents strongly disagreed and disagreed respectively with the statement that joint audits will only be successful if there is one big firm and one small firm working together. Second highest mean was on question 37 where a total of 86% of respondents thought that similarity of the effort exerted by the 2 firms in an audit was between somewhat influential,

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very influential and extremely influential. Question 35 and 36 on similarity in personality of the teams from the audit firms and similarity of both of the audit firm's culture respectively both had neutral responses. For both questions, 17% of respondents thought similarity was slightly influential to the success of joint audits and 24% of respondents for both questions also thought that similarity was somewhat influential. 9% of respondents did not answer question 35. Question 41 had the lowest mean of 1.52. 58% of respondents strongly disagreed with the statement that joint audits will only be successful when both of the audit teams are made up of women while 29% of respondents disagreed. The response for question 41 was in line with question 38 which had the second lowest mean of 1.79. 44% of respondents strongly disagreed while 33% disagreed that joint audits are successful when it's the same genders working in a group on an audit together.

Table 7 - Similarity descriptive stats

Similarity												
	Question	N	Mean	Std. Deviation	Original hypothesis	% Missing data	% Not at all influential	% Slightly influential	% Somewhat influential	% Very influential	% Extremely influential	% Total
33	Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm	66	3,7	1.022	4. Similarity		3	12	17	49	20	100
34	Similarity of the size of the audit firms	65	3,4	1.028	4. Similarity	1,5	6	12	26	46	9	100
35	Similarity in personality of the teams from the audit firms	60	3,1	1.160	4. Similarity	9,1	11	17	24	32	8	100
36	Similarity of both of the audit firm's culture	66	3,12	1.144	4. Similarity		12	17	24	41	6	100
37	Similarity of the effort exerted by the 2 firms in an audit	64	3,7	.937	4. Similarity	3	3	8	20	52	15	100
						% Missing data	% Strongly disagree	% Disagree	% Neither agree or disagree	% Agree	% Strongly agree	% Total
38	Joint audits are successful when it's the same genders working in a group on an audit	63	1,79	.919	4. Similarity	5	44	33	14	3	2	100
39	Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms)	63	3,19	1.189	4. Similarity	5	9	23	14	41	9	100
40	Joint audits will only be successful if there is one big firm and one small firm working together.	63	2,06	.780	4. Similarity	5	20	55	18	2	2	100
41	Joint audits will only be successful when both of the audit teams are made up of women	63	1,52	.780	4. Similarity	5	58	29	8		2	100
42	Joint audit quality is better when there are two big groups working together on an audit	62	3,13	1.000	4. Similarity	6	3	26	27	32	6	100
43	Joint audit quality is better when there are two small groups working together on an audit	63	2,57	.756	4. Similarity	5	5	42	38	11	0	100
	Average mean		2,84									

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5.3.5 Familiarity

The average mean for the familiarity hypothesis was 3.3. Question 47 in figure 8 had the highest mean of 4.08 where 32% of respondents strongly agreed that joint audits are successful when two firms have a high level of interconnectedness on the audit followed by 50% of respondents who agreed making it a total of 82%. The lowest mean was on question 45 where the 49% respondents neither agreed nor disagreed with the statement that joint audits are successful when two firms have not worked together previously and 33% of respondents disagreed. Questions 44 and 46 were interesting. A total of 46% of respondents agreed and strongly agreed with question 44 that joint audits are successful when two firms have worked together previously while a total of 50% of respondents agreed and strongly agreed with question 46 that joint audits are successful when two firms have worked with the audited firm before.

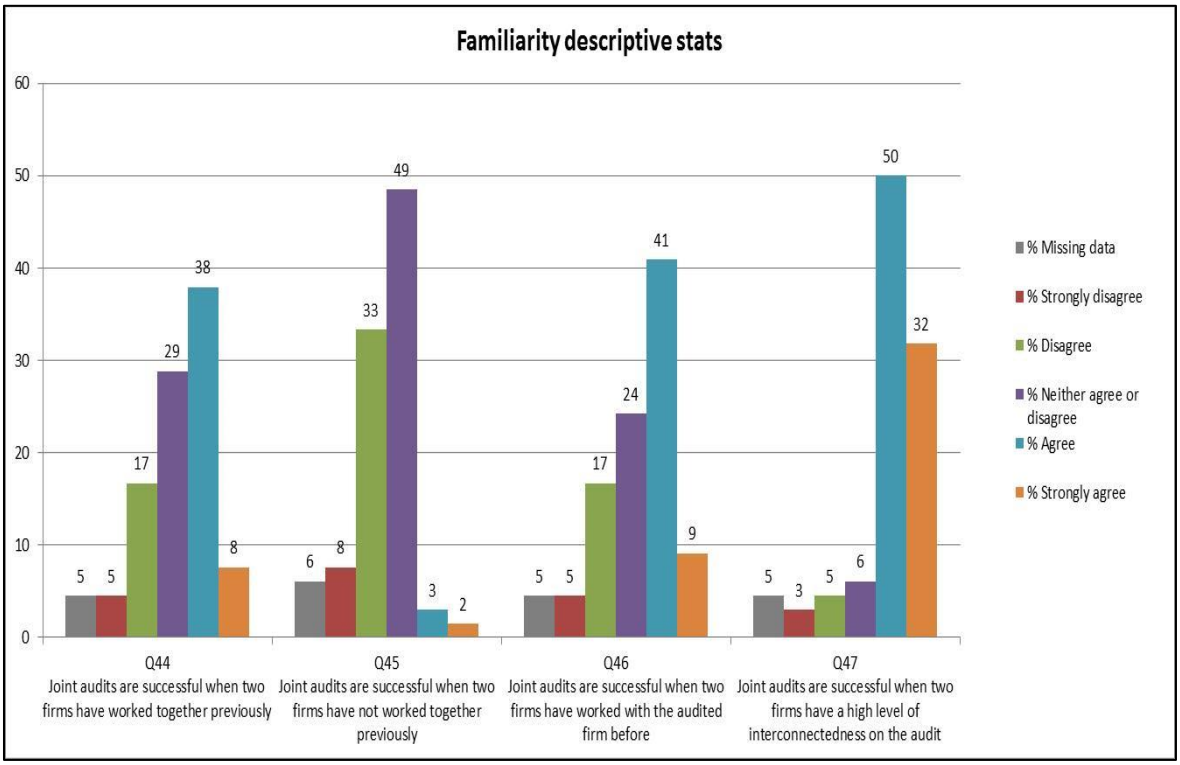

Figure 8 - Familiarity descriptive stats

5.3.6 Voluntary vs Mandatory Joint Audits

The average mean for this hypothesis which only had one question was 3.17. As seen in figure 9, the views on question 48 were mixed. The majority respondents, 38%, neither agreed nor disagreed with the statement that voluntary joint audits produce better audit

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quality than mandatory joint audits while 21% of respondents disagreed and 23% agreed. 5% of respondents did not respond to the question.

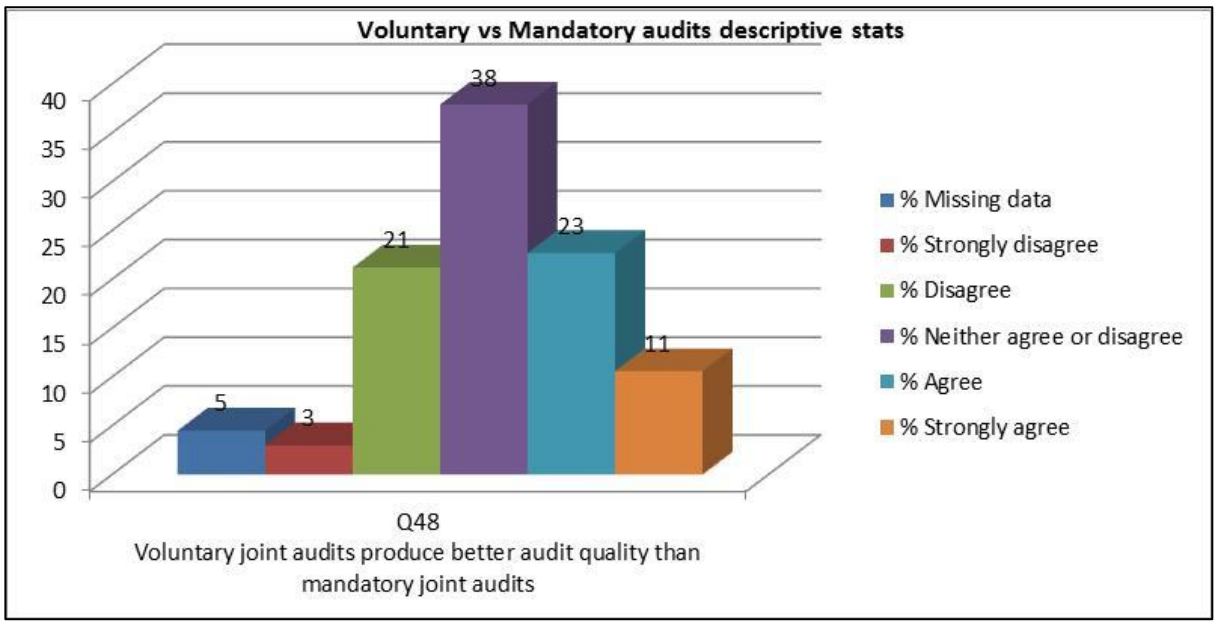

Figure 9 - Voluntary vs Mandatory descriptive stats

5.4 Results on Reliability and Validity of the Data

66 responses were received for the questionnaire. Of the 66 responses received, 63 were complete which a 95% completion rate on all 52 questions which include demographics. The reason for the incomplete responses on some questions is because a few questions and demographics were added after the questionnaire had already been sent out.

The Cronbach alpha coefficient tests which shows the reliability of the questionnaire was run on all questions excluding the demographics and yielded a result of 0.831 as shown in table 8 below. This is number is acceptable and shows the validity of the questionnaire as per Cronbach internal consistency guideline discussed in chapter four, figure 3.

Table 8 - Cronbach reliability tests for questionnaire

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.831	.829	48

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Cronbach was also run per factor derived. Results with the acceptable Cronbach alpha are discussed below.

5.5 Statistical Results per Construct

The six research hypothesis questions derived 48 questions (excluding demographics). The questions were designed and categorised into the following constructs or hypothesis;

- Freeriding or social loafing
- Opinion Shopping or confirmation bias
- Market uncertainty
- Similarity
- Familiarity
- Voluntary vs Mandatory

The constructs were not made apparent to the respondents as the questions were randomly mixed and not categorised on survey monkey. A rotated component matrix was run which showed the loading of each question on each factor. This loading was another form of correlation (see appendix 4) where each question was associated with the factor on which it had the highest loading. After running confirmatory factor analysis on the responses received, additional constructs where revealed which were not initially identified as one of the six hypothesis questions.

In order to identify significant constructs, the rule applied in factor analysis was that every significant factor had to have an eigenvalue greater than 1. In addition, the factor analysis output also indicated the percentage that each factor was of the total response. This allowed visibility on the most important factors which influenced joint audits. 16 constructs were identified based on the criterion of an eigenvalue greater than 1. Table 9 below summarises the results of the factor analysis showing the 16 new constructs. The higher the Eigen value and the percentage of variance for a factor, the greater the importance was of the factor. The first construct, also shown as component, explains 14.161% of the variance in the response. The 16th construct explains 1.016% of the variance. The 16 constructs in total explain 81% of the variance in the responses.

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Table 9 - Factor extraction

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	6.797	14.161	14.161
2	4.778	9.954	24.115
3	3.947	8.223	32.338
4	3.242	6.754	39.092
5	2.728	5.683	44.775
6	2.381	4.960	49.736
7	2.013	4.193	53.929
8	1.996	4.157	58.086
9	1.888	3.934	62.020
10	1.627	3.390	65.409
11	1.510	3.147	68.556
12	1.482	3.087	71.643
13	1.294	2.696	74.339
14	1.266	2.638	76.977
15	1.075	2.240	79.217
16	1.016	2.118	81.334

Reliability analysis was carried out to test the validity of the constructs identified using the Cronbach alpha test. Table 10 below summarises the component summaries together with the questions that loaded onto the component. The Cronbach alpha coefficient as well as the average mean per component is summarised below. A factor was considered to be acceptable if the results of the Cronbach alpha coefficient was greater than 0.6. Where a question caused a reduction in Cronbach alpha, this question was deleted from the construct. See appendix 3 for a list of questions removed from the construct causing an improvement in the Cronbach alpha score of the construct.

Table 10 - Factor loadings, description and mean

Factor	**Loadings**	**Cronbach's alpha**	**Overall mean**
1	The audited client selecting evidence only from the auditor who support their point of view	0.780	3.29

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	Penalising of the audit firm which does not support audited client's view Audited client playing off the firms against each other Overreliance on the counterpart auditor by the other auditor		
	Description: Opinion Shopping		
2	Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm Similarity of the size of the audit firms Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms) The ability of each audit firm to bring a unique value proposition to the table Auditors auditing a client involved in complex transactions Clarity of audit goals	0.700	3.55
	Description: Similarity and audit goals		
3	Joint audits will only be successful when both of the audit teams are made up of women Joint audits are successful when it’s the same genders working in a group on an audit Joint audits will only be successful if there is one big firm and one small firm working together.	0.742	1.79

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	Description: Gender and size		
4	The degree of difficulty of the audit The type of industry which the audited client is in New and complex reporting standards	0.768	3.32
	Description: Market uncertainty		
5	Joint audit quality is better when the audit being carried out is hard Joint audits will b0e successful in an environment with high market pressure e.g. down-rating by credit agencies, interest rate hikes etc. Joint audit quality is better when there are two big groups working together on an audit	0.640	3.10
	Description: Level of difficulty		
6	Voluntary joint audits produce better audit quality than mandatory joint audits Joint audits are successful when two firms have worked together previously Joint audit quality is improved when there is limited to no interaction between the two firms during the audit. Audit fatigue or tiredness from any of the two auditors	0.537	2.91
	Description: Not acceptable alpha		
7	An auditor in a joint audit exerts the same amount of effort regardless of their view of the other auditor covering the potential gap	-2.061	3.27

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	An auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap Visibility of each individual audit firms contribution		
	Description: Not acceptable alpha		
8	Unequal contribution to the audit from any of the two firms Similarity of the effort exerted by the 2 firms in an audit Similarity of both of the audit firm's culture Joint audits are successful when two firms have a high level of interconnectedness on the audit	0.670	3.57
	Description: Freeriding		
9	The difficulty in coordinating between the two auditors compromises on the quality of the audit The level of interdependence and joint use of resources between the joint firms	0.446	3.435
	Description: Not acceptable alpha		
10	Cross review of each of the joint auditors work Joint audits are successful when two firms have worked with the audited firm before Joint audit quality is better when there are two small groups working together on an audit	-0.242	3.18
	Description: Not acceptable alpha		
11	Similarity in personality of the teams from the audit firms	Not calculated	3.10
	Description:		

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	Not acceptable alpha		
12	Joint audit quality is better when the audit being carried out is easy Joint audit quality is improved when there is an excessive amount of interaction between the two firms during the audit.	0.275	2.96
	Description: Not acceptable alpha		
13	Abuse of the counterpart audit firm's resources by one of the joint auditor The gender of the team members on the audit	0.404	2.21
	Description: Not acceptable alpha		
14	Differing views or interpretation by auditors on any critical principles and concepts Ability of each individual auditor to self-evaluate	-0.226	3.59
	Description: Not acceptable alpha		
15	Inability to use the counterpart firms resources by the other joint auditor	Not calculated	2.79
	Description: Not acceptable alpha		
16	In general, audit quality is better when there is one auditor than when there are joint auditors Joint audits are successful when two firms have worked together previously	0.032	3.10
	Description: Not acceptable alpha		

From the 16 new constructs in table 10, six constructs in table 11 below were valid and are shown below in their order of importance;

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Table 11 - New constructs

Factor	Importance	Explained % of Variance
Opinion Shopping	1	14.161%
Similarity and goals	2	9.954%
Gender and size	3	8.223%
Market uncertainty	4	6.754%
Level of difficulty	5	5.683%
Freeriding	6	4.157%

5.6 Correlation

Spearman coefficient test confirmed correlation between the questions within the same newly identified constructs. This is shown in appendix 3. The relationship was moderate to strong with the highest correlation of 0.599 being in factor one on opinion shopping on the relationship between the audited client selecting evidence only from the auditor who support their point of view and penalising of the audit firm which does not support audited client's view. Chi-test run showed that all of the correlations found were all statistically significant.

ANOVA tests were also run to test relationships between demographics namely, years of experience, age and gender with the 48 questions which were the factors influencing joint audits. The following relationships were established:

5.6.1 Years of Experience

The questions in table 12 had statistically significant mean differences when compared with the years of experience of the respondents. These were the type of industry which the audited client was in and the question on whether joint audits will only be successful if there is one big firm and one small firm working together. For these two questions, it was clear that the years of experience of each respondent made a difference to how the respondents answered these questions.

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Table 12 – ANOVA relationship test 'years of experience and questions'

ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
The type of industry which the audited client is in * How many years' experience do you have working on joint audits?	Between Groups (Combined)	17.559	4	4.390	2.981	.026
	Within Groups	86.879	59	1.473		
	Total	104.438	63			
Joint audits will only be successful if there is one big firm and one small firm working together. * How many years' experience do you have working on joint audits?	Between Groups (Combined)	5.684	4	1.421	2.599	.046
	Within Groups	31.170	57	.547		
	Total	36.855	61			

5.6.2 Age of Respondents

The three questions in table 13 had statistically significant mean differences when compared with the age of the respondents. These questions were on auditors auditing a client involved in complex transactions, the level of interdependence and joint use of resources between the joint firms and finally the question of whether joint audits were successful when two firms have worked with the audited firm before. This means that for these 3 questions, it was clear that the age category of the respondents made a difference to how they answered these questions.

Table 13 - ANOVA relationship test 'age of respondents and questions'

ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
Auditors auditing a client involved in complex transactions * What is your age?	Between Groups (Combined)	10.388	4	2.597	2.731	.037
	Within Groups	56.097	59	.951		
	Total	66.484	63			
The level of interdependence and joint use of resources between the joint firms * What is your age?	Between Groups (Combined)	20.182	4	5.045	4.778	.002
	Within Groups	62.303	59	1.056		
	Total	82.484	63			
Joint audits are successful when two firms have worked with the audited firm before * What is your age?	Between Groups (Combined)	13.123	4	3.281	3.606	.011
	Within Groups	50.943	56	.910		
	Total	64.066	60			

5.6.3 Gender

There were no questions with any statistically significant mean difference between the gender of the respondents and the questions asked. This was interesting to note as this showed no bias from respondents given that some questions specifically referred to audits being better when only women were on an audit.

5.7 Summary of Results

From the six research questions identified in chapter two and three, this research showed opinion shopping as the most important factor explaining 14.161% of the response

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variance and being the key factor identified as influencing joint audits. This was followed by the similarity of audit firms, how unique each firm is and the clarity of audit goals explaining 9.954% of the variance. Gender and size was the third most important factor influencing 8.223% of the variance. Gender was however the factor shown not to have any influence on joint audit with a large majority disagreeing that a team made up of women or the gender of the audit teams has any influence on joint audits. Size of the firms in terms of one small firm and one large firm working together had the majority of respondents disagreeing that this make would lead to an improved audit. Market uncertainty was the fourth most important factor explaining 6.754% of the variance followed by the level of difficulty of the audit which explained 5.683% and lastly freeriding which explained 4.157% of the variance. From the original six hypotheses, familiarity was not found to be a valid construct and voluntary vs mandated audits was also not found to be a valid construct influencing joint audits. The two new factors not originally identified were gender and audit goals and the level of difficulty of an audit.

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Chapter Six: Discussion of Research Results

6.1 Introduction

Chapter five described all the results obtained from the research. This chapter will discuss the results obtained in chapter five while at the same time drawing on the literature discussed in chapter two. The aim will be to address the research objectives put forward in chapter one and how these research objects have been achieved. Discussion will be broken down in order of the new constructs obtained as shown in table 11. The two hypotheses namely familiarity and voluntary vs mandatory joint audits which were in the original six hypotheses questions were both found to not have valid constructs. These will be discussed first in this introduction section. The different constructs will then be discussed separately from section 6.2 to section 6.7.

Chapter three discussed the literature on joint audits and derived six hypothesis questions from which questions for the questionnaire were derived. The original six hypothesis questions in order of importance were namely;

- Freeriding or social loafing
- Opinion shopping
- Market uncertainty
- Similarity
- Familiarity
- Voluntary vs mandated

Questions were then randomly mixed when respondents answered without disclosing the original hypothesis groupings listed above. CFA analysis applied to the responses showed new constructs shown below in order of importance; all questions which reduced the alpha of the construct were excluded from the new construct in an attempt to achieve the highest possible alpha.

- Opinion Shopping
- Similarity and goals
- Gender and size
- Market uncertainty
- Level of difficulty

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- Freeriding

It is interesting to see that freeriding, which was thought to be the most important hypothesis as indicated by IOC and joint audits literature became the least important construct after data analysis. Opinion shopping was found to be the number one most important factor influencing joint audits. Table 15 shows all 48 questions, together with the hypothesis which the questions were originally constructed under as well as the new construct. The table excludes questions on demographics.

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Table 14 - Old hypothesis and new constructs

Factor	Questions	New Construct	Old Hypothesis	Cronbach's alpha	Overall mean
1	The audited client selecting evidence only from the auditor who support their point of view	**Opinion Shopping**	Opinion Shopping	**0.780**	**3.29**
	Penalising of the audit firm which does not support audited client's view	**Opinion Shopping**	Opinion Shopping		
	Audited client playing off the firms against each other	**Opinion Shopping**	Opinion Shopping		
	Overreliance on the counterpart auditor by the other auditor	**Opinion Shopping**	Freeriding		
	Joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit	**Not included in new constructs- reduced alpha**	Freeriding		
2	Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm	**Similarity and audit goals**	Similarity	**0.700**	**3.55**
	Similarity of the size of the audit firms	**Similarity and audit goals**	Similarity		
	Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms)	**Similarity and audit goals**	Similarity		
	The ability of each audit firm to bring a unique value proposition to the table	**Similarity and audit goals**	Freeriding		
	Auditors auditing a client involved in complex transactions	**Similarity and audit goals**	Market uncertainty		
	Clarity of audit goals	**Similarity and audit goals**	Freeriding		
3	Joint audits will only be successful when both of the audit teams are made up of women	**Gender and size**	Similarity	**0.742**	**1.79**
	Joint audits are successful when it's the same genders working in a group on an audit	**Gender and size**	Similarity		
	Joint audits will only be successful if there is one big firm and one small firm working together.	**Gender and size**	Similarity		
	Joint audits will only be successful if there is intense rivalry or competition between the two joint auditors	**Not included in new constructs as it reduced alpha**	Market uncertainty		
4	The degree of difficulty of the audit	**Market uncertainty**	Market uncertainty	**0.768**	**3.32**
	The type of industry which the audited client is in	**Market uncertainty**	Market uncertainty		
	New and complex reporting standards	**Market uncertainty**	Market uncertainty		
	Increased regulatory requirements in that environment	**Not included in new constructs as it reduced alpha**	Market uncertainty		
5	Abuse of the counterpart audit firm's resources by one of the joint auditor	**Not acceptable**	Freeriding	**0.404**	**2.21**
	The gender of the team members on the audit	**Not acceptable**	Freeriding		
6	Joint audit quality is better when the audit being carried out is hard	**Level of difficulty**	Market uncertainty	**0.640**	**3.10**
	Joint audits will be successful in an environment with high market pressure e.g. down-rating by credit agencies, interest rate hikes etc.	**Level of difficulty**	Market uncertainty		
	Joint audit quality is better when there are two big groups working together on an audit	**Level of difficulty**	Similarity		
7	Voluntary joint audits produce better audit quality than mandatory joint audits	**Not acceptable**	Voluntary vs Mandated	**0.537**	**2.72**
	Joint audits are successful when two firms have not worked together previously	**Not acceptable**	Familiarity		
	Joint audit quality is improved when there is limited to no interaction between the two firms during the audit.	**Not acceptable**	Freeriding		
	Audit fatigue or tiredness from any of the two auditors	**Not acceptable**	Market uncertainty		
8	An auditor in a joint audit exerts the same amount of effort regardless of their view of the other auditor covering the potential gap	**Not acceptable**	Freeriding	**-2.061**	**3.27**
	An auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap	**Not acceptable**	Freeriding		
	Visibility of each individual audit firms contribution	**Not acceptable**	Freeriding		
9	Unequal contribution to the audit from any of the two firms	**Freeriding**	Freeriding	**0.670**	**3.57**
	Similarity of the effort exerted by the 2 firms in an audit	**Freeriding**	Similarity		
	Similarity of both of the audit firm's culture	**Freeriding**	Similarity		
	Joint audits are successful when two firms have a high level of interconnectedness on the audit	**Freeriding**	Familiarity		
10	The difficulty in coordinating between the two auditors compromises on the quality of the audit	**Not acceptable**	Freeriding	**0.446**	**3.435**
	The level of interdependence and joint use of resources between the joint firms	**Not acceptable**	Freeriding		
11	Cross review of each of the joint auditors work	**Not acceptable**	Freeriding	**-0.242**	**3.18**
	Joint audits are successful when two firms have worked with the audited firm before	**Not acceptable**	Familiarity		
	Joint audit quality is better when there are two small groups working together on an audit	**Not acceptable**	Similarity		
12	Joint audit quality is better when the audit being carried out is easy	**Not acceptable**	Market uncertainty	**0.275**	**2.96**
	Joint audit quality is improved when there is an excessive amount of interaction between the two firms during the audit.	**Not acceptable**	Freeriding		
13	Differing views or interpretation by auditors on any critical principles and concepts	**Not acceptable**	Opinion Shopping	**-0.226**	**3.59**
	Ability of each individual auditor to self-evaluate	**Not acceptable**	Freeriding		
14	In general, audit quality is better when there is one auditor than when there are joint auditors	**Not acceptable**	Freeriding	**0.032**	**3.12**
	Joint audits are successful when two firms have worked together previously	**Not acceptable**	Familiarity		
15	Similarity in personality of the teams from the audit firms	**Not acceptable**	Similarity	**Not calculated**	**3.10**
16	Inability to use the counterpart firms resources by the other joint auditor	**Not acceptable**	Freeriding	**Not calculated**	**2.79**

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6.1.1 Familiarity

Although familiarity was identified as one of the original six hypothesis question, CFA analysis did not identify it as a valid construct and was therefore excluded from the research. 'Satisficing' has been shown to be a factor which influence on the success of a lot of exchange partnerships, where exchange partners tend to prefer to transact with partners they have transacted with in the past (March, 1991), and where there is a reduction in social loafing when partners have worked together previously (Gulati et al., 2012; Simms & Nichols, 2014). Majority of respondents were however neutral, mostly neither agreeing nor disagreeing with question 44 and question 45 asking whether joint audits were improved when the auditors had worked together previously. 82% of respondents however agreed with question 47 that when there is a high level of interconnectedness on the audit, quality is improved. This is supported by research which shows that trust in exchange partnerships has shifted from merely being built on friendship to being based on competence which is cultivated by having long lasting relationships (Cook et al., 2013). It can therefore be argued that a great degree of interconnectedness accelerates this cultivation of trust and confidence in the competence of the exchange partners therefore improving quality. This means that the increased interconnectedness lead exchange partners to quickly become familiar with the task at hand which research has shown to reduce social loafing (Das et al., 1998). Question 47 did not form part of the familiarity construct after data analysis as it became part of the freeriding. The question will therefore be discussed further under freeriding.

Another interesting angle was that although respondents were neutral on whether firms working together previously would improve audit quality, question 46 asking whether audit quality is improved when firms have worked with the client before had a majority of respondents agreeing that previous engagements with the audited client would improve audit quality. This could be because it is no longer enough for exchange partners to know each other but the success of an audit also requires exchange partners to be familiar with the needs of their clients which is what research has shown, being familiar with the task at hand (Das et al., 1998). Because exchange partners have to provide services to clients, this explains why the interconnectedness in question 47 had a lot of respondents agreeing with the question. When familiarity hypothesis was analysed using CFA, questions 44, 45 and 46 from the original hypothesis all did not have acceptable alpha. Questions 47 formed part of the freeriding construct. Given that research discusses interconnectedness in the context of reducing social loafing (Das et al., 1998), it therefore makes sense that CFA identified this factor of interconnectedness as part of freeriding or the social loafing

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construct. Given the neutral responses received from the respondents on familiarity questions alone, it is understandable why familiarity alone did not suffice as a valid construct.

6.1.2 Voluntary vs Mandated Joint Audits

Mandated joint audits have been encouraged by the EC after the global financial crisis (European Commission, 2010). There are only a few studies comparing voluntary vs mandated joint audits (Oliver, 1990) with literature focusing solely on mandated or voluntary audits Empirical research on whether voluntary as opposed to mandated joint audits improve audit quality have been inconclusive (Ratzinger-Sakel et al., 2013). In this research, question 48 was the only question which made up the original hypothesis with the aim of answering this research question. The majority of respondents, 38%, neither agreed nor disagreed with the question of whether or not joint audits improve audit quality. 21% of respondents went on to disagree while 23% were in agreement. The neutral response from respondents confirms what research has shown that it is not clear whether or not mandated joint audits improve audit quality. This question was however not identified as a valid construct.

6.2 Opinion Shopping or Confirmation Bias

Opinion shopping was identified as the most important construct with an Eigen value of 6.797 showing its reliability as a construct as the Eigen value was greater than 1. Opinion shopping also explained 14.161% of the variance of all the constructs making it the most important factor. The construct was made up of a total of four questions as shown in table 14. The results of this research which showed opinion shopping as having the greatest impact on the quality of audit provided is supported by research which has shown that people will generally always look for evidence to support their point of view (Rabin & Schrag, 1999). Literature has also shown that the tendency of companies to internally shop for their desired opinion from both of the joint auditors is one of the main reasons leading to a reduction in audit quality (Deng et al., 2014).

Although research has shown that opinion shopping increases when the risk for losses is high (Kosnik, 2015) and where the audited client is economically important to the audited firm (Chen et al., 2015), only 15% of respondents thought that the penalising of the audit firm by the client for not supporting the audited client's view was extremely influential to an audit. 23% of respondents thought this was not at all influential with the majority of

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respondents were neutral citing that this was only slightly and somewhat influential. The results from the respondents did not conclusively show that audit quality is compromised because of fear by the auditor of getting penalised by the client. The research finding of increased opinion shopping when the risk for loss is higher (Kosnik, 2015) therefore applies predominantly to the possible loss for the audited company instead of the risk for loss by the auditor. This is supported by research on joint audits which has shown that in an attempt to avoid loss, audited clients continue to opinion shop even when the consequences are misstated financial statements (Tong, 2006) and in some cases even resulting in removal of partners who disagree with the client (Chen et al., 2015). This also explains why 17% of all dismissals of auditors have been found to be due to opinion shopping especially where the auditor is about to issue a negative opinion with a potential of causing a loss to the audited client (Chen et al., 2015; Lennox, 2002).

These dismissals were also found to occur closer to the reporting period (Lennox, 2002) showing the importance of how audited clients try and cover up losses as financial statements disclosure is usually done on a public platform where losses and any deterioration in performance can be easily exposed. The conclusion that the fear of loss is for the company being audited was supported by the respondents who showed that one of the most influential factors which compromises on the quality of an audit was the audited client selecting evidence only from auditors supporting their point of view. Respondents also noted that the second most influential factor which causes opinion shopping was on how the audited firm plays off the firms against each other. This further supports the argument of how audited clients will opinion shop and go to such great lengths in an attempt to avoid losses.

Interestingly, overreliance on the counterpart auditor by the other auditor formed part of the new opinion shopping construct and had originally formed part of the freeriding hypothesis. Of all the factors which formed part of the opinion shopping construct, this was also found to be the most influential. It is understandable that this is was identified as an opinion shopping construct given that if one auditor has a strong view on a subject, the overreliance on the counterpart auditor inevitably leads to the two auditors reaching the same conclusion even when the conclusion is incorrect. This hence supports how opinion shopping compromises the quality of an audit when there is already overreliance on any of the auditor counterpart by the other auditor.

Although research has shown that ambiguous decisions or differences in interpretation on important matters leads to an increase in opinion shopping (Kosnik, 2015), this factor was

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not found to form part of the opinion shopping construct as it had an unacceptable alpha in the new construct it had formed part. This meant that the question on differences in interpretation causing an increase in opinion shopping became part of an invalid construct. This is despite 91% of respondents responding that this was between somewhat influential and extremely influential to the quality of audit provided. This response could be because although differing in views can in general be influential to the quality of any engagement, it is not necessarily the overwhelming reason which leads to an increase in opinion shopping which woulod then influence on the quality of audit provided.

6.3 Similarity and Goals

The construct of similarity goals was identified as the second most important construct explaining 9.954% of the variance with an Eigen value of 4.778. This construct was made up of six questions with a Cronbach alpha of 0.700 showing that it was a valid construct. Most respondents thought the difference in the size of the audit firms when comparing audits by equal sized audit firms for instance two 'Big 4' firms with audits done by one small firm and one big firm was influential to the success of an audit. Respondents in another question also agreed that similarity in the size of the joint auditors was influential to an audit. Respondents agreeing that the success of audits will only be achieved when there are two 'Big 4' audit firms working together proves that the influence in size respondents believed was influential in terms of respondents believing that joint audits will only work when there are two 'Big 4' firms. This is supported by research already done on joint audits which has shown freeriding to be significantly reduced when similar size firms are working together (Deng et al., 2014). The resource dependence theory also showed that organisations have a tendency to select exchange partners similar to themselves (Chandler et al., 2013) in an attempt to reduce the possibility of reduction in critical resources which is created by having one organisation taking advantage of the other organisation's resources (Chandler et al., 2013; Podolny, 1994).

Research has shown evidence that exchange partners prefer partners of higher status as they have been seen to provide goods of a higher quality (Cook et al., 2013). It was however not clear from the results of the research whether collaboration preference of partners of a perceived higher status was perceived to lead to an increase in the quality of the audit provided. It was also not clear from the results received whether there was a differentiation between similarity in size alone and similarity in hierarchy. Further clarity is still needed on how the general preference for all parties to transact with partners of a higher status (Cook et al., 2013) would impact on how exchange partners choose their

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partners when taking into account the partners hierarchy. The question still remains whether exchange partners would choose someone similar to them, even when the partner has a lower status. Findings by Podolny that collaboration happens best when partners are similar regardless of their status (Podolny, 1994) could not be concluded in this research and is an area that could be researched further in the future.

Another question in the original hypothesis asking whether similarity in personality of the audit teams had any influence on the quality of audit provided had the majority of respondents saying this had some influence. This question however did not have an acceptable alpha and hence was excluded from the research.

85% of respondents thought that the auditing of clients involved in complex transactions was influential to the success of audits. This factor originally formed part of a different hypothesis but was identified to be part of the similarity and goals construct. The overwhelming agreement from respondents is in line with what literature has shown that the more complex the task performed; the more successful the collaborations are between exchange teams (Simms & Nichols, 2014). An additional two factors which originally formed part of other hypotheses were identified as being part of the similarity and goals construct. These were 'the influence of clarity of audit goals' and the 'ability of each audit firm to bring a unique value proposition to the table'. 91% of respondents thought that clarity of audit goals was influential to the quality of audit provided while 88% thought that the ability of each audit firm to bring a unique value proposition to the table was influential to the quality of the audit. This response has also been supported by various tests carried out in research showing that when certain conditions are present such as, some level of uniqueness, clear goals and commitment to the task, self-evaluation and similarity in the effort exerted, social loafing is significantly reduced when two groups are working together which in turn leads to a successful collaboration (Simms & Nichols, 2014). Although respondents thought self-evaluation and effort exerted were all influential to the success of an audit, these two factors from the research did not have an acceptable alpha and were therefore excluded from the research.

When looking at the three new factors identified as being part of the similarity and goals construct, it is clear why this is the case. The conclusion from the results is that the ability of each firm to bring a unique value proposition to the table is likely going to be possible when there are two firms similar in size working together as they are more or less on par in terms of the resources available to them. This therefore makes complex transactions easy to tackle as there are diversified resources from both of the firms since each of the audit

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firm is bringing in some unique value. This argument is supported by the research work done on mutual dependence which concluded using the application of the resource dependence theory that interorganisational collaborations work best when there is no unbalanced power between the organisations but instead the two organisations can mutually depend on each other and there is no one organisation with more influence on another organisations resources but both firms can have the sum of their dependencies captured (Simms & Nichols, 2014). Because the transactions are complex, it becomes even more important for both firms to be clear on their audit goals and the role they play so that the unique resources provided by each audit firm are fully utilised.

6.4 Gender and Size

The third most important factor contributing 8.223% of the variance with an Eigen value of 3.947 was the gender and size of the audit firms. The Cronbach alpha for this construct was 0.742 making it a valid construct. The construct was made up of three questions. The overall mean for the three questions was 1.79 which is an indication that most questions were below neutral with respondents disagreeing that the questions in this construct had factors which influenced on the success of joint audits. One question was excluded from the construct as it reduced the Cronbach alpha of the construct. Questions making up this construct were therefore all factors which did not have any influence on the quality of audit provided. This construct was a new construct which was not there as part of the original hypotheses. Two questions were initially grouped under the freeriding hypothesis and one question under the similarity construct before CFA analysis was done.

Research has shown that when there is similarity in gender, collaboration tends to be better (Davis & Cobb, 2010). Other researchers supporting this have concluded that having the females on a team is an important factor that has been seen to reduce social loafing as it was found that men tend to loaf more than women (Simms & Nichols, 2014). In spite of this research, the majority of respondents overwhelmingly disagreed that gender had any influence on the success of joint audits. 86% of respondents disagreed with the statement that joint audits will only be effective when both of the audit teams are made up of women. In order to test that there was not a possibility that the statement could be true when referring to men, another question asked whether joint audits were successful when there were the same genders working in a group on an audit. 77% of respondents disagreed with this statement. These findings led this research to conclude that gender, either male or female, was not influential to the improvement of the quality of an audit. The results also showed no significant correlation identified when looking at variables of the gender of

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respondents and the question of whether gender influenced on the quality of audits in joint audits. The lack of correlation or variable relationships eliminated any gender bias which could have been present when respondents were answering questions on gender.

Another statement which formed part of the construct which respondents disagreed with was that joint audits will only be successful if there is one big firm and one small firm working together. These findings were consistent with research already done on joint audits. Using game theory, it was concluded that joint audits generate the same audit quality as single audits for an audit with two big firms and that audit quality is lower in joint audits where there is one big auditor and one small auditor (Deng et al., 2014).

The question of whether joint audits will only be successful if there is intense rivalry or competition between the two joint auditors was excluded from the research as it reduced the Cronbach alpha of the whole construct. 79% of respondents had however strongly disagreed that intense rivalry between the audit firms leads to an improved audit.

6.5 Market Uncertainty

The fourth most important construct with an Eigen value of 3.242 explaining 6.754% of the variance was market uncertainty. The reliability Cronbach alpha was 0.768 making it a valid construct. The construct was made up of four questions. One question was excluded from the construct as reduced the Cronbach alpha.

The resource dependence theory states that collaboration will be successful in an environment of high market certainty (Hallen et al., 2014; Hillman et al., 2009). The boundary theory also support the resource dependence theory by stating that the reason for the need to collaborate in the event of high market uncertainty is because organisations have to cushion themselves from changes in the environment or any uncertainty that would have a negative impact on the organisation by collaborating (Aldrich & Herker, 1977; Cross et al., 2000). The results obtained from the research agreed with this hypothesis as 85% of respondents thought that the degree of difficulty of the audit was between somewhat influential and extremely influential to the success of joint audits. 73% of respondents also thought that new and complex reporting standards was between somewhat influential and extremely influential to the success of joint audits while 70% of respondents thought that the type of industry which the audited client is in was between somewhat influential and extremely influential to the success of joint audits. These results support the research

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already done as they show that market uncertainty has an impact on the quality of joint audits.

Although 86% of respondents thought that increased regulatory requirements in an environment was between somewhat influential and extremely influential to the success of joint audits, this factor was found to reduce the Cronbach alpha of the construct and was therefore excluded from the research.

6.6 Level of Difficulty

The fifth construct with an Eigen value of 2.728 making up 5.683% of the variance was the influence of the level of difficulty of an audit on the effectiveness of joint audits. The Cronbach alpha for the three questions making up this construct was 0.640 hence showing that it is valid. The conclusion obtained from results was however inconclusive. The average mean for all three questions was 3.10 showing that respondents were mainly neutral in their responses.

The response to the question on whether joint audits will be successful in an environment with high market pressure for instance down-rating by credit agencies and interest rate hikes had mostly neutral results with the majority of respondents neither agreeing nor disagreeing. Another question in this construct asking whether the quality of joint audits was better when the audit being carried out is hard also had the majority of respondents neither agreeing nor disagreeing. A question asking the opposite, whether the quality of joint audits quality is better when the audit being carried out is easy also had the majority of respondents neither agreeing nor disagreeing. This question however did not end up forming part of the construct as the Cronbach alpha was unacceptable. Literature has also been contradicted on whether difficulty in task leads to better collaboration. The resource dependence theory states that dependency between two groups is particularly beneficial where the task at hand is more difficult (Pfeffer, 1982; Podolny, 1994; Stock, 2006). Other contradictory findings in literature have shown that the level of difficulty of a task does not have any impact on successful collaborations (Das et al., 1998). The two contradictions in literature is a possible explanation of the neutral responses observed in the results.

A surprising fact is that although the results on this construct were mostly neutral, another question under market uncertainty showed that the degree of difficulty of an audit was influential to the quality of audit provided. The possible explanation is that the degree of difficulty question under market uncertainty could have been associated with difficulty in

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determining the extent of market uncertainty and not necessarily the level of difficulty of an audit.

The third question on this construct asking whether joint audit quality was better when there are two big groups working together on an audit similarly had somewhat neutral responses with a mean of 3.13. This question originally formed part of the similarity hypothesis and was only identified under the level of difficulty construct after CFA data analysis. The question asking the opposite, whether joint audit quality was better when there are two small groups working together on an audit, had an average mean of 2.57 showing that most respondents disagreed with this statement. The question was however excluded from the research as it did not have an acceptable alpha.

6.7 Freeriding

The last construct found with an Eigen value of 1.996 making up 4.157% of the variance was freeriding also known as social loafing. This construct was made up of four questions. The Cronbach alpha of the construct was found to be 0.670 hence making it a valid construct.

Research has shown that organisations collaborate to reduce the shortfalls in critical resources (Hallen et al., 2014). Firms therefore always need other firms to rely on and from which they can gain control over their significant resources while reserving their own resources (Hallen et al., 2014). The reserving of resources while using a counterpart's resources, called freeriding or social loafing results in a compromised quality of the exchange (Simms & Nichols, 2014). The results of this research supported this when it was indicated that unequal contribution to the audit from any of the two firms was influential to the quality of audit provided as a total of 80% of respondents note that this was between somewhat influential and extremely influential to the quality of the audit provided.

Research has shown in a social loafing experiment that the total output produced is less when a group of individuals in a group pull a rope together as opposed to when each individual pulls the rope separately indicating that the effort exerted is not the same (Simms & Nichols, 2014). The results of this research supported these findings as respondents indicated that similarity of effort exerted by the two firms in an audit was important to the success of joint audits. A total of 86% of respondents stated that similarity of effort exerted was between somewhat influential and extremely influential to the quality of the audit provided.

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Similarity of both of the audit firm's culture was originally part of the similarity hypothesis and only formed part of the freeriding construct after data analysis. Results indicated that culture is influential to the success of joint audits. In this research, it was however not tested whether the culture of an organisation could have an influence on the presence of social loafing which would in turn lead to ineffective joint audits. This is an area that future researchers should consider exploring.

Results indicated that joint audits are successful when two firms have a high level of interconnectedness on an audit. This question had the highest mean of 4.08 of all 48 questions with 92% agreeing that interconnectedness leads to better audit quality. The question originally formed part of the familiarity hypothesis as indicated in table 14 and was only identified as part of the freeriding construct after CFA analysis. The identification of this question as being part of the freeriding construct is in line with research which has shown that social loafing is significantly reduced whenever there is a high level of coordination between groups collaborating (Gulati et al., 2012).

Even though research has shown that collaborations encourage social loafing as individuals can ‘hide behind others’ (Simms & Nichols, 2014), the results did not indicate this. The question of whether joint audits can allow for individuals to ‘hide behind others’ so they don’t need to try as hard as they could in a single audit had the majority of respondents disagreeing. This question however reduced the Cronbach alpha of the construct and was therefore excluded from the research.

It was interesting to see that freeriding, which was initially thought to be the most important hypothesis became the sixth most important. This is because most of the questions in the freeriding hypothesis were identified under other different constructs after data analysis. This shows how interconnected the interorganisational collaboration factors are.

A few questions from the original freeriding hypothesis were not considered to have acceptable alpha and were therefore excluded from the research. Of these questions, some surprising results were on the question of whether an auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap. Research has shown that in collaborations, exchange partners exert less effort as they perceive the other partner to cover the gap (Simms & Nichols, 2014). The results showed the majority of respondents disagreeing with this statement which is different from what research has shown.

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Another question contradicting the results of research was on the question of the abuse of the counterpart audit firm's resources by one of the joint auditor. Years of research has shown that one of the reasons for an organisation collaborating is for 'asymmetry' which means, to take advantage of the other organisation resources (Aldrich, 1976). Results indicated that this factor is not influential with only 11% of respondents stating that abuse of the counterpart audit firm's resources by one of the joint auditor was extremely influential to the quality of audit provided. Only 8% of respondents thought that inability to use the counterpart firms resources by the other joint auditor was extremely influential to the quality of audit provided hence further contradicting the results of research. Only 9% of respondents also thought that the level of interdependence and joint use of resources between the joint firms was influential to the quality of the audit provided in joint audits.

The results on the abuse of counterpart's resources by other auditors were surprising as they indicated that most respondents did not think that the factor of abuse of resources of one counterpart auditor was a risk that would influence on the quality of audit provided. This result was not expected given that misappropriation of each other's resources has been cited as one of the main reasons for firm collaboration (Aldrich, 1976; Hallen et al., 2014; Hillman et al., 2009; Pfeffer & Salancik, 2003). It is however interesting to see that most respondents also believed that audits will be of a greater quality when similar size firms are working together as opposed to one small firm and one big firm. This leads to the possible conclusion that this perceived lack of abuse of each other's resources only occurs when firm's resource capability is on the same level and similar size firms are working together. Results also showed the majority of respondents disagreeing that a small firm and a larger firm collaboration leads to a great quality audit which was also supported by research showing that these type of collaborations most likely leads to freeriding (Deng et al., 2014). This is not good news for smaller audit firms as part of the main advantage of mandatory and voluntary joint audits is to give smaller audit firms a chance of working with big corporates (Velte & Azibi, 2015).

6.8 Conclusion

Collaborations have been known to be in general complex and risky (Gulati et al., 2012). The high failure rates in collaborations highlights the dangers that come with any form of collaboration between two or more firms (Gulati et al., 2012). Although joint audits, which are forms of collaboration, have always been practiced, they only became very popular after the global financial crisis when the EC proposed to mandate joint audits (European

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Commission, 2010). The research conducted on whether joint audits improve the quality of audit provided has however produced mixed and inclusive results (André et al., 2015; Holm & Thinggaard, 2012; Ratzinger-Sakel et al., 2013).

The aim of this research was to contribute to the understanding of joint audits, not by dwelling on whether or not joint audits improve audit quality, but instead by investigating the implications of theoretical contributions that have been made in the fields of inter-organisational collaboration and inter-organisational relationships to identify specific conditions where joint audits work and where they do not. The aim of the investigations and findings was help to understand why there are mixed views on joint audits.

It is clear from the results of this research which factors impact on the success of joint audit collaborations. The most important factor was found to be opinion shopping, followed by similarity and goals, gender and size, market uncertainty, level of difficulty and lastly freeriding. Freeriding, which was thought to be the most important factor became the least important as most respondents did not believe that the abuse of the counterparts resources was not a factor influencing on the success of joint audit collaborations. Respondents also believed that collaborations work best when done with firms similar in size which explains the results from respondents that collaborations do not pose the risk of abuse of each other's resources when firms are similar in size. Further research is still needed on whether similarity in size is the same as similarity in hierarchy. Other areas needing further clarity include whether the culture of an organisation is correlated to free riding or social loafing.

The next chapter concludes this research, discusses key findings, and proposes a model of factors impacting on the success of joint audits which is based on findings from this research as well as literature review. Recommendations for the joint auditors, the clients and regulators are discussed as well as areas of future research.

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Chapter Seven: Conclusion

7.1 Introduction

The previous chapter elaborated on the research findings and integrated this together with literature. This final chapter will summarise on the key objectives of this research, the key findings of the research together with the recommendations for auditors, audited clients and regulators on how to increase the quality of joint audits. This chapter will also include limitations of the research and suggestions for future research.

The aim of this research was not to prove whether or not joint audits improve audit quality, or whether audits are generally better with one auditor instead of joint auditors. The aim was to identify the factors influencing on the success of joint audits using the resource dependence theory, which is an IOC theory as well as some theories and constructs from the research already done on joint audits. Most of the factors which influence the success of joint audits were very clear. These factors have been discussed in detail in chapters five and six.

A model with significant factors influencing the quality of joint audits has been put forward in this research and is shown in figure 10. This model was built on theoretical foundations and is also supported by quantitative data collected from respondents in the form of a survey. The model shows the most important factors from the constructs identified using CFA. All factors in this model were tested for reliability using Cronbach alpha tests. Constructs have been broken down into those that are of high importance, moderate and the factors of low to no importance. The aim of this model is for potential joint auditors, audited clients and regulators to look at the factors impacting joint audits and maximise the output that can potentially be achieved from collaborations of joint audits.

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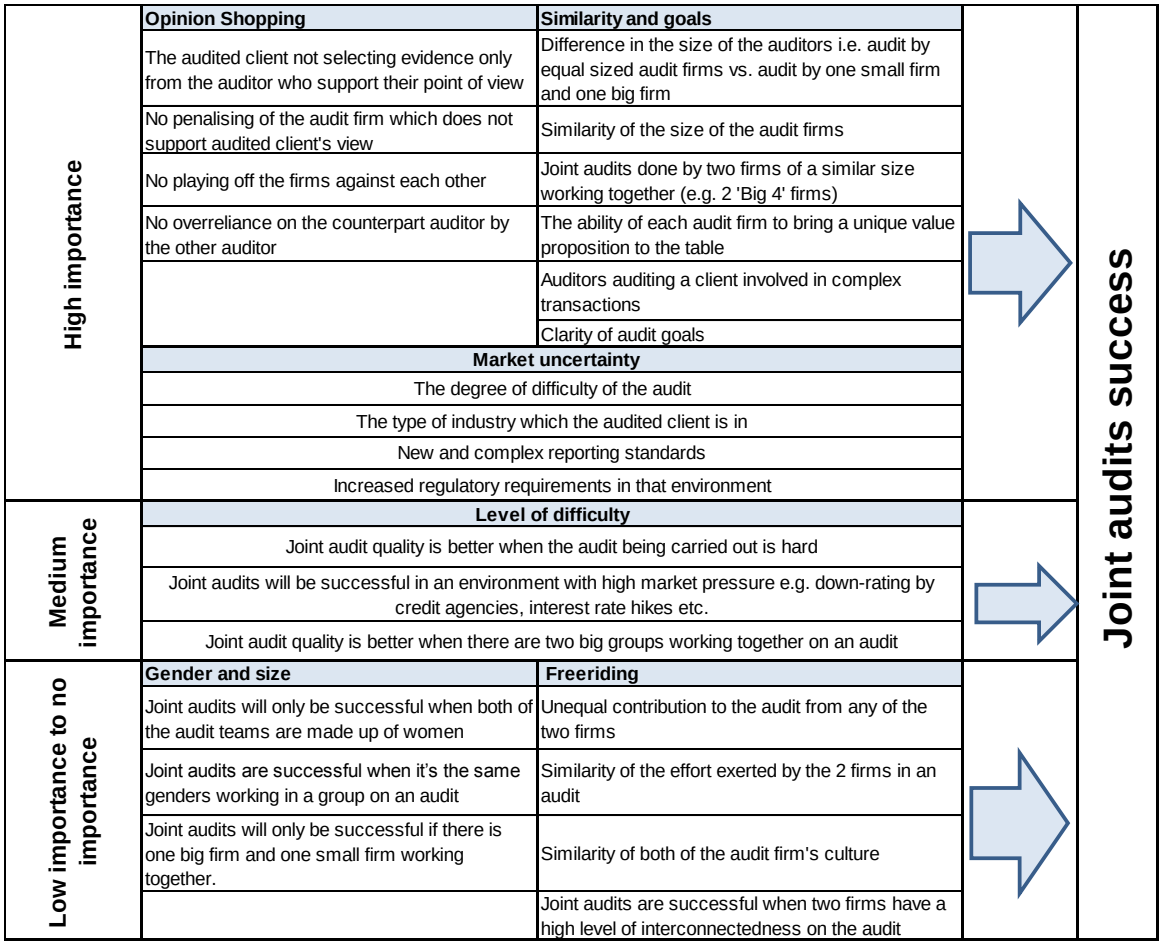

Figure 10 - Proposed model - Factors influencing joint audits

7.2 Key Research Findings

Opinion shopping was found to be the most important factor influencing on the quality of joint audits. Opinion shopping by the company being audited is mainly caused by the fear of loss by the audited client even when the decision to opinion shop results in misstated financial statements or the resignation of audit committee members (Chen et al., 2015; Lennox, 2002). Results showed that companies will play off auditing firms against each other in an attempt to avoid a loss and will continue selecting evidence only from auditors supporting their point of view thereby ignoring auditors with contrary views. This is also why 17% of all dismissals of auditors have been found to be due to opinion shopping and these dismissals occur closer to the reporting period (Chen et al., 2015; Lennox, 2002).

Interestingly, fear by the auditor of getting penalised by the client, was not a factor causing the auditor to give in to opinion shopping even when the client was economically important to the auditor. Differences in interpretation by the two joint auditors where an issue is vague was also not found to be a valid construct influencing opinion shopping.

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Similarity in the size of the audit firms was found to have influence when it comes to the effectiveness of joint audits. This was in line with what research has shown that audits carried out by firms similar in size lead to improved audit quality (Deng et al., 2014). The results also showed that joint audits are not effective when the firms are made up of one small firm and one big firm further supporting the results on similarity in size. This is supported by literature which has also shown that the makeup of one small firm and one big firm leads to an increase in free riding (Deng et al., 2014). These results are potentially problematic for smaller audit firms as the preference of parties to have their exchange with higher status exchange partners has been supported by research (Cook et al., 2013). This is because the lower level partners with any affiliations with higher level partners are generally positively viewed while the higher status partners with any affiliations with lower partners were penalised by having their status reduced (Sauder, Lynn, & Podolny, 2012).

The importance of clarity of audit goals during a collaboration was also revealed in the results of the research. This is because the transactions are complex and each audit firm already has a unique value proposition they are bringing to the table. Failure to have clear audit goals results in these similar size firms wasting resources as they will not be fully exploring the value they could get from using each of the auditor's unique resources to tackle the complex problems. .

Results showed that when market uncertainty is high, the quality of the collaboration is improved and joint audits quality is better. These findings are also supported by research showing that high market uncertainty aids better collaborations (Hallen et al., 2014; Hillman et al., 2009)

Responses on how the difficulty of an audit influences the quality of audit provided were mostly neutral. This neutral response is similar to the different views which have been presented in literature. While years of research has shown that difficulty in the task leads to better collaboration (Pfeffer, 1982; Podolny, 1994; Stock, 2006) other researchers have disputed this by showing that the level of difficulty of a task does not lead to better collaboration (Das et al., 1998).

Freeriding, which was initially thought to be the most important factor influencing joint audits when the hypotheses were derived, was found to be the least important construct. Majority of respondents surprisingly did not believe that the abuse of a fellow joint auditor's resources was influential to the quality of joint audits provided. A possible explanation for

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this is that when firms are equal in size and have similar capabilities in terms of resources, there is a very small chance of potential abuse of each other's resources. This is in line with the findings discussed on the size of the audit where respondents noted that the make-up of an audit with one small firm and one big firm leads to an ineffective audit.

The results from the research showed that the gender of the teams or of the exchange partners was not seen to have any influence on the effectiveness of joint audits. This contradicted the literature which has shown that men tend to free ride more than women and that teams made up of the same gender are more effective (Davis & Cobb, 2010; Simms & Nichols, 2014). Similarity in personality of the audit firms teams was also not found to have any influence on the quality of joint audits provided

Although 79% of respondents thought that cross review of each of the auditor's work was between somewhat influential and extremely influential to the success of an audit and 91% of respondents thought that visibility of each individual audit firms contribution was between somewhat influential to extremely influential to the success of an audit, both of these factors were not found to be part of any valid construct and were therefore excluded from the research. This is despite research showing that when these factors are present, there is a decrease in social loafing which leads to better collaboration (Simms & Nichols, 2014).

Other surprising findings were that although research has shown coordination and increased interaction between auditors as an important factor contributing to the success of collaboration and reduction in social loafing (Gulati et al., 2012), these factors were both not identified as part of any valid construct when data analysis was done. This is despite the majority respondents agreeing that both of these factors were influential to the success of an audit.

Although 80% of respondents thought that fatigue in a group was influential to the quality of audit provided which was supported by research showing that success is not observed when there is fatigue within a group during collaboration (Simms & Nichols, 2014), this question did not form part of a valid construct.

Familiarity, which formed part of the original six hypotheses did not form part of any valid construct and was therefore excluded from the research. This is despite a significant amount of research showing that the two most significant features found to be present in a high uncertainty environment where partners are transacting are trustworthiness and honesty where exchange partners are familiar with each other (Cook et al., 2013).

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Responses on whether the quality of joint audits is improved when audits are voluntary as opposed to mandated were neutral. This is no surprise as empirical and theoretical literature research on whether voluntary as opposed to mandated joint audits improve audit quality have been inconclusive (Ratzinger-Sakel et al., 2013). Although this question was one of the original six hypotheses, it did not form part of any valid construct and was therefore excluded from the research.

7.3 Recommendations to Audited Clients

The recommendations below apply to the audited clients and their stakeholders who have interest in the success of joint audits. Recommendations are based on literature on this topic as well as results from the survey conducted.

Overreliance on the counterpart auditor by the other auditor was shown to be the most influential factor affecting the potential for opinion shopping and the subsequent reduction in audit quality. Audited clients should therefore not appoint joint auditors who over-rely on each other and who do not make decisions without the approval of their fellow joint auditor. This can be tested before the joint auditors are appointed as part of the interviews with the potential auditors on how they resolve differences on point of views with a fellow auditor and observing whether the auditor feels the need to pass all decisions through the counterpart auditor. Where an auditor has a tendency to pass all decisions through the counterpart auditor, this is a sign of overreliance which could potentially lead to opinion shopping and reduction in audit quality.

When selecting auditors for joint audits, it is encouraged that clients do not focus on the personality of the audit teams or familiarity of the firms as the results have shown personality not to have any influence on the success of joint audits. The focus should be on getting two firms similar in size. Each firm should have its own unique value proposition. Intensive due diligence, referrals and auditor site visits are encouraged before joint auditor appointments are made. These background checks would assist the audited company to determine the unique proposition offered by each of the firms. Once the audit starts, it is important that clear goals are set where each of the audit firm deliverables are clear and these deliverables align to the audit firm's unique value proposition.

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Where market uncertainty is high, it is recommended that audited companies consider appointing joint auditors. This is because literature has shown that the quality of audits is improved when there is high market uncertainty (Hallen et al., 2014; Hillman et al., 2009).

7.4 Recommendations to Joint Auditors

The recommendations below are to joint auditors as well as potential auditors considering getting in joint audit engagements. Recommendations are based on literature on this topic as well as results from the survey conducted.

Due to opinion shopping being higher when the risk for loss is increased for the audited client as shown by literature and the results of this research, auditors should avoid getting into joint audit engagements with clients who have significant losses which do not have a potential of getting reformed. When a client is in a loss position such as liquidation, going concern issues or business rescue, it is advisable that they stay with one auditor in order to avoid the possibility of opinion shopping for outcomes which reduce the possibility of further loss.

Joint auditors should avoid getting into engagements with firms that are different size to them especially if the potential counterpart auditor is smaller as research has shown that this will result in freeriding and an ineffective joint audit (Hallen et al., 2014). It is also important for firms to find out the counterpart's auditor unique proposition. The joint auditors should then work together and come up with clear goals on the audit to avoid duplication of efforts. Communication on goals and status of the audit should be an ongoing frequent conversation which joint auditors should have throughout the audit. This is in line with research which has shown that improved coordination leads to an improved collaboration (Gulati et al., 2012).

Gender of the individuals on a team or the personality of the team members should not be the focus when audit teams are being selected as results have shown that these factors do not influence on the quality or effectiveness of joint audits. This is despite research showing that gender influences on collaborations (Davis & Cobb, 2010). Focus should be on the competence of the team members.

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7.5 Recommendations to Regulators

Opinion shopping has been found to be significantly reduced on a partner level where there is only one firm in comparison to opinion shopping between two audit firms. Steps taken to reduce partner level opinion shopping include reports to the regulator citing detailed reasons why the auditor is not continuing with the audit (Chen et al., 2015). PCAOB has gone on to ask for a full report when the change in partners is not mandatory (Chen et al., 2015). Regulators in countries with mandatory joint audits should make it compulsory for a full report with clear reasons for the change to be submitted every time there is a change in joint auditors or when an audit firm has resigned.

Given that joint audit quality is significantly increased when market uncertainty is high, it is recommended that regulators consider encouraging joint audits when there are high market uncertainties such as new reporting standards or regulations. One such approach would be for the regulator to offer incentives to the companies appointing joint auditors.

7.6 Research Limitations

Although this research was on the effectiveness of joint audits using interorganisational collaborations theories, the research limited theories to those only focusing on dyads, which is collaboration between two firms. There has been increased interest in the study of networks and strategic alliances of three or more organisations whose purpose is to achieve a common goal (Provan et al., 2007) which means that the theories used there could potentially be more up to date and relevant.

As there were no responses from the regulator, this meant that results from the survey were only be limited to audit professionals and audited clients view and not the regulator's view of whether certain conditions result in the improvement of quality of joint audits provided. Given that the regulators are mainly responsible for mandating joint audits, their views would have been important to this research.

A closed questionnaire sent to respondents meant that other additional factors not initially identified as part of the theories used to come up with the questionnaire were not considered.

7.7 Future Research

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An assumption has been made that joint audits provide a fair representation of interorganisational collaboration. Future researchers will have to challenge this assumption. A suggestion would be to test this using empirical research.

Although research has shown that exchange partners generally prefer partners of a higher status, it was not proven whether this kind of collaboration between two high status partners leads to an increase in the quality of audit provided. Future researchers should look at testing whether exchanges with higher status partners such as two 'Big 4' firms results in higher quality joint audits when compared to collaborations between smaller and larger firms.

Further clarity is still needed on how the general preference for all parties to transact with partners of a higher status (Cook et al., 2013) would impact on how exchange partners choose their partners. The question of whether exchange partners would choose someone similar to them, even when the partner has a lower status still needs to be investigated and is an area for future research.

Culture of an audit interestingly formed part of the freeriding construct when it had originally been part of the similarity construct. Results indicated that culture is influential to the success of joint audits. However, this research did not test whether the culture of an organisation could potentially have an influence on the presence of social loafing which would in turn lead to ineffective joint audits. This is an area which could be explored by future researchers.

Qualitative research should be considered for this topic where questions are not close ended. This could potentially result in new influencing factors being identified.

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Appendix 1: Survey Questionnaire

I am conducting research on the factors impacting on the success of joint audits . The survey is made up of 2 pages and 2 sections. Please answer all the questions. The survey will take you approximately 5 to 10 minutes.

*A. How many years' experience do you have working on joint audits?

Less than 1 year	1-3 years	3-5 years	5-10 years	Over 10 years	N/A
○	○	○	○	○	○

*B. What is your age?

○ 18 to 24 ○ 25 to 34 ○ 35 to 44 ○ 45 to 54 ○ 55 and older

*C. What is your gender?

○ Female ○ Male

*D. What type of experience have you had with joint audits (tick all applicable)

☐ As an auditor ☐ As an audited client ☐ As a regulator ☐ Other

SECTION ONE Below are some factors that may or may not influence the quality of a joint audit. In your view, how influential do you think each of these factors is:

A. Freeriding/Social Loafing/Mutual dependence/Unique proposition

*1. Unequal contribution to the audit from any of the two firms

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential
○	○	○	○	○

*2. Overreliance on the counterpart auditor by the other auditor

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential
○	○	○	○	○

*3. Cross review of each of the joint auditors work

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential
○	○	○	○	○

*4. Abuse of the counterpart audit firm's resources by one of the joint auditor

Not at all	Slightly	Somewhat	Very	Extremely
○	○	○	○	○

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influential	influential	influential	influential	influential

*5. Visibility of each individual audit firms contribution

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*6. Ability of each individual auditor to self-evaluate

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*7. Clarity of audit goals

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*8. The gender of the team members on the audit

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*9. The ability of each audit firm to bring a unique value proposition to the table

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*10. Inability to use the counterpart firms resources by the other joint auditor

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*11. The level of interdependence and joint use of resources between the joint firms

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

Below are some statements about joint audits. How much do you agree or disagree with them;

*12. In general, audit quality is better when there is one auditor than when there are joint auditors

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*13. An auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap

Strongly	Disagree	Neither agree or	Agree	Strongly

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disagree disagree agree

*14. An auditor in a joint audit exerts the same amount of effort regardless of their view of the other auditor covering the potential gap

Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree

*15. The difficulty in coordinating between the two auditors compromises on the quality of the audit

Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree

*16. Joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit

Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree

*17. Joint audit quality is improved when there is limited to no interaction between the two firms during the audit.

Strongly disagree | Disagree | Neither agree or disagree | Agree | Strongly agree

*18. Joint audit quality is improved when there is an excessive amount of interaction between the two firms during the audit.

B. Opinion Shopping

*19. The audited client selecting evidence only from the auditor who support their point of view

Not at all influential | Slightly influential | Somewhat influential | Very influential | Extremely influential

*20. Differing views or interpretation by auditors on any critical principles and concepts

Not at all influential | Slightly influential | Somewhat influential | Very influential | Extremely influential

*21. Penalising of the audit firm which does not support audited client's view

Not at all influential | Slightly influential | Somewhat influential | Very influential | Extremely influential

*22. Audited client playing off the firms against each other

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○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

C. Market Uncertainty

*23. The type of industry which the audited client is in

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

*24. Audit fatigue or tiredness from any of the two auditors

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

*25. Increased regulatory requirements in that environment

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

*26. New and complex reporting standards

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

*27. Auditors auditing a client involved in complex transactions

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

*28. The degree of difficulty of the audit

○ Not at all influential	○ Slightly influential	○ Somewhat influential	○ Very influential	○ Extremely influential

Below are some statements about joint audits. How much do you agree or disagree with them;

*29. Joint audits will be successful in an environment with high market pressure e.g. down-rating by credit agencies, interest rate hikes etc.

◉ Strongly disagree	○ Disagree	○ Neither agree or disagree	○ Agree	○ Strongly agree

*30. Joint audits will only be successful if there is intense rivalry or competition between the two joint auditors

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Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*31. Joint audit quality is better when the audit being carried out is hard

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*32. Joint audit quality is better when the audit being carried out is easy

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

D. Similarity

*33. Similarity of the size of the audit firms

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*34. Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*35. Similarity in personality of the teams from the audit firms

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*36. Similarity of both of the audit firm's culture

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

*37. Similarity of the effort exerted by the 2 firms in an audit

Not at all influential	Slightly influential	Somewhat influential	Very influential	Extremely influential

Below are some statements about joint audits. How much do you agree or disagree with them;

*38. Joint audits are successful when it's the same genders working in a group on an audit

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Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*39. Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms)

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*40. Joint audits will only be successful if there is one big firm and one small firm working together.

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*41. Joint audits will only be successful when both of the audit teams are made up of women

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*42. Joint audit quality is better when there are two big groups working together on an audit

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*43. Joint audit quality is better when there are two small groups working together on an audit

E. Familiarity

*44 Joint audits are successful when two firms have worked together previously

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*45. Joint audits are successful when two firms have not worked together previously

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*46. Joint audits are successful when two firms have worked with the audited firm before

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

*47. Joint audits are successful when two firms have a high level of interconnectedness on the audit

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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F. Voluntary vs Mandatory

*48. Voluntary joint audits produce better audit quality than mandatory joint audits

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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Appendix 2: Consistency Matrix

Hypothesis	Literature review	Data Collection	Analysis
Hypothesis 1 – Relative to joint audits, audit quality is higher when each of the two firms can be mutually dependent and offer a unique proposition	(Hallen et al., 2014), (Deng et al., 2014), (Hillman et al., 2009), (Aldrich, 1976), (Ratzinger-Sakel et al., 2013), (Simms & Nichols, 2014), (Gulati et al., 2012), (Das, Sen, & Sengupta, 1998), (Casciaro & Piskorski, 2005), (Das et al., 1998), (Nienhüser, 2008),.	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test
Hypothesis 2 – Audit quality is higher in a single audit than a joint audit due to a reduction in opinion shopping.	(Deng et al., 2014), (Rabin & Schrag, 1999), (Kosnik, 2015), (Tong, 2006), (Chen et al., 2015), (Lennox, 2002), (Bacon & Anderson, 1960),.	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test
Hypothesis 3 – Audit quality is higher for joint audits performed under conditions of market uncertainty.	(Simms & Nichols, 2014), (Tashman & Rivera, 2015), (Slovik, 2011), (Pfeffer, 1982), (Podolny, 1994), (Stock, 2006), (Aldrich & Herker, 1977), (Cross, Yan, & Louis, 2000), (Jarillo, 1989), (Kogut, 1988), (Shan, 1990), (Aldrich, 1976).	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test
Hypothesis 4 – In the context of joint audits, audit quality is higher when the two firms are similar in size, culture and gender.	(Deng et al., 2014), (Chandler et al., 2013), (Podolny, 1994), (Oliver, 1990), (Gulati et al., 2012), (Cook et al., 2013), (Sauder et al., 2012), (Davis & Cobb, 2010), (Ratzinger-Sakel et al., 2013),	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test
Hypothesis 5 – Joint audits will improve the quality of audit if the parties have transacted together in the past.	(Cook et al., 2013), (Podolny, 1994), (March, 1991), (Das et al., 1998), (Simms & Nichols, 2014), (Gulati et al., 2012)	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test
Hypothesis 6 – Voluntary joint audits are perceived to be more effective than mandatory joint audits	(Zerni et al., 2012) , (Ratzinger-Sakel et al., 2013), (European Commission, 2010), (Oliver, 1990), (Aldrich, 1976), (Pfeffer, 1982), (Salancik & Pfeffer, 1978).	Survey via questionnaire	Descriptive frequency analysis. Confirmatory factor analysis (CFA) Cronbach's alpha ANOVA Spearman's Ranked Order (Rho) correlation Chi-test

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Appendix 3: Detailed statistical results

Rotated Component Matrix[a]

	Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
The audited client selecting evidence only from the auditor who support their point of view	0,864	0,104	0,005	0,008	0,017	-0,017	0,111	0,218	-0,029	0,103	0,054	0,027	0,06	-0,102	0,091	-0,044
Penalising of the audit firm which does not support audited client's view	0,745	0,152	0,109	-0,026	-0,099	-0,14	0,148	0,003	0,177	-0,19	-0,099	0,241	-0,083	0,029	0,135	0,16
Audited client playing off the firms against each other	0,627	-0,053	-0,3	-0,189	-0,091	0,091	0,058	-0,082	0,265	0,149	0,164	0,05	0,209	-0,22	0,075	-0,166
Overreliance on the counterpart auditor by the other auditor	0,607	0,24	0,099	-0,21	-0,142	0,255	0,091	0,136	-0,022	0,224	0,096	-0,161	-0,094	-0,008	-0,266	0,142
Joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit	0,389	-0,113	0,008	0,219	-0,076	0,103	0,332	-0,334	0,288	0,238	0,322	-0,181	-0,133	-0,094	0,144	0,132
Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm	0,188	0,817	0,072	0,127	0,029	-0,07	0,148	-0,059	-0,078	0,121	0,016	-0,034	-0,071	0,111	0,137	0,019
Similarity of the size of the audit firms	0,074	0,652	-0,015	0,177	0,03	-0,081	0,266	-0,051	-0,137	0,057	0,067	0,025	0,453	-0,078	0,078	-0,071
Auditors auditing a client involved in complex transactions	0,167	0,633	0,127	0,218	0,253	0,222	0,087	0,016	0,074	0,074	-0,18	0,011	0,224	-0,014	-0,294	0,144
Clarity of audit goals	-0,007	0,619	0,183	-0,117	-0,089	-0,132	-0,248	0,064	0,296	0,171	0,45	0,066	-0,029	-0,17	0,072	0,024
Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms)	-0,07	0,471	0,202	0,276	0,093	-0,173	-0,022	-0,059	-0,451	0,05	0,319	0,254	0,217	0,015	-0,015	-0,18
The ability of each audit firm to bring a unique value proposition to the table	0,06	0,442	-0,431	0,118	0,423	0,194	-0,154	0,179	-0,035	0,059	0,076	-0,096	-0,028	-0,118	0,09	-0,034
Joint audits will only be successful when both of the audit teams are made up of women	-0,063	0,155	0,855	0,067	0,091	0,034	0,081	0,059	-0,154	0,074	0,044	-0,11	0,108	-0,02	0,229	-0,063
Joint audits are successful when it's the same genders working in a group on an audit	-0,05	-0,124	0,769	0,265	-0,065	0,036	-0,021	0,096	0	0,105	-0,111	-0,002	0,034	0,128	0,227	0,026
Joint audits will only be successful if there is one big firm and one small firm working together.	0,208	0,296	0,649	-0,119	-0,058	0,021	0,115	0,008	0,237	-0,132	-0,172	-0,069	0,01	-0,248	-0,202	0,193
Joint audits will only be successful if there is intense rivalry or competition between the two joint auditors	0,139	0,034	0,611	0,198	0,141	-0,277	0,041	-0,1	-0,058	-0,172	-0,08	0,111	-0,07	0,081	-0,37	-0,136
The degree of difficulty of the audit	0,047	0,115	0,142	0,803	0,08	0,111	0,041	-0,129	0,011	-0,038	-0,141	-0,214	0,084	0,134	-0,023	0,067
The type of industry which the audited client is in	-0,185	0,128	0,201	0,73	0,122	-0,074	0,086	0,201	-0,193	-0,013	0,078	0,134	0,161	0,04	-0,191	-0,053
New and complex reporting standards	-0,31	0,243	0,402	0,541	-0,13	0,027	0,072	0,066	0,004	-0,255	0,061	0,149	-0,07	-0,114	0,116	-0,005
Increased regulatory requirements in that environment	0,094	0,375	-0,146	0,484	0,084	0,01	-0,113	-0,057	0,069	-0,089	0,37	0,132	-0,072	0,377	-0,072	-0,277
Abuse of the counterpart audit firm's resources by one of the joint auditor	0,381	0,068	0,241	-0,42	-0,067	-0,09	-0,074	0,272	0,022	-0,081	0,347	-0,162	0,399	0,162	-0,177	0,065
Joint audit quality is better when the audit being carried out is hard	-0,107	-0,054	-0,066	-0,038	0,871	-0,011	-0,027	0,067	0,016	-0,186	0,082	0,08	0,108	-0,071	0,083	-0,025
Joint audit quality is better when there are two big groups working together on an audit	-0,086	0,179	0,092	0,118	0,769	-0,108	0,059	0,045	-0,105	0,162	0,078	0,199	-0,142	0,25	-0,117	-0,136
Joint audits will be successful in an environment with high market pressure e.g. down-rating by credit agencies, interest rate hikes etc.	0,03	0,155	0,158	0,176	0,53	0,182	-0,134	-0,191	-0,056	0,216	0,234	0,133	0,154	-0,05	0,025	-0,38
Voluntary joint audits produce better audit quality than mandatory joint audits	-0,094	0,051	-0,032	0,161	0,031	0,729	0,163	-0,105	0,013	0,38	-0,067	-0,141	0,014	-0,065	0,036	-0,062
Joint audits are successful when two firms have not worked together previously	-0,003	-0,085	-0,013	0,144	0,007	0,672	-0,155	0,089	0,08	0,036	-0,006	0,338	-0,35	0,058	-0,173	-0,125
Joint audit quality is improved when there is limited to no interaction between the two firms during the audit.	0,038	-0,069	0,085	-0,172	-0,157	0,651	0,09	-0,339	0,172	-0,251	0,129	-0,097	0,072	-0,048	0,257	-0,171
Audit fatigue or tiredness from any of the two auditors	0,17	0,033	-0,125	-0,076	0,122	0,635	0,172	0,167	0,081	-0,176	0,241	0,184	0,201	0,143	-0,044	0,143
An auditor in a joint audit exerts the same amount of effort regardless of their view of the other auditor covering the potential gap	-0,24	-0,13	-0,049	-0,133	0,06	-0,01	-0,799	-0,128	0,003	-0,098	0,156	-0,095	-0,127	0,092	0,026	0,003
An auditor in a joint audit exerts less effort when they feel that the other auditor covers the potential gap	0,189	0,196	0,153	-0,02	0,035	0,111	0,783	0,053	0,28	-0,022	0,194	0,03	-0,05	0,077	-0,01	0,156
Visibility of each individual audit firms contribution	0,194	0,292	-0,006	0,139	0,065	-0,141	-0,528	0,308	0,116	0,344	0,127	0,184	0,032	0,134	-0,039	0,023
Unequal contribution to the audit from any of the two firms	0,117	-0,133	0,036	-0,08	-0,031	-0,043	0,029	0,834	-0,066	0,044	0,059	0,137	0,046	-0,027	0,015	-0,084
Similarity of both of the audit firm's culture	0,185	0,132	0,1	0,238	0,36	0,074	0,036	0,535	-0,037	-0,127	0,256	-0,031	-0,04	-0,209	0,271	0,253
Joint audits are successful when two firms have a high level of interconnectedness on the audit	0,346	0,183	0,093	0,255	0,398	0,039	0,293	0,483	0,324	0,074	-0,133	0,084	-0,048	-0,027	-0,012	-0,107
Similarity of the effort exerted by the 2 firms in an audit	0,173	0,21	-0,024	0,048	0,095	-0,4	0,084	0,44	0,257	0,33	0,385	-0,186	0,119	-0,085	-0,086	0,117
The difficulty in coordinating between the two auditors compromises on the quality of the audit	0,164	-0,118	-0,042	-0,03	-0,073	0,071	0,124	-0,12	0,843	0,041	0,013	0,062	0,058	-0,044	0,043	-0,025
The level of interdependence and joint use of resources between the joint firms	-0,012	0,363	-0,019	-0,057	0,102	0,16	0,015	0,338	0,569	-0,068	0,034	0,191	0,051	0,286	0,198	0,137
Cross review of each of the joint auditors work	0,19	0,32	0	-0,135	0,001	0,01	0,009	0,079	0,098	0,806	0,021	0,003	0,051	-0,035	0,039	0,04
Joint audits are successful when two firms have worked with the audited firm before	0,449	0,106	-0,029	0,044	0,187	-0,011	0,147	0,074	0,172	-0,546	0,356	0,211	0,121	0,182	-0,073	0,077
Joint audit quality is better when there are two small groups working together on an audit	-0,002	0,126	0,055	0,398	-0,035	-0,077	-0,307	-0,002	0,337	-0,445	0,04	-0,017	0,297	-0,079	0,06	0,004
Similarity in personality of the teams from the audit firms	0,074	0,047	-0,24	-0,047	0,238	0,177	-0,021	0,117	-0,067	-0,078	0,83	0,015	-0,003	-0,135	0,071	-0,01
Joint audit quality is better when the audit being carried out is easy	0,188	0,044	0,051	0,058	0,106	0,14	-0,058	0,035	0,107	-0,083	-0,021	0,779	-0,059	-0,053	-0,002	0,167
Joint audit quality is improved when there is an excessive amount of interaction between the two firms during the audit.	-0,123	-0,017	-0,209	-0,151	0,247	-0,064	0,275	0,25	-0,048	0,063	0,076	0,664	0,12	0,136	0,205	-0,074
The gender of the team members on the audit	0,012	0,091	0,057	0,14	0,036	0,027	0,02	0,051	0,07	-0,011	-0,02	0,01	0,874	0,121	0,171	0,093
Differing views or interpretation by auditors on any critical principles and concepts	0,258	0,108	-0,143	-0,064	0,013	0,001	0,048	0,12	0,076	0,028	0,149	-0,005	-0,123	-0,796	0,007	-0,126
Ability of each individual auditor to self-evaluate	0,377	0,289	-0,283	0,117	0,061	0,122	-0,017	0,125	0,259	-0,079	0,003	-0,014	0,053	0,557	0,188	-0,113
Inability to use the counterpart firms resources by the other joint auditor	0,164	0,131	0,219	-0,082	0,052	0,007	-0,008	0,047	0,135	0,033	0,036	0,116	0,226	0,062	0,785	0,11
In general, audit quality is better when there is one auditor than when there are joint auditors	0,038	0,074	0,043	-0,029	-0,373	-0,192	0,151	-0,11	0,026	0,108	0,02	0,17	0,139	0,096	0,135	0,763
Joint audits are successful when two firms have worked together previously	0,114	-0,118	-0,165	0,386	0,292	0,355	-0,18	0,056	0,087	-0,193	0,089	0,283	0,245	0,002	0,045	0,453

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Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.769	.768	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
The audited client selecting evidence only from the auditor who support their point of view	12.63	12.494	.696	.498	.670
Penalising of the audit firm which does not support audited client's view	12.92	12.365	.598	.442	.707
Audited client playing off the firms against each other	12.54	13.865	.552	.336	.723
Overreliance on the counterpart auditor by the other auditor	12.44	15.025	.495	.261	.743
Joint audits can allow for individuals to 'hide behind others' so they don't need to try as hard as they could in a single audit	13.14	15.286	.377	.176	.780

Reliability Statistics

Cronbach's Alpha	N of Items
.727	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Joint audits will only be successful when both of the audit teams are made up of women	5.75	3.451	.728	.544
Joint audits are successful when it's the same genders working in a group on an audit	5.48	3.350	.587	.621
Joint audits will only be successful if there is one big firm and one small firm working together.	5.21	4.263	.402	.727
Joint audits will only be successful if there is intense rivalry or competition between the two joint auditors	5.38	4.078	.385	.742

Reliability Statistics

Cronbach's Alpha	N of Items
.732	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The degree of difficulty of the audit	9.98	6.080	.619	.616
The type of industry which the audited client is in	10.41	5.343	.619	.613
New and complex reporting standards	10.32	6.640	.546	.661
Increased regulatory requirements in that environment	9.95	7.691	.333	.768

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Factor 1				
		Overreliance on the counterpart auditor by the other auditor		
The audited client selecting evidence only from the auditor who support their point of view	Correlation	0.531	Sig. (1-tailed)	0.000
		The audited client selecting evidence only from the auditor who support their point of view		
Penalising of the audit firm which does not support audited client's view	Correlation	0.599	Sig. (1-tailed)	0.000
Audited client playing off the firms against each other	Correlation	0.513	Sig. (1-tailed)	0.000
Factor 2				
		Difference in the size of the auditors i.e. audit by equal sized audit firms vs. audit by one small firm and one big firm		
Similarity of the size of the audit firms	Correlation	0.585	Sig. (1-tailed)	0.000
Auditors auditing a client involved in complex transactions	Correlation	0.504	Sig. (1-tailed)	0.000
Factor 3				
		Similarity of the size of the audit firms		
Joint audits will only be successful if there are two firms of a similar size working together (e.g. 2 'Big 4' firms)	Correlation	0.576	Sig. (1-tailed)	0.000
Factor 4				
		Joint audits will only be successful when both of the audit teams are made up of women		
Joint audits are successful when it's the same genders working in a group on an audit	Correlation	0.708	Sig. (1-tailed)	0.000
Factors 5				
		The degree of difficulty of the audit		
The type of industry which the audited client is in	Correlation	0.555	Sig. (1-tailed)	0.000
New and complex reporting standards	Correlation	0.512	Sig. (1-tailed)	0.000
Factor 6				
		Similarity of both of the audit firm's culture		
Joint audits are successful when two firms have a high level of interconnectedness on the audit	Correlation	0.511	Sig. (1-tailed)	0.000

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ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
The type of industry which the audited client is in * How many years' experience do you have working on joint audits?	Between Groups (Combined)	17.559	4	4.390	2.981	.026
	Within Groups	86.879	59	1.473		
	Total	104.438	63			
Joint audits will only be successful if there is one big firm and one small firm working together. * How many years' experience do you have working on joint audits?	Between Groups (Combined)	5.684	4	1.421	2.599	.046
	Within Groups	31.170	57	.547		
	Total	36.855	61			

ANOVA Table

		Sum of Squares	df	Mean Square	F	Sig.
Auditors auditing a client involved in complex transactions * What is your age?	Between Groups (Combined)	10.388	4	2.597	2.731	.037
	Within Groups	56.097	59	.951		
	Total	66.484	63			
The level of interdependence and joint use of resources between the joint firms * What is your age?	Between Groups (Combined)	20.182	4	5.045	4.778	.002
	Within Groups	62.303	59	1.056		
	Total	82.484	63			
Joint audits are successful when two firms have worked with the audited firm before * What is your age?	Between Groups (Combined)	13.123	4	3.281	3.606	.011
	Within Groups	50.943	56	.910		
	Total	64.066	60			

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