Independent project, 15 credits, for the degree of Master of Science

in Business Administration

Spring Semester 2018

Commercialization and Audit quality

Evidence from Chinese audit market

Shihao Tang and Shen Shen

School of Health and Society

Authors
Shihao Tang, Shen Shen

Title
Commercialization and audit quality–Evidence from Chinese audit market

Supervisor
Ulf Larsson

Examiners
Timurs Umans

Abstract
In recent years, the commercialization of the audit market has become more and more apparent, which is an inevitable trend. After the Enron scandal broke out, researches about commercialization and audit professions, audit quality have arisen. Most of these studies are focus on western audit firms. The purpose of this study is to look at the impact of commercialization of the Chinese audit industry from the auditor perspective.

This paper is based on 109 responses to a survey distributed to Chinese auditors, including Big 4 firms and non-Big 4 firms. This study use market orientation, customer orientation and process orientation as indicators of commercialization. Auditor independence and auditor competence as two main cornerstones of audit quality. The data were analyzed by multiple statistics test.

Our finding indicates that all three indicators of commercialization of audit market have a positive relation with auditor independence and competence. We are thus concluding that commercialization of the audit market has a positive relation to audit quality. Also, we find that auditors in Big 4 and non-Big 4 audit farm are not much difference. This may be because the Big 4 in the Chinese market do not have the same dominance as in the Western market.

Key words
Commercialization, audit quality, market orientation, customer orientation, process orientation, auditor independence, auditor competence

Acknowledgement

First of all, we would like to thank Professors Ulf Larsson and Timurs Umans. Professor Ulf provided us with valuable opinions and suggestions at the beginning of the thesis, which strengthened the development direction of the thesis. Professor Timurs' patience and guidance led us to complete this paper. We also want to thank our classmates and friends who helped us when we were confused. We want to thank the local offices of the Big 4 in China for their cooperation, they have made our ideas possible.

Finally, we would like to thank our family for their concern and support during this period. They are strong backing for us to go on.

Without you, this paper will not come true.

Thanks.

List of Content

List of tables

List of figure

Introduction

The introduction will include the background to the research, an explanation of the problem, the purpose of the research, and the research question. It will then provide an outline of the thesis.

1.1 Background

In the past few decades, China's economic development has led the world in terms of its outstanding speed and effectiveness. In addition, China did not experience any significant impact from the economic crisis which affected other developed countries at the end of the 20th century. China was rated highly in many areas, but according to Business Management International (BMI China Commercial Banking Report, 2010), Western countries still entertain doubts about China's future economic direction. One of the main threats to China's future economy is the growth of corruption. Many local officials are closely associated with enterprises, a situation which leads to complex interpersonal relationships prone to corruption and bribery. As a consequence, many researchers (Woodbine, Fan & Scully, 2012) believe Chinese corporate governance is weak and non-transparent by Western standards. One of the main differences between Western economies and the Chinese economy is the nature of the company relationship (Liu, Wang & Wu, 2011). For example, in America, companies and businesses are characterised by rules-based governance. In China, on the other hand, this governance policy has been dramatically influenced by government control.

There are two kinds of firm in the Chinese securities market, state-owned enterprises (SOE) and non-state-owned enterprises (NSOE). After the People's Republic of China was founded in 1949, there did not appear to be a need for auditing, because all firms were owned and managed by the Chinese government. Since the implementation of reforms and more open policy in 1978, many nationalised enterprises have become private companies. At the same time, the

introduction of large amounts of foreign capital has brought a need for professional auditing. In order to control SOEs more effectively and address the impact of newly introduced capital, the Chinese government decided to focus on developing new audit policies. In 1988, the Chinese Ministry of Finance established the Chinese Institute of Certified Public Accountants (CICPA), and took control of the audit market. During this period, the vast majority of audit firms were funded and established by the government (Lin and Liu, 2009). Until the 1990s, with the establishment of the two primary stock markets in Shenzhen and Shanghai, and the opening up of overseas investment, the demand for high-quality auditing work increased dramatically. Since then, the Chinese government has allowed foreign audit firms such as the Big 4 to enter the Chinese market through joint ventures with domestic practitioners. Despite this, in order to tighten control of the audit market, the Chinese government only allowed certain audit firms to audit public companies. The result of this policy was that the audit firms at the time mainly fell into three categories: government-controlled audit firms, university-controlled audit firms and audit firms in a joint venture with international audit companies. With the introduction of foreign capital, the outside world's doubts about the government's complete control over the audit market are growing. In order to dispel this doubt, the CICPA decided in 1998 to require all audit firms to cut their ties with sponsors, including government agencies and university institutions, to improve audit independence. This policy continues to this day, but many audit firms are still supported by the government.

Francis, Michas and Seavey (2013) emphasise that audit markets are country-specific in nature, due to country-level controls over the licensing and regulation of auditors. Audit firms in different locations and different countries have different legal practices and audit markets, even audit firms like the Big 4, which operate a global network. This is particularly true in the Chinese audit market, where the most popular customers are Chinese listed companies. Most of these listed firms are SOEs or former SOEs, with the government holding some shares. According to the Ministry of Finance and China Securities Regulatory Commission, these kinds of firm need to be audited by specially designated audit firms. In 2015, there were more than 7400 accounting firms, over 8.5 million CPAs and nearly 30 million employees in the sector in

China (Wang and Dou, 2015), but only about 100 CPA firms were qualified to audit publicly traded companies.

Another unique feature of the Chinese audit market is that most companies tend to cooperate with domestic audit companies, rather than the Big 4, who are known for the high quality of their auditing. According to the CICPA, since April 2017, 40 audit firms have made audit reports for more than 3,000 listed companies. Most of these were completed by local Chinese auditing companies, and the Big 4 accounted for only 6% of them. Some researchers note (Chen, Su & Wu, 2007; DeFond, Wong & Li, 2000) that there was little demand for quality auditing services in the Chinese market, which is why the Big 4 cannot have a huge market share as they have in the USA, UK and Europe. At the same time, competition between auditors is becoming more pronounced in China, due to the active participation of small and mid-sized CPA firms, as well as the low concentration of Big-4 auditors. (Li, Song & Wong, 2005; Wang & Claiborne, 2008) In recent years, with the development of its market economy, China has been undergoing rapid developments in the accounting profession. The industry brought in 50.9 billion yuan in revenue in 2012, which represents more than 15% growth. Forty-seven firms earn over one hundred million yuan, and 350 administrative institutions and enterprises are involved. In this process, local firms have gradually become bigger and stronger, and the gap between domestic firms and the "Big 4" has also narrowed. In 2002, the income ratio between the top local accounting firms and the "Big 4" was on average 1 in 4. By 2006, the maximum was 1 to 7. The gap has narrowed in recent years, shrinking to 1 to 1 in 2011.

In an environment where the Chinese audit market is so fierce, more and more auditing companies and auditors have turned their attention to commercialisation. Auditing was defined as a profession as far back as the 1970s, to ensure the quality of accounting information (Broberg, Umans & Gerlofstig, 2013; Öhman, 2005; Power, 1999). Marketing was also seen as unethical and was considered to violate the professional code of ethics (Clow et al., 2009; Heischmidt et al., 2002). However, with the entry of new firms and an increase in competition, marketing in the audit industry has slowly been accepted. From as early as the 1980s,

accounting scholars (Frederiksen, 1989; Hanson, 1989; Marts, 1989; Honeycutt and Kenan, 1989) have combined the traditional 4Ps of the marketing mix with accounting, and accounting firms have also employed marketing directors to enhance their operations. However, during this time, marketing tools have focused more on promotion (Shenkman, 1989; Sinclair, 1988). Furthermore, recent research by Pernilla, Timurs and Carl (2013) notes that more and more auditors are changing their attitudes towards commercialisation of the auditing profession.

1.2 Problem

In the early 1970s, marketing and advertising were taboo topics for CPA firms, but over the past years, there has been more research on the relationship between the accounting profession and commercialisation. Many successful accounting firms are involved in intentional and continuous marketing efforts, and some entrepreneurial CPAs invest in rebranding, website promotion, direct mail and strategic marketing plans (Copeland, 2010). With a more competitive environment than before because of rising customer demand and the trend towards globalisation, companies are beginning to discover more forms of advertising to maintain their client base (Heischmidt et al., 2002). Companies served by CPAs have all been radically impacted by the explosion of the internet. Firms which use technology-aware marketing tools benefit not only from being seen as more innovative, but also from being able to carry out efficient and cost-effective marketing campaigns (Copeland, 2010). Moreover, studies show that auditors balance their inherent auditing responsibilities with the newly imposed marketing activities (Broberg, Umans & Gerlofstig, 2013) brought about by the change in circumstances. A question has also been raised as to whether the attitudinal shift towards commercialisation in the auditing profession could influence audit quality.

Auditing has traditionally been defined as a profession, along with other areas such as medicine, law and engineering (Broberg, Umans & Gerlofstig, 2013). Many people believe that professional services are hard to change, because professionals always need specific skills and theoretical knowledge, making these professions hard to break into. Before the 21st century, auditors were considered to be independent, especially in terms of reviewing a client's financial

situation (commercialisation). Chandler and Edwards (1996) and Cullina (2004) have noted that auditors should make audit reports without being influenced by clients. However, several studies (Hodges and Young, 2009; Kotler and Connor Jr., 1977; Mautz and Sharaf, 1997; Reid, 2008) have shown that the business environment and fierce competition can bring rapid changes to professional services. In fact, the introduction of a large number of new auditing companies into the audit market in China has led to a strong competitive relationship. In order to retain customers, more and more auditing companies have to change their focus to a market orientation involving commercialisation.

From a marketing perspective, the auditing industry can be seen as a kind of service industry (Kathawala and Abdou, 2003). According to Kotler (1994), more services and better quality are often considered key to competitive success. A recent article by Broberg et al. (2018) argues that two significant ways of exploring the commercialisation of audit firms can be found in the literature: the exploration of non-audit services and the marketing activities of audit firms.

Non-audit services include some consulting-oriented services, such as advisory services in terms of accounting, tax, strategy and financial structure, as well as merger and acquisition-related activities. These non-audit services are the subject of increasing demand from clients, and will result in an increase in services. At the same time, providing non-audit services will help commercialise audit firms by making them more customer-oriented (Sharma and Sidhu, 2001), as this is also a type of marketing activity. In the Chinese audit market, customer orientation or client relationships are sometimes known as guanxi. The involvement of guanxi between audit firms and their clients could affect audit quality. Studies show that there are two types of guanxi: firm-level connections derived from state ownership and personal connections developed through management involving external auditors (Liu, Wang & Wu, 2011). However, the involvement of guanxi contradicts the fact that many scholars believe auditors should maintain a considerable degree of independence. It is also why many people doubt the quality of Chinese auditors.

Furthermore, the audit market in China is different to markets in developed economies. This is because (1) competition between auditors is more pronounced due to the active participation of small- and mid-sized CPA firms and the low concentration of Big-4 firms, and (2) Chinese auditors only usually operate in the local market, as geography and the government heavily influence how audit firms are selected (Wang et al., 2009). In developed economies, a good deal of literature suggests that the real and perceived quality of auditing by the Big-4 firms is greater than for non-Big 4 firms. However, for historical reasons, and because of the current institutional arrangements, the audit market in China is dominated by domestic firms which are different from the Western audit market (Leung & Liu, 2015). It is worth noting that in 2017, according to CICPA, the top 10 firms in the audit market were domestic firms, accounting for 69% of the total number of listed companies, but their audited listed companies accounted for 36.16% of total revenue and 27.36% of total profits. Total assets accounted for 13.57%. On the other hand, clients of the Big 4 only accounted for 6.12% of all listed companies, but 53.58% of total revenue, 65.27% of total profits and 82.91% of the assets of all listed companies.

In the past decade, audit firms have continued to make the change towards commercialisation, but concerns have been raised about this in some high-profile reports in the Western world. In particular, a number of scandals and evidence of audit failures, which have been documented throughout the world, have led experts and scholars to question the effect commercialisation has on the quality of audits. In this context, and in the context of the general auditing environment globally, this research will consider how the commercialisation of audit firms could affect the quality of audits in China.

1.3 Research purpose

This study aims to explain how the commercialisation of auditing affects audit quality in the context of the Chinese audit market.

1.4 Research question

How does commercialisation of the audit industry affect the quality of audits in China?

1.5 Outline

This thesis consists of five chapters.

Chapter 1: Introduction

The introduction begins with background information. It illustrates trends in audit markets, and the current situation in terms of commercialisation of the Chinese audit market. It then sets out the research question and the purpose of the research.

Chapter 2: Theoretical framework

The theoretical framework section begins by discussing the theories which underpin this thesis, followed by a literature review related to the topic. It then establishes the hypotheses for the research.

Chapter 3: Methodology

The methodology section discusses both the empirical methodology and the theoretical base underpinning it. The theoretical base illustrates the approach used in designing the research, and why it was chosen. The empirical methodology illustrates how the theories translate into measurable data, and describes how the data were analysed.

Chapter 4: Analysis

The analysis section presents the results of quantitative data analysis and the findings of statistical analyses.

Chapter 5: Conclusion

The conclusion section is a summary of the thesis, where the findings of the research are

discussed, as well as the contribution made by the research, its limitations and suggestions for future research.

2.Theoretical framework

Following a literature review focusing on commercialisation and audit quality, the theoretical framework chosen for the research involves agency theory and institution theory. Hypotheses were generated on this basis.

2.1 Agency theory

According to Berle and Means (1969), there is an agency problem between the principal and the manager in current corporations. This simply means that the principal gives a task to the agent, and the agent is likely to prioritise the interests of the principal, rather than his/her own interests, in completing the task (Jenson & Meckling, 1976). According to agency theory, the two main issues are an agent problem and a risk-sharing problem. The agency problem suggests that the principal and the agent may have different agendas in carrying out the task. The agent may be acting according to his/her own will, as well as that of the principal, but this is difficult to determine. At the same time, the behaviour of the agent may change as a result of factors in the environment, and cannot be explained by the agent's will alone.

In terms of the risk-sharing issue, Eisenhardt (1989) argues that agents and principals may have different attitudes towards risk-taking, so that agents act differently to the principal. Watts and Zimmerman (1983) propose a solution to this question. They believe that by signing a contract, the principal is bound to agree with the agent. The contract has to establish a way of measuring the agent's behaviour to ensure that the principal's interests are not harmed. Related to this are the agent's costs, which include the cost of signing the contract, the cost of monitoring and other costs when the principal chooses the agent.

Audits can be considered one of the main corporate governance mechanisms for reducing these agency problems. An audit is defined as "a periodic examination of the financial statements of an entity by an independent third party (the auditor), to ensure that those financial statements

have been properly prepared, are accurate and in accordance with generally acceptable accounting principles and legal requirements, and give a true and fair view of the financial state of the entity" (Leung & Liu, 2015). An audit plays a vital role in the capital market because the literature suggests that financial statements are useful to investors, but their usefulness is contingent on their perceived credibility. The work of the auditors directly affects the credibility of financial statements (Jensen and Meckling, 1976).

2.2 Institutional theory

According to institutional theory (DiMaggio & Powell, 1983), some service industries and firms are bound to be affected by national policies, regulations and laws. Scott (1995) once pointed out that if organisations want to survive or join a new market, they must conform to the rules and belief systems prevailing in the environment. Even so, some foreign firms still face tremendous pressure from their peers, which may force them to change their competitive strategies and human-resource management (Porter, 1990).

Institutional theory can be used to explain some unique features of the Chinese audit market, especially for the Big 4. In the early stages of auditing in China, since almost all enterprises in China are SOEs, the government urgently needed to take full control of the audit market, so foreign audit firms were not allowed to enter it. With the introduction of reforms and more open policies, as well as the specific reform of the auditing system, the Chinese government finally allowed foreign audit firms to enter the Chinese audit market through a joint venture. However, the government controls the issuing of audit licences and the establishment of regulations for auditors. Particularly in the Chinese audit market, where many listed companies are SOEs or former SOEs in which the government has shares, these need to be audited by specially designated audit firms. This is also the main reason why the Big 4 cannot take a large share of the Chinese audit market.

2.3 Commercialisation of accountancy

According to Copeland (2010), recent trends in marketing in CPAs suggest that they should focus on and market the value they offer and the aspects in which they differ from other firms. Consultancy and non-audit services (NAS) have been an important factor in the growth of audit firms, and for many of them, including the Big 4, these services already account for more than 50% of their revenue. As early as the 1990s, some scholars (Humphrey and Moizer, 1990; Chesser et al., 1994) warned that audit firms were tending to become involved in non-auditing activities, which would bring greater economic benefit but which would push the audit industry towards a market orientation. They believed this would undermine the independence of audits. On the one hand, the gradual commercialisation of the audit industry is a response to growing customer demand (Jaworski et al., 2000; Clow et al., 2009). On the other hand, because of the enormous benefits of commercialisation, it is also considered to be a result of internal incentives in the audit industry itself (Sweeney and Pierce, 2004). Also, Hulbert and Lawson (1996) have identified that accounting firms are becoming increasingly aware of the benefits to be obtained from advertising, and advertising by accounting firms is becoming increasingly aggressive. Some Western scholars (Debates, 2010) have begun to suspect that a lack of competition could mean that the excessive concentration on the Big 4 in terms of market share in the Western audit market could lead to a decline in audit quality. This has encouraged a belief that commercialisation will benefit the accounting profession. On the contrary, despite the Enron scandal of 2000, there was no evidence that public opinion thought the marketisation and commercialisation of audit firms would have a significantly negative impact on the audit industry. The conflicts between commercialisation and professionalism in audit firms have existed for a long time (Gendron, 2002), and the tension between auditing costs and auditing quality has been discussed by scholars. However, the globalisation of the auditing profession, the subsequent increase in competitiveness and the need to survive which have driven many audit firms to commercialise, have made this trend unavoidable (Sori, Karbhari & Mohamad). As Umans et al. (2013) identified, some studies have investigated how marketing activities have been adopted by auditors where young auditors believe that a good professional image can be established and maintained with an appropriate use of marketing. Their findings suggest that

young auditors see advertising as an important marketing strategy which can help them expand their client base. Moreover, some studies have suggested that the marketing process will fail if the company cannot provide a quality service or maintain professional standards. In other words, it recommends that the quality of marketing tools be based on the quality of the service. On the whole, traditional marketing tools could be summarised as *developing a contemporary brand or image*, *seminars*, *direct mail marketing, niche or vertical-marketing strategies, media advertising, networking and building relationships* (Copeland, 2010). This is in keeping with Heischmidt et al. (2002), who note that seminars, advertisements in the yellow pages and brochures are the most profitable advertising methods. The findings of Broberg et al. (2018) indicate that the organisational identity of auditors has a positive association with three aspects of commercialisation: market orientation, customer orientation and process orientation.

Before commercialisation emerges, the vast majority of audit firms and auditors are client-oriented, and focus on public interest rather than commercial gains (Suddaby et al., 2009). The commercialisation of the audit market has emerged as a result of increasing competition in the market and the demands of customers, and it has pushed audit firms and auditors to move towards customer orientation. Market orientation is characterised by how the firm should address the market. Jaworski (2000) states that market orientation is a combination of a market-driven strategy and a market-driving strategy. A market-driven strategy is reactive, as its focus is on how to adapt to market demands. In contrast, a market-driving strategy is proactive, and involves developing services and products which differ from those of competitors. In order to gain competitive advantage, audit firms and auditors have to embrace both strategies and be "commercially aware" (Hanlon, 1996) in engaging in marketing activities. In order to implement these strategies, audit firms always establish separate business units for carrying out different activities (Johnson et al., 2011). This model of providing multiple services through different business units forces audit firms to be process-oriented.

Sweeney and McGarry (2011) have noted that the marketing and advertising activities of audit firms have been used as yet another indicator of commercialisation. They discovered that the

literature suggests two main ways of exploring the commercialisation of audit firms: researching either their NAS or their marketing activities. In contrast, the study found that in Big-4 firms, professional identity is positively associated only with the firm's process orientation, where in non-Big 4 firms, professional identity has a positive association with all three aspects of commercialisation. This paper will use market orientation, customer orientation and firm-process orientation as indicators for testing whether commercialisation is likely to affect audit quality.

2.3.1 Non-audit services in audit firms

According to Louise, Fred & Michael (2004), commercialisation can be measured through inputs, activities and outcomes. Commercial inputs and outcomes should be available through the company's transparent reports, but legal regulations mean that audit firms cannot be listed in China, so their transparent reports are not released to the public.

The US regulators define nine forms of NAS: services related to the audit client's accounting records, the design and implementation of financial-information systems, appraisal services or opinions on fairness, actuarial services, internal audit services, management functions, human resources, broker-dealer services and legal services (Sori, Karbhari & Mohamad, 2010). Many scholars have also discussed the benefits and drawbacks of NASs, and have debated whether auditors should be allowed to take part in providing them. Mitchell (1992) and Flint et al. (1988) have suggested that auditors should be banned from offering NASs to their audit clients. It would involve unfair competition, as audit services would be used to sell NASs. Moreover, economic ties between auditors and clients would rob auditors of their independence and lower the quality of audits. In contrast to this general objection to the provision of NASs, Hillison and Kennelly (1988) have argued that under certain conditions, paid NASs should be allowed. The three alternatives are: (1) providing NASs only to non-audit clients; (2) prohibiting certain types of NAS; (3) permitting all types of NAS, but with full compulsory disclosure. Opponents of these arguments (e.g. Antle et al., 1997) believe that offering NASs alongside audits will

develop economies of scope, which will reduce audit costs, raise the technical quality of auditing, enhance competition without interfering with independence or NAS quality, and ultimately improve the quality of audits.

Despite the diverse opinions of scholars, the financial failures and audit scandals of the early 21st century were indeed worrying. The Enron financial fraud case in the US is a classic example. Until Enron acknowledged the fraud, Andersen charged Enron $25 million for auditing services and $27 million for NASs. This move destroyed public confidence in the audit profession, and some are still sceptical about how professional audits are. NASs have already become an integral part of today's Chinese audit market. In order to avoid the possible negative impact of providing NASs, some audit firms even separate them by establishing specific branches or subsidiaries. This may be the future direction of NAS development.

2.4 Audit quality

Audit quality is an essential concept in the auditing sphere. Broberg et al. (2016) have shown that researchers and auditors themselves emphasise the importance of maintaining professional scepticism and making professional judgements if regulators and the audit profession are to carry out high-quality audits. The quality of audits is determined by the auditor's ability to find violations of accounting standards and his/her incentive to report such behaviour. In other words, audit quality is a combination of auditor competence and audit independence (Gul, Wu & Yang, 2013). Previous to this, Francis (2004) and DeAngelo (1981) suggested that there should be two primary drivers of audit quality: litigation cost and reputation cost. Francis (2004) also highlighted that audit quality was positively associated with the quality of earnings. Both of them believed that the quality of audits was higher in large audit firms than in smaller ones.

Moreover, Kaawaase et al. (2016) suggest that audit fees, discretionary accruals, compliance of audited financial statements and audit firm size could be used to measure audit quality. They indicate that DeAngelo's view of audit quality has limitations because it places less emphasis on external users of financial statements, because it is unable to identify the reported problem

in a client's accounting system and because there is no consistency of audit quality. It is also based on a model which identified how to measure this in a developing country. Firstly, they note that a higher audit fee is expected where there is greater input in terms of staff hours, experience, checking, etc., where all these factors contribute to audit quality. Wang et al. (2009) examined how audit fees are determined by focusing on auditor-industry specialisation and second-tier auditors in the Chinese market. They found evidence of Big-4 premiums for brand names, as well as industry specialisation in both the statutory and supplementary markets. Big-4 industry specialists earn additional premiums in the statutory market, unlike non-industry specialists. They also found that market expansion did not give the second-tier auditors any price advantage. These auditors increased their market share mainly in terms of small and medium-sized clients. Moreover, the industry experience of second-tier firms may have helped them develop economies of scale and reduce service fees. This may be their strategy for winning future clients looking for low-priced audits, and is in keeping with the findings of Asthana et al. (2018). Their research demonstrates that fee competition is useful as a mechanism for improving audit quality in the highly concentrated US audit market, albeit only in local audit markets where the incumbent auditor has below-median market power. They also identified from an agency theory perspective, that the use of discretionary accruals as a measure of audit quality stems from the potential to manipulate financial statements by using accruals to influence reported results. Moreover, they specified how practitioners' literature is clear in terms of the requirements for accounting and auditing compliance.

According to Jui & Wong (2015), Chinese regulators and those establishing standards in China decided on the merits of adopting international standards. Chinese authorities effectively achieved convergence with IFRS in 2006. Efforts to achieve convergence with International Standards on Auditing (ISA) began in 2005 and reached fruition in 2010. The route taken for this international convergence indicates a potential lack of alignment with requirements in China. Furthermore, Kaawaase et al. (2016) demonstrate that audit firms could be characterised and grouped in several ways, such as according to the number of partners, the asset base, the client base, the firm's international status and industry specialisation. In developed economies,

scholars have used the Big-4 firms as a proxy for high-quality audits because of their substantial market share and human resources in these countries (Francis, 2004). Many extant audit researchers have focused attention on two characteristics of audit firms at *national-level* as fundamental determinants of audit quality, namely audit firm size and auditor-industry leadership (Choi et al., 2010). Meanwhile, research by Choi et al. (2010) shows that the size of the audit office has a significant positive relationship with audit quality, and they support the view that a large local office provides higher-quality audits than a small local office. Moreover, when Broberg et al. (2018) looked for correlations between commercialisation and audit quality, they discovered that where audit firms orient their development towards commercialisation, audit quality is mainly decided in terms of how auditors can maintain distance from their clients, in another words, how the auditor can remain independent. This is in keeping with DeAngelo (1981), who suggested that the conditional probability of reporting a breach they have discovered is a measure of how independent auditors are from a given client.

2.4.1 Auditor independence

A number of researchers have explored the independence of auditors. The main conclusion is that auditor independence has a significant positive impact on audit quality. DeAngelo (1981) defines audit quality using two major criteria. First, auditors should find any violations by their clients; second, once a breach is found, auditors should report it truthfully. According to this definition, an auditor is expected to remain independent, because if auditors are not independent, and are financially bound to their clients, they are less likely to report the violation, and the quality of the audit will be compromised.

Lin and Nopmanee (2015) suggest that there are four threats to auditor independence: the importance of the client, NAS, auditor tenure and the client's affiliation to a CPA firm. The arguments for customer importance primarily involve the auditor's economic dependence on customers. When the audit firm provides services to the client, and the client pays the fee, the auditor establishes a financial bond with the client. Once a large portfolio has been developed

for a client, auditors may find they have to act in the interests of the client in order to secure future income and sources of profit, thereby neglecting independence (DeAngelo,1981; Blay, 2005). This need to retain clients shows that when auditors build a long-term relationship with specific clients, they may develop closer ties with them, and begin to act as their private consultant or manager, thereby neglecting independence in their auditing. The issue of a client's affiliation with CPA firms suggests that when an auditor is a former colleague of the client or has a close relationship, the client may be familiar with the auditor's habits, and may be able to circumvent certain flaws. This too can impair independence (Lennox, 2005).

Almost all scholars agree with the above three arguments, but researchers have different opinions on the impact of marketing activities on auditor independence. When an auditor provides a paid NAS for a client, it strengthens the financial bond between the auditor and the client, making the auditor more dependent on the client. Furthermore, when an auditor provides both an audit and an NAS to the same client, there may be a conflict of interest, since the auditor is reviewing his own work. Another view suggests that NASs enhance independence. Some researchers (Antle et al., 1997) discovered that providing NASs can help an auditor to learn more about a client's business, leading to a better audit and more complete service for the client.

With the inevitable commercialisation of audit firms, more and more people are worried that providing NASs could lead to bias and conflicts of interest, thus affecting the independence of auditors. Particularly after the Enron fiscal fraud, public confidence in public auditing was destroyed (Johnson and Ravlic, 2002). In terms of research into this, Prem, Wayne, Hemalatha & Jawaher (2007) identify three schools of thought. The first school argues that auditor independence will be impaired if the auditor is also involved in market activities. Their main argument is that the service fees of marketing activities are generally considerable, which may lead to auditors becoming excessively dependent on clients financially, and therefore not being able to conduct audit operations objectively. Johnson (2002), for example, points out that substantial financial pressure, complex business environments and fierce market competition are among the reasons why auditors are likely to charge high NAS fees, which may lead to a

decline in independence.

The second school of thought argues that auditor objectivity and independence will be enhanced if auditors are involved in marketing activities. Their main argument is that providing NAS activities will enhance the auditor's ability to learn more about clients, ensuring that auditors can carry out better audits and give clients a more complete service. Beck and Wu (2006) even consider that charging a certain amount for NASs can help auditors reduce financial pressure and uncertainty, thereby increasing independence, and there are cases of auditors who are willing to provide NASs without charge to their clients.

The third school argues that involvement in marketing activities does not affect auditor independence. These scholars found no substantial evidence from their empirical studies that providing NASs affected independence. Kinney (1999) also found that many investors do not care about NAS. Therefore, if these three schools of thought are combined with features of the Chinese audit market, three hypotheses can be developed in terms of the relationship between commercialisation and auditor independence.

> *H1: An auditor's market orientation is negatively associated with auditor independence.*
> *H2: An auditor's customer orientation is negatively associated with auditor independence.*
> *H3: An auditor's process orientation is negatively associated with auditor independence.*

2.4.2 Auditor competence

Auditor quality is a combination of auditor competence and independence (Gul, Wu and Yang, 2013). Many researchers have discussed the independence of audits and recognised this as an essential indicator of audit quality, but the capabilities of auditors have rarely been mentioned. Recently, the importance of individual auditors has emerged as a factor influencing the auditing process and audit quality. Wallman (1996) argues that in assessing auditor independence, firms and researchers should focus on individual auditing decisions for specific clients. Furthermore,

Church et al. (2008) believe that research on the relationship between an auditor's characteristics and audit quality should be expanded. A number of international organisations have defined auditor competence. The International Auditing and Assurance Standards Board (IAASB, 2013) refers to auditor competence as the ability of auditors to perform tasks in accordance with professional standards. Similarly, the Institute of Internal Auditors (IIA, 2013) defines competence as the ability to perform work or tasks correctly, and this involves a combination of knowledge, skills and behaviour. DeFond and Francis (2005) argue that audit quality should be analysed at individual auditor level. At the same time, they argue that this research should be carried out in markets where data are available on auditors. Maybe this is why individual auditors and auditor competence were not well-reviewed in the early stages of audit quality research, because data on individual auditors were not available for the US and other Western markets.

The most representative difference is likely to be that the Chinese audit market is different to the Western audit market because of different national economic systems. The large number of SOEs in the Chinese listed market means that the Chinese government had comprehensive control over the early audit market, which gave the market some unique characteristics. Despite two audit market reforms around 1990 and 1998 to improve auditor independence, a large number of audit firms are still influenced by the government. A number of studies have been published on this aspect by Western scholars, based on the Western economic system. For specific historical and political reasons, China's auditing industry has undergone two institutional reforms in 10 years, moving from complete government control to affiliated relationships (Liu, Wang & Wu, 2011; DeFond, Wong & Li, 2000). Although in 2000 the MOF required all audit firms to cut themselves off from their sponsorship, the influence of government can still be seen in domestic audit firms. These influences are manifested in the fact that most of their clients are SOEs, and many of the partners of audit firms also work in government departments. Another unique feature of the Chinese audit market is the system of accountability. Auditing standards require auditors to sign their audit report, so that their performance can be monitored. Moreover, two signatures are required for each audit report,

typically from a senior auditor who is the team leader and is reviewing the report, and from a junior auditor who has done the fieldwork.

Baybutt (2015) argues that auditor competence is essential for quality audits. In other words, the process in terms of auditors must be demonstrably objective and impartial. There are high expectations of auditors. Auditors should be educated, and have academic training in accounting, taxation, auditing and other areas related to their profession (Mansouri et al., 2009). Lee and Stone (1995) argue that if the auditor does not meet the above conditions, then he or she is incompetent, and the independence of the audit cannot be relied upon. A lack of capabilities and experience will make auditors dependent on customers in every respect. Gul et al. (2013) have found that individual auditors have a significant effect on audit reporting and the quality of clients' earnings both statistically and economically. Mansouri et al. (2009) suggest that the characteristics of auditors can affect their judgements and decision making, with an inevitable impact on audit quality. Equally, some scholars have indicated a number of factors which can affect an auditor's competence. Bertrand and Schoar (2003) have argued that management could be one of these factors influencing an auditor's decisions. They do not consider auditors to have the same power as corporate CEOs, who can determine the direction of a business. Auditors must abide by the auditing standards promulgated by professional or regulatory agencies, and follow standardised auditing procedures in their work. In this way, if the audit firm chooses to compromise in the client's favour, in pursuit of stronger financial results, the auditor's decision may be affected. Another study from the UK (Marriott et al., 2011) noted that changes in the industry have also had an impact on the training of auditors.

As an essential indicator of audit quality, little research has been undertaken on the impact of the commercialisation of the audit market and auditor competence. In order to measure the relationship between auditor competence and commercialisation of the audit market, auditor competence needs to be quantified. Auditor competence is something that will change over time, and Bailey (2010) has illustrated changes in the area over the five years from 2006 to 2010. Auditor competence is a very broad topic, and includes the various attributes of the auditor.

Bailey divides an auditor's core competences into three main areas: general competences, behavioural skills and technical skills. Across the three areas, three capabilities are considered to be the most important and stable skills: communication skills, problem identification and solution skills, and keeping up to date with industry and regulatory changes and professional standards. These three skills were rated as the top three from 2006 to 2010. In comparison, technical skills have changed considerably in five years. Bailey's research predicted that computer-assisted audit techniques would replace statistical auditing in future, which is already the case today. To quantify auditor competence, this article will use the two factors which are least affected by time: communication skills and keeping up to date. Problem identification and solution skills were not used because these are best examined through individual audit reports, which were not available to this study.

We believe that the commercialisation of the audit market will have some impact on auditors' competence. Market orientation and customer orientation often bring auditors into closer contact with the customer, thus strengthening the auditor's communication skills. If an audit firm is process-oriented, it may pay more attention to re-educating and evaluating auditors, so that the latter remain up to date with professional standards, as well as industry and regulatory changes. Three hypotheses therefore emerge in terms of the relationship between these three aspects of commercialisation and auditor competence.

> *H4: An auditor's market orientation is positively associated with auditor competence.*
>
> *H5: An auditor's customer orientation is positively associated with auditor competence.*
>
> *H6: An auditor's process orientation is positively associated with auditor competence.*

2.5 A framework for research on commercialisation and audit quality

Previous research has shown that audit quality is determined by the independence of the audit and the auditor's competence. Three aspects of commercialisation in the audit market involve market orientation, customer orientation and process orientation. Studying the relationship

between these different orientations and auditor independence and competence can help determine how the commercialisation of the audit market affects audit quality.

Figure 1 presents a simplified framework for commercialization and audit quality.
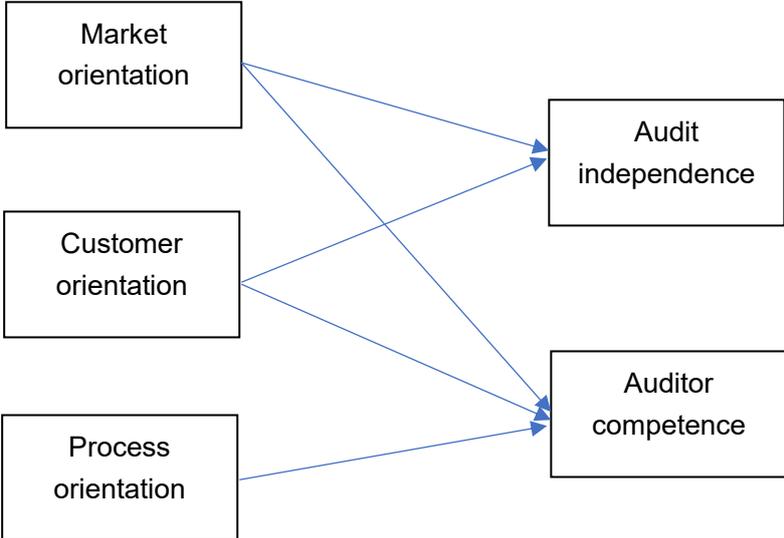
3. Methodology

This section will introduce both the theoretical base and the empirical methodology adopted in this thesis.

3.1 Theoretical base

The theoretical base involves the research philosophy, the choice of research approach, the specific theories chosen and a critique of sources.

3.1.1 Research approach

Three research approaches could be considered: deduction, induction and adduction. A deductive approach is used when a researcher wishes to develop a framework related to an existing theory or a conclusion already drawn from empirical materials (Bryman & Bell, 2015). An inductive approach, on the other hand, involves building new theories based on the data that have been collected (Saunders, Lewis & Thornhill, 2009). An adductive approach is a combination of the two approaches, mainly used to increase the scope of the diagnostic power of a study. This thesis is inspired by research on auditors' professionalism and commercialisation by Broberg, Umans, Skog & Theodorsson (2018). Data analysis and collection were based on their theories, so a deductive approach was used in this thesis. This approach advocates establishing hypotheses from the theoretical framework, and basing the study on these, thereby reducing the risk of subjectivity (Crossan, 2003). Because the hypotheses were established from existing theories and frameworks, the hypotheses should be truthful if they are proved.

3.1.2 Choice of methodology

Qualitative and quantitative are the two most commonly used research methodologies.

Quantitative methods collect and analyse data through numbers and charts, while qualitative methods mostly use open questions and observation to allow participants to express their personal opinions. This thesis uses a deductive research approach, as it considers quantitative methods to be the most objective (Saunders et al., 2009) and to be the most suitable for showing findings to be universal. This is a challenge in qualitative research because every researcher tends to have different priorities.

3.1.3 Choice of theory

The main objective of the research for this thesis is to ascertain whether auditors can maintain their professionalism and independence when the audit industry is commercialised, which may affect the quality of auditing. Agency theory provides a good theoretical base for exploring the reaction of auditors to changes in corporate policy. Agency theory suggests that the principal and the agency may have different agendas in carrying out a task. The agent may act according to his own will, but this is hard to determine in terms of the principal (Jenson & Meckling, 1976). Institutional theory forms another aspect of the theoretical base for the thesis. The target group in this research involves auditors in mainland China, whose accounting system differs considerably from that in other western countries. We believe that institutional theory could explain why and how auditors in China make specific choices in specific situations. Auditors are forced to engage with the large number of SOEs in the Chinese listed market, which inevitably leads to problems of political affiliation. It is possible that if an auditor is a CCP member, s/he may be treated differently, or make different decisions in auditing SOEs.

3.1.4 Critique of sources

In this paper, most of the scientific articles are extracted from Summon@HKR and Google Scholar. The research object is mainland China, so some Chinese material is included from Baidu Xueshu and Chinese CPA websites, but these types of article are largely used to provide background information in the introduction.

It is important to maintain a critical view in extracting data from articles. The ABS ranking system, a guide to the range and quality of journals in the business and management field, was therefore used as an indication of the quality of sources. The ABS ranking system provides scholars with greater clarity in terms of which journals to target, and grades quality in five categories:

  4*: Journals of distinction

  4: Top journals

  3: Highly regarded journals

  2: Well-regarded journals

  1: Normal standards journals

80 articles were used as references in this thesis, of which 63 were covered by the ABS ranking system. Of the remaining 17 articles, three were from books, one was from a corporate report, and the other 13 did not feature in the ABS ranking system.

ABS ranking	No. Of articles	Percentage
4*:Journals of Distinction	13	16%
4 :Top journal	25	32%
3 : Highly regarded journal	9	12%
2 : Well-regarded journal	12	16%
1 : Recognized journal	4	5%
0 : Unranked	17	19%
Total:	**80**	**100%**

Table 3.1 ABS ranking of referenced articles

Table 3.1 is an overview of the articles used in this thesis. High-ranking articles account for 48% of the total number of articles, showing that nearly half of the articles were published in high-level magazines. Nine articles were published in a highly regarded journal, 12 in a well-regarded journal, and only four articles were published in one of the lowest ranked journals. This distribution shows that most articles were high quality and were reliable. The remaining 13 articles may not be guaranteed because they did not feature in the ABS system. However, the use of these articles did not necessarily pose a threat to the theoretical framework of this thesis.

3.1.5 Research strategy

The purpose of this study is to understand the relationship between the commercialisation of the audit industry and the quality of audits, as well as the role of auditors themselves. To achieve this goal, the author begins with a background investigation, followed by a literature review on similar topics. Hypotheses are then established based on theory, and finally an empirical study tests these hypotheses in order to draw a conclusion with validity.

3.2 Empirical methodology

Empirical methodology is indispensable in quantitative research, and explains how data were designed, collected and analysed in this study.

3.2.1 Data collection method

The most common tools used in quantitative research are interviews and surveys. In this study, the author used a survey to collect data. A survey is an excellent tool for gathering information about individuals, and it also allows researchers to collect a large amount of data in a relatively short period. This is an advantage which is not shared by interviews or other quantitative research tools. All data used in the analysis emerged from the survey; no secondary data were used in this paper.

3.2.2 Sample selection

The research target of this thesis involves Chinese auditors. First of all, China has an enormous number of audit firms due to its vast territory and huge population. At the end of 2014, according to the statistics of the Ministry of Finance of the People's Republic of China, there were 7,316 audit firms nationwide, and the number is growing. The author believes that if only

a few firms were selected, this thesis would not be representative, so no distinction is drawn between domestic audit firms. However, since most of the studies in this field differentiate between the Big 4 and other firms, the author distributed the survey in two batches, one using e-mail and focusing on the Big 4, and the other using a website and mobile apps to collect data. The content of the questionnaires for each delivery mode is exactly the same, with no differences.

The questionnaire was generated by a website, wj.qq.com, whose Chinese name is QQwenjuan, and which is a Tencent product. Tencent is China's largest internet company with a huge customer base in China, and its products include QQ and Wechat. This questionnaire consists of two pages and 24 questions. Each respondent was expected to take 3 to 10 minutes to answer these questions. All questions were mandatory, but respondents could stop at any time. There was no cap or limit on answers for each IP, but only the first answer was recorded in the database. All questions were recorded in Chinese.

The author used e-mail to collect data from the Big 4. Since it is difficult to obtain auditors' personal e-mail addresses, the author chose to contact the offices of the Big 4 in various provinces and cities, and this information can be found on their official website. Phone calls were used to ask if respondents were willing to cooperate, and they were assured that they would not be asked for personal information such as their e-mail address. Telephone consultations were conducted with 81 Big-4 offices in mainland China, and 14 of them were interested in cooperating. An e-mail was sent to those who were willing to collaborate, and a link to the survey was sent to the office contact, then forwarded internally to each auditor by the contact. In this way, the respondent did not have to worry that their personal information might be leaked. However, it meant that the author could not control the number of samples sent, as they could only be forwarded by the contact person. The contacts ultimately informed the author that a total of 236 surveys had been forwarded. The sampling time was three weeks, and another e-mail was sent as a reminder during that time. Ultimately, 32 of the 236 questionnaires were returned, of which 25 were valid, accounting for 10.6% of questionnaires

delivered.

For other domestic firms, the author did not consider it feasible to use separate emails to collect data. First, it would have been impossible to ask all the firms, and secondly, the research might not have been considered representative if only a few firms had been selected. The precise delivery feature on the webpage was used to distribute the questionnaire. QQwenjuan is prepared to conduct questionnaires for users of a specially selected population. In order to improve the accuracy of distribution, it is possible to choose from among the following attributes: gender, marital status, education, age, area, industry, career, equipment characteristics (Android or iOS) and interests. No limit was set on gender, marital status, education, age, equipment characteristics or interests. In terms of area, all provinces in China were selected except Hong Kong, Macao and Taiwan. In the industry section, business services were chosen, which include the accounting, legal and human resources industries. In the professional/career section, accountants and auditors were selected. The sampling time was three weeks. At the same time, in order to encourage people to take part in the survey, a total 400 RMB prize pool was added. Each respondent who completed the questionnaire would receive a two RMB award. The questionnaire and rewards were to be distributed through smartphone APP QQ and WeChat, which are used by most Chinese people. Tencent is the largest internet company in China, with a good reputation, so this feature should be trustworthy. Finally, 284 responses were received, but sadly only 84 were valid. There was therefore a total of 96 valid responses.

3.2.3 Operationalisation

Operationalisation is the process by which researchers translate their theories and hypotheses into measurable data and use different variables to measure sections in their hypotheses. The questionnaire is based on the hypotheses presented above, which can be found in chapter 2. The survey has three parts in total. The first part involves background questions, the second part is on the commercialisation of auditing, and the third part contains questions about audit quality.

The part on the commercialisation of the audit industry involves a questionnaire generated by Broberg et al. (2018), who proposed the following indicators of commercialisation: market orientation, customer orientation and process orientation. The audit quality part uses the two variables audit independence and audit competence. As Gul, Wu and Yang (2013) mention, audit quality is a product of auditor competence and independence. For both parts of the questionnaire, seven-item Likert scales are used. The descriptive statistics are listed in the table below.

3.2.3.1 Dependent variable

The quality of auditing has been discussed by many scholars, and factors affecting the quality of auditing have also been explored. De Angelo (1981) defines audit quality as the probability that critical errors occurring in financial statements can be exposed by auditors. She then argues that auditor size is the main factor affecting audit quality. The limitations of her research have been highlighted many times by subsequent researchers. Sutton (1993) and Francis (2011) argue that she ignores many factors which could affect an auditor's ability to detect a breach in an audit report, including individual factors. Duff (2004) and Windmoller (2000) note that De Angelo bypasses the auditor-client relationship, omitting the fact that long-term cooperation between auditors and customers could lead to links between them, thereby reducing auditor independence. Finally, Francis (2011) criticises this definition by noting the fact that auditors who knowingly fail to report misstatements are committing crimes. Recently, new indicators of audit quality have emerged. Brown, Gissel & Nelly (2016) developed the new indicators of audit quality, audit professionals and audit process. At more or less the same time, Lin and Tepalagul (2015) argued that audit quality is a combination of audit competence and independence. Although the title is different, the content is basically the same. In order to fulfil the objective of this study, we divided audit quality into two parts involving two dependent variables: auditing competence and auditor independence. All questions about auditor independence and auditor competence are subject to a 7-item Likert scale: 1=Strongly disagree, 4=Neutral and 7=Strongly agree.

Auditor independence

To measure the independence of auditors, the definitions of independence must be clear. Auditors cannot guarantee absolute neutrality and objectivity. Independence does not require the auditor to be utterly free from all factors that will affect whether the auditor makes a fair decision, but there is the hope that auditors will not be affected by non-professional factors (Susan et al., 2001). A three-step framework was developed to measure auditor independence. 1) Identify threats to the auditor's independence and analyse their significance. 2) Evaluate the effectiveness of potential safeguards, including restrictions. 3) Determine an acceptable level of risk in terms of independence. Five threats emerged from their research: self-interest, self-review, advocacy, familiarity and intimidation threats. Lin and Tepalagul (2015) found different threats: client importance, NAS, auditor tenure and the client's affiliation with a CPA firm. The formulation of these two threats is similar except that Lin and Tepalagul found that auditor tenure was also a threat to auditor independence. Since no similar questionnaires were found, three questions were developed in this thesis around the independence of auditors based on the literature examined. The questions can be found in Appendix 1, Question 9. A Cronbach's alpha test was carried out, which indicated reliability of $\alpha = 0.815$.

Auditor competence

Although there has been little research on auditors' competence, it is an extensive topic. Nelson and Tan (2005) note that auditors need to undertake a considerable number of tasks to draft a complete financial report. Therefore, the characteristics of the auditor will affect the outcome. Gul (1994) suggests that auditors are expected to be knowledgeable, need to have been educated by third parties, and need to have academic training in accounting, taxation, auditing and other areas related to their profession. Hermanson et al. (1993), in turn, state that auditors should have passed the CPA examination. However, these standards are old-fashioned. In recent research, scholars have found that the competence of auditors is not only affected by their level of education, but that many other aspects have a specific influence, including work experience, birth cohort, their rank in the firm and political affiliation (Gul, Wu and Yang, 2013). It is impossible to test all the indicators listed above, and another tool was used for this variable test.

Research carried out by Bailey (2010) argues that core competences are the most critical elements in this field, including a number of social skills. The highest ranking are communication skills, problem identification and solution skills, and keeping up to date with industry or regulatory changes and professional standards. Of these skills, problem identification and solution skills can only be measured by means of an auditor's final report. Based on this research, the author developed a new questionnaire on auditors' competence, which can be found in Appendix 1, Question 8. The reliability test shows $\alpha=0.7$.

3.2.3.2 Independent variables

Three different independent variables were used in this study: market orientation, customer orientation and process orientation. The presence of these three orientations is an indicator of audit commercialisation (Broberg et al., 2018). Therefore, the degree of commercialisation of an audit firm or auditor can be assessed by measuring these orientations. The independent variables were operationalised as follows. All questions about market orientation, customer orientation and process orientation were listed with a 7-item Likert scale: 1=Strongly disagree, 4=Neutral and 7=Strongly agree. The original questionnaire was designed by Broberg et al. (2018), but the present author modified it on the basis of the research and target samples. For example, the questionnaire about market orientation consists of two parts, market-driven and market-driving. Since the original survey was written in Swedish, and some questions are similar, these questions were simplified in the Chinese questionnaire to avoid confusion for the respondents. The questions can be found in Appendix1.

Market orientation consists of two different aspects: a reactive approach called market-driven and a proactive approach called market-driving. Both approaches focus on the market, and on trying to gain a competitive advantage in order to keep customers or find new ones. Questions can be found in 5.1 to 5.4, and indicate reliability of $\alpha=0.861$.

Measurement of *customer orientation* is based on Deshpande and Farley's (1998) research, which was modified by Broberg et al. (2018). Broberg (2013) argues that adding value for

customers has become a more and more important aspect of an auditor's perspective. Globalisation also means that the audit industry is moving towards its customers, and the auditor-customer relationship has become very important. Questions can be found in 6.1 to 6.4 in the survey, and reliability is α=0.857.

The measurement for *process orientation* was built by Chen et al. in 2009. The original questionnaire had six statements, but in the current thesis, two similar questions were combined into one question. At the same time, it was considered that too many questions within a single variable could mean respondents would be bored, so a total of five questions were asked in this unit. Questions can be found from 7.1 to 7.5, with reliability of α=0.892, still within a trustworthy range.

3.2.3.3 Control variables

Gender - Gender differences may also affect the quality of the audit. Broberg et al. (2013) found that female auditors place more emphasis on marketing-related activities, which may indicate that female auditors tend more towards commercialisation. Equally, Breesch and Branson (2016) found that under the leadership of female partners, the quality of audits improved. In the follow-up analysis, male was coded as 1, and female as 0.

Age - Age is considered to be an important characteristic in an auditor in many places. Broberg et al. (2013) once argued that older auditors might not consider commercialisation to be a healthy development in the audit industry. Clow et al. (2009) also found that some older auditors believe that taking part in business activity is non-professional behaviour, not befitting of an auditor.

Auditor tenure - Auditor tenure is a controversial variable. Two views have emerged on how auditor tenure affects audit quality. In the early research on auditor tenure, most scholars (Shockley, 1981; Knapp, 1991; Deis and Giroux, 1992) considered that, as the auditor-client relationship became more long-term, an auditor would develop a close relationship with the client, and was more likely to act in favour of management, reducing the quality of the audit. However, a recent study by Stanley and DeZoort (2007) found that as the auditor-client

relationship grew, the likelihood of losing the client diminished, so that the audit quality improved.

Audit firm - The Big 4 are the subject of considerable research on auditing. Since DeAngelo (1981) argued that audit quality is related to firm size, the Big N firms have become standard in assessing audit quality. Also, Broberg et al. (2013) assume that the auditing industry's tendency towards commercialisation is a result of the Big 4's increasing marketing and business activities. Sweeney and McGarry (2011) have also shown that the Big 4 are more commercial compared to smaller audit firms. In the following analysis, the Big 4 are coded as 0, and non-Big 4 firms as 1.

3.2.4 Data analysis method

The statistical programme SPSS was used in this research to give authors a better understanding of the variables. A number of tests were carried out. First, a Cronbach's Alpha test was run on each variable to ensure the internal reliability of the measure, and to test whether group data could be merging. Secondly, a correlation test was carried out between all the variables, in order to ascertain potential correlations between the independent variables, dependent variables and control variables. There was also an attempt to find the potential multiple collinear and verify the hypotheses. Multiple linear regression and stepwise regression tests were carried out in order to find an appropriate model for variables.

3.3 Ethical considerations

Ethical considerations are very important in modern academic research, and affect the quality and credibility of the article (*Vetenskapsrådet*, 2017). The Swedish Research Council has issued guidelines consisting of eight rules. 1) Researchers should be truthful about their research. In the current research, respondents were informed about the identity of the researchers and the research topic. The research was also discussed with supervisors and fellow students. 2)

Researchers must consciously review and report the basic premises of their studies. The present research was reviewed and changed many times during construction. 3) Researchers must openly account for their methods and results. The methods and results have been explained in detail in the report. 4) Researchers must openly declare their commercial interests and other associations. The present author has no commercial interests in terms of this thesis. 5) Researchers must not make unauthorised use of the research results of others. All resources used in the present research have been referenced throughout the thesis. 6) Research must be kept in good order. All data were deleted when the thesis was finished, to prevent any third-party use. 7) Researchers must make every effort to conduct their research without harm to people, animals or the environment. No people were hurt by the present research, which had no association with animals or the environment. 8) Researchers must judge the research of others fairly. No insulting remarks or language were used in this thesis.

3.4 Validity and reliability

The validity of research involves whether the findings of the study can be trusted to reflect the expected phenomenon (Bryman & Bell, 2011). First, all literature quoted in this thesis was listed in the reference list, and a critical review analysis was carried out using the ABS ranking system. A small pilot test was carried out to ensure the questionnaire was clear and feasible.

Reliability in a study involves whether the measures and indicators used in it are reliable (Bryman and Bell, 2011). Cronbach's Alpha test is a useful tool for testing the internal reliability of each measure. This test was used to prove the reliability of each measure.

4. Results and analysis

This section will present a brief explanation of the data. Firstly, the sample is described by detailing the composition of each individual variable. This is followed by an analysis and interpretation in terms of merging the following variables: market orientation, customer orientation, process orientation, auditor competence and auditor independence. Thirdly, a multiple regression analysis and bivariate correlations are presented, which show how the variables are related to each other. Finally, the results are discussed in terms of the hypotheses and the model.

4.1 Descriptive statistics

In total, the survey generated 111 responses, out of which 96 were complete. The sample included 1600 auditors, and the response rate was 6.94%, including all answers. Compared to similar research by Carrington et al. (2013), Broberg et al. (2013) and Broberg et al. (2018), the response rate was very low, so this should be taken into account in considering whether the results from this study are generalisable.

Table 4.1.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	96	0.0	1.0	.844	.3650
Age	96	23.00	57.00	29.6354	6.43039
Tenure	96	1.00	36.00	9.4793	4.86147
Audit firm	96	0.00	1.00	.7604	.42907
Q51	96	1	7	5.09	1.577
Q52	96	1	7	5.47	1.458
Q53	96	1	7	5.26	1.481
Q54	96	1	7	5.35	1.330
Q61	96	1	7	5.03	1.586
Q62	96	1	7	5.09	1.392
Q63	96	1	7	5.21	1.428
Q64	96	1	7	5.16	1.482
Q71	96	1	7	5.14	1.580
Q72	96	1	7	5.30	1.377
Q73	96	1	7	5.36	1.385
Q74	96	1	7	5.65	1.458
Q75	96	1	7	5.48	1.494
Q81	96	1	7	5.54	1.368
Q82	96	1	7	5.08	1.374
Q91	96	1	7	5.36	1.423
Q92	96	1	7	5.23	1.476
Q93	96	1	7	5.68	1.388
Valid N (listwise)	96				

The analysis only includes complete answers, so that answers can be considered in terms of the respondent group as a whole. Dependent variables were merged with independent variables and divided by the number of questions in each group for market orientation, customer orientation, process orientation, auditor competence and auditor independence. A Cronbach's Alpha test generated an alpha-value of 0.834 for questions on market orientation, 0.839 for questions on customer orientation, 0.870 for questions on process orientation, 0.815 for questions on auditor independence and 0.707 for questions on auditor competence, which are above the 0.7 reference value provided by Pallant (2013).

Table 4.1.2 Merging of Variable

	Alpha-value	Number of questions	Number of Components	Number in Questionnaire
Market Orientation	0.834	4	1	5.1-5.4
Customer Orientation	0.839	4	1	6.1-6.4
Process Orientation	0.870	5	1	7.1-7.5
Auditor Independence	0.815	3	1	9.1-9.3
Auditor Competence	0.707	2	1	8.1-8.2

There are 9 variables. Tenure, age, audit firm and gender are control variables. The average age of respondents is 29 years, with a minimum of 23 years and a maximum of 57 years. The average tenure of respondents is 4.9 years, with a minimum of 1 year and a maximum of 36 years.

Table 4.1.3 Gender distribution

	Number of respondents	Percentage
Male	81	84.38%
Female	18	15.63%
Total	96	100%

As illustrated in Table 4.3, 18 respondents (15.63%) are female and 81 (84.38%) are male. This is different to similar studies. Broberg et al., 2013, Carrington et al., 2013 and Broberg et al., 2018, for example, received responses from around 70% male and 30% female participants in their studies.

Table4.1.4 Audit firm distribution

	Number of respondents	Percentage
Big4	23	23.96%
Non-Big4	73	76.04%
Total	96	100%

As illustrated in Table 4.4, 23 respondents (23.96%) work in Big-4 firms and 84 respondents (76.04%) in non-Big 4 firms. This is in keeping with the background to Chinese audit firms noted in the introduction, which shows that non-Big 4 firms represent a majority proportion of the Chinese audit market.

Auditor competence (AC) and auditor independence (AI) are dependent variables, as illustrated in the table Descriptive analysis. AC indicates an average of 5.313, a minimum of one and a maximum of seven, and AI a mean of 5.423, a minimum of one and a maximum of seven. Both the mean and median of the variables are higher than the mid-point of the seven-item Likert scale, which could indicate that respondents have greater independence and competence of their own. In combination with the independent variables market orientation (MO), customer orientation (CO) and process orientation (PO), as demonstrated in the table Descriptive analysis, MO demonstrates an average of 5.29, a minimum of one and a maximum of seven. The mean of CO is 5.122, with a minimum of one and a maximum of seven. PO has an average of 5.385 with a minimum of one and a maximum of seven. The medians are 5.5, 5.25 and 5.6 respectively. These demonstrate that the population is skewed towards a higher level of commercialisation of auditors in China.

4.2 Independent t test

T tests study the difference between X (group a and group b) and Y (quantitative), such as the difference in satisfaction between different genders. Firstly, they analyse whether there is a significant difference between X and Y (p-value is less than 0.05 or 0.01). Secondly, if the difference is significant, the test can compare the average value and describe the differences.

Table 4.2.1 Results of Independent t test Analysis

	Audit Firm (Mean±Std. Deviation)		t	p
	0.0(N=23)	1.0(N=73)		
AC	5.15±1.07	5.36±1.22	-0.743	0.459
AI	5.48±0.97	5.41±1.29	0.245	0.807
PO	5.51±1.20	5.35±1.19	0.59	0.556
CO	5.12±1.18	5.12±1.23	-0.013	0.99
MO	5.48±1.18	5.24±1.20	0.844	0.401

*p<0.05 **p<0.01

The table above shows that, using the t test (all referred to as the independent sample t test) to study the AUDIT FIRM for AC, AI, PO, CO and MO, a total of five differences can be seen: different AUDIT FIRM samples for AC, AI, PO, CO and MO are not all significant (P > 0.05), and mean different AUDIT FIRM samples for AC, AI, PO, CO, MO all indicate consistency, and no difference. In conclusion: there are no significant differences in the AUDIT FIRM samples for AC, AI, PO, CO and MO.

Table 4.2.2 Results of Independent t test Analysis

	Gender (Mean±Std. Deviation)		t	p
	0.0(N=15)	1.0(N=81)		
AC	5.27±1.35	5.32±1.16	-0.162	0.871
AI	5.36±1.07	5.44±1.25	-0.234	0.816
PO	5.20±1.21	5.42±1.18	-0.658	0.512
CO	4.92±1.00	5.16±1.25	-0.715	0.476
MO	5.07±1.10	5.34±1.22	-0.8	0.426

*p<0.05 **p<0.01

The table above shows that, using the t test (all referred to as the independent sample t test) to study gender for AC, AI, PO, CO and MO, a total of five differences can be seen from the table above: different gender samples for AC, AI, PO, CO and MO are not all significant (P > 0.05), and mean different gender samples for AC, AI, PO, CO, MO all indicate consistency, and no difference. It can be concluded that no gender samples show any significant difference for AC, AI, PO, CO and MO.

4.3 Correlations

On the one hand, a Spearman test of correlations aims to identify the potential relations between variables, and the correlation matrix illustrates the results of the test. On the other hand, a test of correlations is also important for identifying the potential risks of multicollinearity in the subsequent multiple regression analysis (Pallant, 2013). This section analyses the correlation matrix from left to right.

The table demonstrates that the control variables are not correlated with the dependent variables. However, of the control variables, age is positively correlated with tenure. This could be explained by the fact that older auditors may have been working for more years.

Table 4.3 Correlation coefficient

correlation coefficient

	Gender	Age	Tenure	Audit firm	MO	CO	PO	AC	AI
Gender	1								
Age	-0.007	1							
Tenure	-0.03	.852**	1						
Audit firm	-0.04	0.04	-0.062	1					
MO	0.082	0.173	0.027	-0.087	1				
CO	0.074	0.173	-0.003	0.001	.725**	1			
PO	0.068	.217*	0.166	-0.061	.773**	.768**	1		
AC	0.017	0.154	0.084	-0.061	.592**	.586**	.602**	1	
AI	0.024	0.105	0.103	-0.025	.678**	.699**	.795**	.639**	1

**. The correlation is significant at the 0.01(2-TAILED)

*. The correlation is significant at the 0.05 level (2-TAILED)

41

Four significant correlations were found for each of the dependent variables. Firstly, for auditor independence, MO, CO, PO and AC are positively correlated with AI, which indicates that the more commercialised an audit firm is, the more independent the auditors are. In addition, AC and AI are positively correlated, which shows that audit quality mainly depends on the ability of auditors to find and eliminate financial reporting errors. The possibility of "discovery" depends on professional competence, while the possibility of "elimination" depends on independence. There is reason to suspect that to maintain audit quality, professional competence and audit independence are mutually causal and indispensable. Since Broberg et al. (2013) noted that another way of observing commercialisation in the industry involves the extent to which customer and firm-POs have been adopted, becoming more oriented towards customer and firm processes often goes together with retaining existing customers and acquiring new ones. This is achieved by surveying the market and adopting different market strategies to address needs. In another words, MO, PO and CO promote and influence each other, so that multicollinearity may occur in the multiple linear regression. In the next section, therefore, multiple linear regression begins to show one-to-one correspondence.

4.4 Multiple linear regression and stepwise regression

Multiple regression analysis is conducted to confirm or reject hypotheses. It is a way of analysing the relations between one dependent variable and two or more independent variables (Pallant, 2013). According to Pallant (2013), it is important that no multicollinearity exists between the variables, so in order to exclude multicollinearity, a stepwise regression was conducted. The difference between stepwise regression and regression analysis is that the stepwise regression model will automatically identify the independent variable with significance, and variables without significance will automatically be removed from the model.

4.4.1 Multiple regression model of AC

Table 4.4.1 Results of AC Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t☐	p☐	VIF☐
	B☐	Std. Error☐	Beta☐			
Constant	1.492	0.796	-	1.873	0.064	-
Gender	-0.101	0.261	-0.031	-0.387	0.7	1.01
Age	-0.005	0.03	-0.027	-0.164	0.87	4.235
Tenure	0.011	0.038	0.048	0.292	0.771	4.27
AUDITFIRM	0.323	0.229	0.117	1.412	0.161	1.073
MO	0.27	0.14	0.273	1.932	0.057	3.115
CO	0.202	0.13	0.206	1.553	0.124	2.75
PO	0.239	0.148	0.239	1.617	0.109	3.417

Dependent variable：AC

R^2=0.435

Adj R^2=0.39

F=9.682(0.000**)

D-W：1.917

*p<0.05 **p<0.01*

The table above shows that CO, MO and PO were used as independent variables, Age, Gender, Audit firm and Tenure were used as control variables and AC as the dependent variable in conducting linear regression analysis. As can be seen from the chart, the model of R square value is 0.435, and the mean CO, MO, PO, Age, Gender, AUDIT FIRM and Tenure could explain 43.5% of the AC reasons for such changes. An F test was carried out on the model (F = 9.682, P < 0.05), which shows that CO, MO, PO, Age, Gender, AUDIT FIRM and Tenure affect AC relationships in at least one case, and that the model formula is: AC=1.492 + 0.202*CO + 0.270*MO + 0.239*PO-0.005*Age-0.101*Gender + 0.323*AUDIT FIRM + 0.011*Tenure. In addition, according to the multicollinearity test of the model, all the VIF values in the model are less than 5, which means there is no collinearity problem. Moreover, the d-w value is near the number 2, which indicates that the model does not suffer from autocorrelation, and there is no correlation between sample data, so the model is good.

The final concrete analysis shows that: The regression coefficient value of CO is 0.202(t=1.553, P=0.124>0.05), which means that CO has no influence on AC. The regression coefficient value

of MO is 0.270(t=1.932, P=0.057>0.05), which means that MO does not affect AC. The regression coefficient value of PO is 0.239(t=1.617, P=0.109>0.05), which means that PO has no influence on AC. The regression coefficient value of Age is -0.005(t=-0.164, P=0.870>0.05), which means that Age has no influence on AC. The regression coefficient of Gender is -0.101(t=-0.387, P=0.700>0.05), which means that Gender will not affect AC. The regression coefficient value of AUDIT FIRM is 0.323(t=1.412, P=0.161>0.05), which means that AUDIT FIRM does not affect AC. Tenure obtained a regression coefficient value of 0.011(t=0.292, P=0.771>0.05), indicating that Tenure would not affect AC.

Summary analysis: CO, MO, PO, Age, Gender, AUDIT FIRM and Tenure would have no impact on AC.

4.4.2 Regression model of AI

Table 4.4.2 Results of AI Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF
	B	Std. Error	Beta			
Constant	1.72	0.626	-	2.747	0.007**	-
Gender	-0.114	0.205	-0.034	-0.553	0.582	1.01
Age	-0.049	0.024	-0.256	-2.04	0.044*	4.235
Tenure	0.05	0.03	0.21	1.665	0.099	4.27
AUDITFIRM	0.125	0.18	0.044	0.695	0.489	1.073
MO	0.162	0.11	0.159	1.478	0.143	3.115
CO	0.189	0.102	0.187	1.848	0.068	2.75
PO	0.571	0.116	0.554	4.904	0.000**	3.417

Dependent variable：AI

R^2=0.672

Adj R^2=0.646

F=25.725(0.000**)

D-W：2.071

*p<0.05 ** p<0.01*

The table above shows that Age, Gender, Audit firm and Tenure were used as control variables, CO, MO and PO were used as independent variables, and AI was used as the dependent variable in order to carry out linear regression analysis. As can be seen from the chart, the model of R square value is 0.672, which means that CO, MO, PO, Age, Gender, Audit firm and Tenure

could explain 67.2% of the AI reasons for such changes. An F test was carried out on the model (F = 25.725, P < 0.05), which shows that at least one variable from CO, MO, PO, Age, Gender, Audit firm and Tenure has a relationship with AI, and that the model formula is: AI=1.720 + 0.189*CO + 0.162*MO + 0.571*PO-0.049*Age-0.114*Gender + 0.125*AUDIT FIRM + 0.050*Tenure. In addition, according to the multicollinearity test of the model, all the VIF values in the model are less than 5, which means there is no collinearity problem. Moreover, the d-w value is near the number 2, which indicates that the model does not suffer from autocorrelation, and there is no correlation between sample data, so the model is acceptable.

The final concrete analysis shows that: The regression coefficient value of CO is 0.189(t=1.848, P=0.068>0.05), which means that CO has no influence on AI. The regression coefficient value of MO is 0.162(t=1.478, P=0.143>0.05), which means that MO does not affect AI. The regression coefficient value of PO is 0.571(t=4.904, P=0.000<0.01), which means that PO will have a significant positive impact on AI. The regression coefficient value of Age is -0.049(t=-2.040, P=0.044<0.05), which means that Age has a significant negative impact on AI. The regression coefficient of Gender is -0.114(t=-0.553, P=0.582>0.05), which means that Gender has no influence on AI. The regression coefficient value of Audit firm is 0.125(t=0.695, P=0.489>0.05), which means that AUDIT FIRM does not affect AI. Tenure obtained a regression coefficient of 0.050(t=1.665, P=0.099>0.05), indicating that Tenure does not affect AI. The conclusion and analysis show that PO has a significant positive impact on AI.

Furthermore, Age has a significant negative impact on AI. However, CO, MO, Gender, Audit firm and Tenure do not affect AI. In a single variable linear regression, only considering the relationship between MO and AC or the relationship between CO and AC, but ignoring the relationship between the MO and CO is not appropriate. Selection of the multiple linear regression model by the independent variables is independent of the role in the independent variable, so the close relationship between MO and CO is why one of them was deleted by the stepwise regression. Secondly, the relevance of CO and AC is not demonstrated sufficiently, and this could be a reason to include them in the model. These could be the reason why CO and

AC have positive correlations, but CO is not included in the model. The same occurred when the regression between AI and MO, PO and CO was tested, so a stepwise regression was initiated. However, these two results of the regression model did not identify with the correlation matrix, so a stepwise regression was used to identify the independent variable with significance.

4.4.3 Stepwise regression model of AI

Table 4.4.3 Results of AI Stepwise Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t□	p□	VIF□
	B□	Std. Error□	Beta□			
Constant	0.816	0.359	-	2.274	0.025*	-
PO	0.648	0.099	0.628	6.569	0.000**	2.438
CO	0.219	0.097	0.217	2.268	0.026*	2.438

Dependent variable: AI

R^2=0.651

Adj R^2=0.644

F=86.771(0.000**)

D-W：2.115

*p<0.05 **p<0.01*

Gender, Age, Tenure and Audit firm were used as control variables, MO, CO, PO were used as independent variables, and AI was used as the dependent variable for stepwise regression analysis. Through automatic model identification, the remaining two terms, CO and PO, were finally included in the model. The R square value was 0.651, indicating that CO and PO could explain 65.1% of the change in AI. Moreover, the model passed the F test (F=86.771, P<0.05), indicating that the model was effective, and the model formula is: AI=0.816 + 0.219*CO + 0.648*PO. In addition, according to the multicollinearity test of the model, all the VIF values in the model are less than 5, which means there is no collinearity problem. Moreover, the d-w value is near the number 2, which indicates that the model does not suffer from autocorrelation, and there is no correlation between sample data, so the model is good.

The final concrete analysis shows that: The regression coefficient value of CO is 0.219(t=2.268,

P=0.026<0.05), which means that CO has a significant positive impact on AI. The regression coefficient value of PO is 0.648(t=6.569, P=0.000<0.01), which means that PO has a significant positive impact on AI. The conclusion and analysis show that CO and PO have a significant positive influence on AI.

4.4.4 Stepwise regression of AC

Table 4.4.4 Results of AC Stepwise Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	p	VIF
	B	Std. Error	Beta			
Constant	1.735	0.462	-	3.756	0.000**	-
PO	0.359	0.126	0.359	2.841	0.006**	2.488
MO	0.31	0.125	0.314	2.482	0.015*	2.488

Dependent variable: AC

R²=0.402

Adj R²=0.389

F=31.282(0.000**)

D-W：2.001

*p<0.05 **p<0.01

Gender, Age, Tenure and Audit firm were used as control variables, MO, CO and PO were used as independent variables, and AC was used as the dependent variable for stepwise regression analysis. After automatic recognition of the model, MO and PO remained. In the model, the R squared value was 0.402, indicating that MO and PO could explain 40.2% of the change in AC. Moreover, the model passed the F test (F=31.282, P<0.05), indicating that the model was effective, and the model formula is: AC=1.735 + 0.310*MO + 0.359*PO.

In addition, according to the multicollinearity test of the model, all the VIF values in the model are less than 5, which means there is no collinearity problem. Moreover, the d-w value is near the number 2, which indicates that the model does not suffer from autocorrelation, and there is no correlation between sample data, so the model is good.

The final concrete analysis shows that the regression coefficient value of MO is 0.310(t=2.482,

P=0.015<0.05), which means that MO will have a significant positive impact on AC. The regression coefficient value of PO is 0.359(t=2.841, P=0.006<0.01), which means that PO has a significant positive impact on AC.

The summary analysis shows that MO and PO will have a significant positive impact on AC.

4.5 Summary of hypothesis testing

Table 4.5 Summary of hypothesis testing

	Status	Results
H1: An auditor's market orientation is negatively associated with auditor independence.	rejected	reverse relation
H2: An auditor's customer orientation is negatively associated with auditor independence.	rejected	contributed to model
H3: An auditor's process orientation is negatively associated with auditor independence.	rejected	contributed to model
H4: An auditor's market orientation is positively associated with auditor competence.	accepted	contributed to model
H5: An auditor's customer orientation is positively associated with auditor competence.	accepted	reverse relation
H6: An auditor's process orientation is positively associated with auditor competence.	accepted	contributed to model

Firstly, all the hypotheses on AI can be rejected. In fact, the result shows the opposite. In other words, AI is positively associated with CO and PO. However, there is only a linear regression model to illustrate the positive association between AI and CO and PO. MO does not feature in this model, which was different from the one which stated that CO, PO and MO were connected to each other. AI and MO have no linear relationship. Secondly, all the hypotheses on AC can be accepted, and *H4* and *H6* contribute to the model. In another words, AC and MO, and PO and CO are positively associated. However, CO did not contribute to this model. CO and AC may have a non-linear relationship. In a single variable linear regression, only considering the relationship between MO and AC or between CO and AC, but ignoring the relationship between MO and CO, is not appropriate. Conduit and Mavondo (2001) argue that CO and MO are associated, noting that "CO is important for the development of a MO. Not only does internal

CO have a direct effect on MO, but it also mediates the relationships between various antecedents and MO". Moreover, selection of the multiple linear regression model by the independent variables is independent of the role in the independent variable. Therefore, the close relationship between MO and CO is the reason why one of them is deleted by the stepwise regression. Secondly the relevance of CO and AC is not demonstrated sufficiently, and this could be a reason to include them in the model. This may be why CO and AC have positive correlations, but CO is not included in the model. The same happened when, in the regression between AI and MO, and PO and CO, MO was not included in the model.

5.Conclusion

This section will summarise the thesis, and discuss which aspects are founded and which are not. It will discuss the contributions made by the thesis, as well as its limitations. Finally, the author will make recommendations for future research.

5.1 Summary of the thesis

The purpose of this article is to understand how the commercialisation of the auditing industry could affect audit quality in the Chinese audit market. This research is based on two fundamental theories: agency theory and institutional theory. In terms of agency theory, Jenson and Meckling (1976) suggest that agents will sometimes choose to act by prioritising their own interests instead of those of the principal. Today, as the audit industry is gradually becoming commercialised, and the financial benefit to audit firms is clearly a major factor, an issue has been identified as to whether auditors can retain their professional characteristics and independence in the wake of commercialisation. In terms of institutional theory, Scott (1995) argues that if firms wish to survive in or join the new market, they must conform to the rules and belief system prevailing in this environment, which is very important in the Chinese market. There are a considerable number of large SOEs in China, and they are also the most critical clients an audit firm could have, which inevitably leads to problems of political affiliation.

To understand the changes brought by commercialisation of the audit market, it is important to identify the characteristics of commercialisation. Broberg et al. (2018) suggest that an indication of an audit firm's accelerated commercialisation is when it begins to explore NAS and take part in more marketing activities, which lead to market-oriented, customer-oriented and process-oriented management. This study uses these three orientations as indicators of commercialisation in audit firms. There has never been a lack of research on audit quality, and DeAngelo's (1981) article about audit quality and firm size, for example, is seen as a landmark by other researchers. In recent years, the limitations of DeAngelo's research have been

discussed, and Gul, Wu and Yang (2013) believe that audit quality is a combination of audit independence and AC. These two factors were chosen to test the quality of audits in this thesis. By combing the literature for research based on these theories, six hypotheses were established.

To test these hypotheses, a quantitative approach was used to ensure a more objective result. Using a questionnaire, 96 valid sets of data were collected and compiled, and a rigorous statistical analysis was conducted. The results showed that hypotheses 1, 2 and 3 could be rejected. Hypotheses 4, 5 and 6, on the other hand, could be supported.

5.2 Discussion of the results

The purpose of this article is not only to understand the impact of commercialisation on audit quality, but also to explore the reasons. Analysis of the data from this research showed that hypotheses 1, 2 and 3 could be rejected. However, the linear regression model illustrates that only CO and PO have a positive relationship with AI. Hypotheses 4, 5 and 6 are supported, and the analysis indicates that MO, CO and PO all have a positive relationship with AC. In contrast, the linear regression indicates that AC is only positively related to MO and PO. We believe that there are two factors which bring about this situation. First, the correlations test shows that MO and AI have a significant relationship. However, the relationship between them is not a linear relationship, but a more complex one, so it cannot be expressed by linear regression. The same principle applies to the relationship between CO and AC. Secondly, in statistics, the independent variables of multiple linear regression models need to be independent of each other. However, Conduit and Mavondo (2001) have stated that MO and CO are related. Therefore, in the stepwise regression analysis, a weaker orientation was rejected by the system. This means that MO may be related to AI, but rather weakly. The same applies to the relationship between CO and AC.

In this study, almost no control variables have a relationship with the dependent variables. In contrast, many documents indicate that auditors from the Big 4 seem to be more independent.

This can be explained by the characteristics of the Chinese audit market. Government policy means that the Big 4 often use joint ventures to enter the Chinese audit market, rather than setting up firms directly in the Western audit market. Another control variable used frequently in research is audit tenure. Some research indicates that audit tenure is a threat to AI. Some researchers suggest that, as an auditor spends more time with clients, a closer relationship could develop between auditor and customer, which is likely to lead the auditor to act in favour of management, reducing his or her independence. However, in the data collected during the present research, average auditor tenure is fewer than 5 years. This is not a long time, so we believe it is reasonable to assume that audit tenure has no effect on AI. In terms of AI, the results show that all three indicators of commercialisation are related. CO and PO have a positive relationship with AI. In terms of AC, positive associations were found with MO and PO. MO involves two strategies which firms might use, a market-driving strategy and a market-driven strategy. However, we believe that no matter which strategy audit firms adopt, it will make the relationship between auditor and client closer. If the firm uses a market-driving strategy, the auditor may approach the client proactively, by recommending a new service for example. If the firm adopts a market-driven strategy, customers will approach the auditor because there are more demands to be satisfied. This will make the auditor and customer closer and avoid misunderstanding, thus making the audit process more fluid. As exchanges of information increase between colleagues and customers, the auditor's communication skills will be improved, which explains why MO will improve the auditor's competence. With process-oriented management, the firm may need to continue to train auditors so they can remain up to date with industry and regulation changes, and professional standards. This also explains why PO has a positive impact on auditors' independence and competence. MO, CO and PO are three indicators of commercialisation, and our findings show that commercialisation has positive relationships with AI and AC, which will affect the quality of audits. Since most scholars agree that AI and AC are positively related to audit quality, it can be concluded that commercialisation of the audit market has a positive effect on quality in the Chinese audit market.

5.3 Theoretical contribution

The main contribution of this paper is to establish a link between the commercialisation of auditing and audit quality by analysing different variables. At the same time, this study has analysed the impact of commercialisation of audit firms on the independence and competence of auditors. We conclude that the commercialisation of the audit market has a positive effect on quality in the Chinese audit market. This theory is contrary to the findings of many mainstream researchers, but it also confirms the theory of Broberg et al. (2018), which concludes that an auditor's professional identity is positively associated with commercialisation. This may open a new door for future discussion about auditing and commercialisation.

5.4 Methodological contribution

Two methods were used during the sampling process in this article. We believe it is wise to use different collecting methods for each different target population. The collection method used to collect data from Big-4 auditors in this article is a good example. The internal communication process of a target group is an excellent way of collecting data, even if it means that researchers cannot directly access participants' contact information. The combination of a website database and a mobile app for this precise target delivery is an innovation. With a reliable database, this approach allows researchers to obtain a large amount of data in a short period. We believe this is also the direction of future developments in surveys.

5.5 Limitations and future research

This study also has certain limitations. First of all, it targeted the Chinese audit market, but most existing research is based on the Western audit market, so the citations and base used in this research are not necessarily valid for the Chinese market. At the same time, the conclusions from this article may not apply to the Western audit market. As Francis, Michas and Seavey (2012) have argued, an audit market is country-specific in nature. Another limitation involves

data collection. Although different collection methods were adopted for different populations, the accuracy of the data sources cannot be 100% determined because of the inability to access accurate personal contact information. Also, the design of the questionnaire was based on literature in English, but the questionnaire received by respondents was a Chinese survey. This may lead to misunderstandings as a result of translation problems.

Another limitation is the issue of AC. In discussing AC, it is important to recognise that competence is a factor which changes with time. In general, research on competence compares a change in competence over time. For example, Bailey's (2010) research was based on the conclusions from changes in AC from 2006 to 2010. In the present study, there was insufficient time to obtain continuous data from year to year, so more stable factors that do not change over time were used in this article. However, this does not rule out time effectiveness. In fact, limitations are unavoidable, as AC is affected by too many factors, and a large proportion of them will change with time, such as technical skills. The measurement of AC may be slightly misleading in this study, but we believe that the overall study is still credible.

A number of questions have emerged as a result of the research. The findings show that the relationship between MO and AI is not clear, nor is that between CO and AC. However, it is unclear whether there is a method for testing these relationships specifically. Also, if commercialisation has become a feature of auditing, so that marketing activities do not affect the professionalism and independence of auditors, and even improve these characteristics, what factors might affect the independence and professionalism of auditors? Many Western studies have shown that commercialisation has a negative relationship with AI. Could this be the result of cultural differences and different audit systems? These questions can only be answered by future research.

Reference list

Antle, R., Griffin, P.A., Teece, D.J. and Williamson, O.E. (1997) An Economic Analysis of Auditor Independence for a Multi-Client, Multi-Service Public Accounting Firm, Berkeley, CA: The Law & Economics Consulting Group Inc.

Asthana, S., Khurana, I., & Raman, K. K. (2019). Fee competition among Big 4 auditors and audit quality. *Review of Quantitative Finance and Accounting*, *52*(2), 403-438.

Babeau, A., Berle, A. A., Means, G. C., & Babeau, A. (1969). The modern corporation and private property. *Revue Économique*, *20*(6), 1042. doi:10.2307/3500200

Bailey, J. A., & CIA, C. (2010). The IIA's Global Internal Audit Survey: A Component of the CBOK Study. Core Competencies for Today's Internal Auditors Report II.

Baybutt, P. (2015). Competency requirements for process safety auditors. *Process Safety Progress*, *34*(2), 179-182.

Beck, P. J., & Wu, M. G. (2006). Learning by doing and audit quality. *Contemporary Accounting Research*, *23*(1), 1-30.

Blay, A. D. (2005). Independence threats, litigation risk, and the auditor's decision process. *Contemporary Accounting Research*, *22*(4), 759-789.

Broberg, P., Umans, T., Skog, P., & Theodorsson, E. (2018). Auditors' professional and organizational identities and commercialization in audit firms. *Accounting, Auditing & Accountability Journal*, (just-accepted), 00-00.

Broberg, P., Tagesson, T., Argento, D., Gyllengahm, N., & Mårtensson, O. (2017). Explaining the influence of time budget pressure on audit quality in Sweden. *Journal of Management & Governance*, *21*(2), 331-350.

Broberg, P., Umans, T., & Gerlofstig, C. (2013). Balance between auditing and marketing: An explorative study. *Journal of International Accounting, Auditing and Taxation*, *22*(1), 57-70.

Broberg, P., Umans, T., Skog, P., & Theodorsson, E. (2018). Auditors' professional and organizational identities and commercialization in audit firms. *Accounting, Auditing & Accountability Journal*, *31*(2), 374-399.

Bryman, A., & Bell, E. (2015). *Business Research Methods* (4th ed.). Oxford: Oxford Univeristy Press.

Chen, C. J. P., Su, X., & Wu, X. (2007). Market competitiveness and Big 5 pricing: Evidence from China's binary market. *The International Journal of Auditing*, 42, 1–24

Chesser, D.L., Moore, C.W. and Conway, L.G. (1994), "Has advertising by CPA's promoted a trend toward commercialism?", *Journal of Applied Business Research*, Vol. 10 No. 2, pp. 98-105.

Church, B., S. Davis, and S. McCraken. 2008. The auditor's reporting model: A literature overview and research synthesis. *Accounting Horizons* 22 (1): 69–90.

Chunfei Wang Huan Dou. (2015;2014;). Does the transformation of accounting firms' organizational form improve audit quality?evidence from china. *China Journal of Accounting Research* , *8*(4), 279-293. doi:10.1016/j.cjar.2014.08.005

Clow, K.E., Stevens, R.E., McConkey, W.C. and Loundon, D.L. (2009), "Accountants' attitudes toward advertising: a longitudinal study", *Journal of Services Marketing*, Vol. 23 No. 2, pp. 125-132.

Choi, J. H., Kim, C., Kim, J. B., & Zang, Y. (2010). Audit office size, audit quality, and audit pricing. *Auditing: A Journal of practice & theory*, *29*(1), 73-97.

Copeland, M. K. (2010). Marketing and advertising for CPAs: Leading-edge strategies. *The CPA Journal*, *80*(8), 58.

Crossan, F. (2003). Research Philosophy: Towards an Understanding. *Nurse Researcher, 11*(1), 46-55.

Conduit, J., & Mavondo, F. T. (2001). How critical is internal customer orientation to market orientation?. *Journal of business research*, *51*(1), 11-24.

Dao-de, S. (2000). Selection of the linear regression model according to the parameter estimation. *Wuhan University Journal of Natural Sciences*, *5*(4), 400-405.

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of accounting and economics*, *3*(3), 183-199.

Debates, P. (2010). House of Lords. *Official Report*, *138*(40), 731.

DeFond, M., and J. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory* 24 (Supplement): 5–30.

DeFond, M. L., Wong, T. J., & Li, S. H. (2000). The impact of improved auditor independence on audit market concentration in China. *Journal of Accounting & Economics*, 28, 269–305

Deis, Jr., D. R. and G. A. Giroux. 1992. Determinants of audit quality in the public sector. *The Accounting Review* 67 (3): 462-479.

DiMaggio, P. J., & Powell, W. W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *American Sociological Review*, 48(2), 147–160.

Duff, A. (2004). *Auditqual: Dimensions of audit quality*. Edinburgh: Institute of Chartered Accountants of Scotland.

Earl, L., Gault, F., & Bordt, M. (2004). Summary: Meeting on Commercialization Measurement, Indicators, Gaps and Frameworks. *Ottawa, December*.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, *14*(1), 57-74.

Flint, D. (1988). *Philosophy and principles of auditing: an introduction*. Macmillan Education.

Francis, J. R. (2004). What do we know about audit quality?. *The British accounting review*, *36*(4), 345-368.

Francis, J. R. (2011). A framework for understanding and researching audit quality. *Auditing: A journal of practice & theory*, *30*(2), 125-152.

Francis, J. R., Michas, P. N., & Seavey, S. E. (2013). Does audit market concentration harm the quality of audited earnings? evidence from audit markets in 42 countries. *Contemporary Accounting Research, 30*(1), 325-355. doi:10.1111/j.1911-3846.2012.01156.x

Gendron, Y. (2002), "On the role of the organization in auditors' client-acceptance decisions", *Accounting, Organizations and Society*, Vol. 27 No. 7, pp. 659-684

Gul, F. A., Wu, D., & Yang, Z. (2013). Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review*, *88*(6), 1993-2023.

Hanlon, G. (1996), " 'Casino capitalism' and the rise of the 'commercialised' service class – an examination of the accountant", *Critical Perspectives on Accounting*, Vol. 7 No. 3, pp. 339-363.

Hardies, K., Breesch, D., & Branson, J. (2016). Do (fe)male auditors impair audit quality? Evidence from going-concern opinions. *European Accounting Review , 25* (1), pp. 7-34.

Heischmidt, K. A., & Elfrink, J. (1991). The changing attitudes of CPAs toward advertising. *Journal of Advertising*, *20*(2), 39-51.

Heischmidt, K., Elfrink, J., & Mays, B. (2002). Professional accounting services: Types of marketing communications used by CPAs. *Services Marketing Quarterly*, *23*(3), 63-72.

Hillison, W., Kennelley, M. (1988). The Economics of Non-Audit Services. *Accounting Horizons*, 2 (September), 32-40.

Hulbert, J. E., & Lawson, V. S. (1996). The status of advertising in the accounting profession. *National public accountant*, *41*(7), 22-25.

Humphrey, C., & Moizer, P. (1990). From techniques to ideologies: An alternative perspective on the audit function. *Critical Perspectives on Accounting*, *1*(3), 217-238.

INSTITUTE OF INTERNAL AUDITORS (IIA). *Global Internal Audit Competency Framework*. Altamonte Springs, FL: IIA, 2013.

INTERNATIONAL AUDITING AND ASSURANCE STANDARDS BOARD (IAASB). *ISA 610 (Revised March 2013), Using the Work of Internal Auditors*. International Federation of Accountants (IFAC), New York.

Jaworski, B., Kohli, A. and Sahay, A. (2000), "Market-driven versus driving markets", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 45-54.

Jenson, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behaviour. *Agency cost*.

Johnson, G., Whittington, R., Scholes, K. and Pyle, S. (2011), Exploring Strategy: Text & Cases, *Financial Times Prentice Hall, Harlow*.

Johnson, R., & Ravlic, T. (2002). Current affairs in audit.

Joshi, P. L., Bremser, W. G., Hemalatha, J., & Al-Mudhaki, J. (2007). Non-audit services and auditor independence: empirical findings from Bahrain. *International Journal of Accounting, Auditing and Performance Evaluation*, *4*(1), 57-89.

Jui, L., & Wong, J. (2015). The past, present, and future of auditing in China. *The CPA Journal*, *85*(2), 14.

Kaawaase, T. K., Assad, M. J., Kitindi, E. G., & Nkundabanyanga, S. K. (2016). Audit quality differences amongst audit firms in a developing economy: The case of Uganda. *Journal of Accounting in Emerging Economies*, *6*(3), 269-290.

Kathawala, Y., & Abdou, K. (2003). Supply chain evaluation in the service industry: A framework development compared to manufacturing. *Managerial Auditing Journal, 18*(2), 140-149. doi:10.1108/02686900310455137

Kinney Jr, W. R. (1999). Auditor independence: A burdensome constraint or core value?. *Accounting Horizons*, *13*(1), 69-75.

Knapp, M. C. 1991. Factors that audit committee members use as surrogates for audit quality. *Auditing: A Journal of Practice and Theory* 10 (1): 35-52.

Kotler, Philip (1994). *Marketing Management-Analysis, Planning, Implementation and Control*, 8th edition. Englewood Cliffs, NJ: Prentice-Hall.

Lee, T., & Stone, M. (1997). Economic agency and audit committees: Responsibilities and membership composition. *International Journal of Auditing*, *1*(2), 97-116.

Lennox, C. (2005). Management ownership and audit firm size. *Contemporary Accounting Research*, *22*(1), 205-227.

Leung, N. W., & Liu, J. (2015). Ownership structure and auditor choice: evidence from Chinese listed firms. *Asian Journal of Business Ethics*, *4*(2), 163-185.

Li, C., Song, F. M., & Wong, S. M. 2005. Audit firm size effects in China's emerging audit market. Hong Kong Institute of Economics and Business Strategy Working Paper No. 1114

Lin, Z. J., & Liu, M. (2009). The impact of corporate governance on auditor choice: evidence from China. *Journal of International Accounting, Auditing and Taxation*, 18(1), 44–59

Liu, J., Wang, Y., & Wu, L. (2011). The effect of guanxi on audit quality in China. *Journal of Business Ethics*, *103*(4), 621.

Marriott, N., Telford, B., Davies, M., & Evans, J. (2011). Students' Perceptions of Work-Based Training and Examination-Based Learning Relating to the Professional Competence of Auditors and the Impact of Regulatory Changes on Audit Training in the UK. *Accounting Education: an international journal*, *20*(2), 133-151.

Mansouri, A., Pirayesh, R., & Salehi, M. (2009). Audit competence and audit quality: Case in emerging economy. *International Journal of Business and Management*, *4*(2), 17-25.

Mitchell, A. (1992). *A better future for auditing*. University of East London.

Pierce, B., & Sweeney, B. (2004). Cost–quality conflict in audit firms: an empirical investigation. *European Accounting Review*, *13*(3), 415-441.

Porter, M. E. (1990). *The competitive advantage of nations: with a new introduction*. Free Pr.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students* (5th ed.). Harlow: Pearson Education Limited.

Scott, W. R. (1995). Institutions and organizations. Foundations for organizational science. *London: A Sage Publication Series*.

Sharma, D.S. and Sidhu, J. (2001), "Professionalism vs commercialism: the association between non-audit services (NAS) and audit independence", *Journal of Business Finance and Accounting*, Vol. 28 Nos 5/6, pp. 595-629.

Shockley, R. A. 1981. Perceptions of auditors' independence: An empirical analysis. *The Accounting Review* 56 (4): 785-800

Sori, Z. M., Karbhari, Y., & Mohamad, S. (2010). Commercialization of accounting profession: The case of non-audit services. *International Journal of Economics and Management*, *4*(2), 212-242..

Stanley, J. D. and F. T. DeZoort. 2007. Audit firm tenure and financial restatements: An analysis of industry specialization and fee effects. *Journal of Accounting and Public Policy* 26: 131-159

Suddaby, R., Gendron, Y. and Lam, H. (2009), "The organizational context of professionalism in accounting", *Accounting, Organisations and Society*, Vol. 34 Nos 3/4, pp. 409-427.

Sutton, S. G. (1993). Toward an understanding of the factors affecting the quality of the audit process. *Decision Sciences*, *24*(1), 88-105.

Sweeney, B., & McGarry, C. (2011). Commercial and professional audit goals: Inculcation of audit seniors. *International Journal of Auditing*, *15*(3), 316-332.

Tepalagul, N., & Lin, L. (2015). Auditor independence and audit quality: A literature review. *Journal of Accounting, Auditing & Finance*, *30*(1), 101-121.

Umans, T., Broberg, P., Schmidt, M., Nilsson, S., & Olsson, E. (2016). Feeling well by being together: Study of Swedish auditors. *Work*, *54*(1), 79-86.

Vetenskapsrådet. (2017). *Good research practice.* Stockholm: Swedish Research Council.

Wallman, S. 1996. The future of accounting, part III: Reliability and auditor independence. *Accounting Horizons* 10 (4): 76–97.

Wang, K. O. S., & Claiborne, M. C. (2008). Determinants and consequences of voluntary disclosure in an emerging market: Evidence from China. *Journal of International Accounting, Auditing, and Taxation*, 17(1.)

Wang, K., Sewon, O., & Iqbal, Z. (2009). Audit pricing and auditor industry specialization in an emerging market: Evidence from China. *Journal of International Accounting, Auditing and Taxation*, *18*(1), 60-72.

Watts, R. L., & Zimmerman, J. L. (1983). Agency problems, auditing, and the theory of the firm: Some evidence. *The Journal of Law and Economics*, *26*(3), 613-633.

Windmöller, R. (2000). The auditor market and auditor independence. *European Accounting Review*, *9*(4), 639-642Woodbine, G., Fan, Y. H., & Scully, G. (2012). The ethical orientations of chinese auditors and the effect on the judgements they make. *Asian Journal of Business Ethics, 1*(2), 195-216. doi:10.1007/s13520-011-0001-5

Appendix 1 Questionnaire (English)

In order to get a better understanding of the relationship between audit commercialization and audit quality, I hope you can take a few minutes to share us your experience and suggestions. We value each respondent's opinion and looking forward to your participation!

1. What is your gender?

2. What is your age?

3. How long have you been working as an auditor?

4. Are you working in Big 4 audit firm? (PwC, DTT, KPMG and EY)

5. Please select to which extent you agree or disagree with the following statements base on your working experience and opinion (1=Strongly disagree, 4=No opinion, 7=Strongly agree)

   5.1 The firm's strategy for competitive advantage is based on its understanding of customers' current needs

   5.2 The firm constantly tries to improve current technologies and techniques to meet immediate needs of customers

   5.3 The firm constantly listens to our customers in order to be able to satisfy their needs

   5.4 The firm constantly thinks about new services and more valuable offerings that may satisfy the needs the customers might have in the future

6. Please select to which extent your agree or disagree with the following statements base on your working experience and opinion (1=Strongly disagree, 4=No opinion, 7=Strongly agree)

   6.1 In the firm, we share experiences from interaction with clients across different departments

6.2 The firm's objectives are driven primarily by customer satisfaction

6.3 The firm measures customer satisfaction frequently

6.4 The firm regularly surveys end customers to assess the quality of its services

7. Please select to which extent your agree or disagree with the following statements base on your working experience and opinion (1=Strongly disagree, 4=No opinion, 7=Strongly agree)

7.1 In the firm, business process are sufficiently defined so that we have a clear understanding of these process

7.2 The firm allocates resources based on the business processes

7.3 The firm sets specific performance goals for different business process

7.4 The firm sets clearly designates process owners and their responsibilities

7.5 The firm's employees are rewarded based in their performance in each given assignment

8. Please select to which extent your agree or disagree with the following statements base on your working experience and opinion (1=Strongly disagree, 4=No opinion, 7=Strongly agree)

8.1 Auditors should have good communication skills so that they can express their idea fluently with both spoken and written when communicate with colleagues and clients

8.2 Auditors should keeping up to date with industry and regulation changes and professional standards

9. Please select to which extent your agree or disagree with the following statements base on your working experience and opinion (1=Strongly disagree, 4=No opinion, 7=Strongly agree)

9.1 Regard the size of the client, auditors should treat customers equally

9.2 The pressure provided by the client should not change my opinion about the audit results

9.3 As an auditor, I should not be involved in auditing when clients associated with other non-audit services.

You have completed this survey, thank you for your participation!

Appendix 2 Questionnaire (Chinese)

为了能够更好地了解审计单位市场化行为对审计质量的影响，希望您能抽出几分钟时间，

将您的感受和建议告诉我们，我们非常重视每位答题者的宝贵意见，期待您的参与!

1. 请问您的性别是?

2. 请问您的年龄是?

3. 请问您已经从事审计行业多久了?

4. 请问您是否在四大审计所工作?　（普华永道，德勤，毕马威，安永）

5. 请您根据您的工作经验和意见选择您是否同意以下陈述。(1代表非常不同意，4代表

   没有意见，7代表完全同意)

   5.1 事务所的竞争优势是基于对客户需要的了解产生的

   5.2 事务所会不断改进并提高现有技术以满足不同客户的特定需求

   5.3 事务所不断的听取客户的意见来满足客户的需求

   5.4 事务所会不断提出新的和更具有价值的服务来满足客户需求

6. 请您根据您的工作经验和意见选择您是否同意以下陈述。(1代表非常不同意，4代表

   没有意见，7代表完全同意)

   6.1 事务所中，员工会分享与不同客户交流的经验

   6.2 事务所的工作目标主要由客户满意度来驱动

   6.3 事务所会经常性的评测客户满意度

   6.4 事务所会常规性的调查终端客户来寻求对其服务质量的意见

7. 请您根据您的工作经验和意见选择您是否同意以下陈述。(1代表非常不同意，4代表

   没有意见，7代表完全同意)

7.1 事务所中，业务流程清晰，并且大多数员工了解这些流程

7.2 事务所会根据业务流程合理分配对应资源

7.3 事务所会对不同的项目设定特定的绩效目标

7.4 事务所会明确指定项目的负责人和责任人

7.5 事务所会根据员工的表现进行嘉奖

8. 请您根据您的工作经验和意见选择您是否同意以下陈述。（1代表非常不同意，4代表没有意见，7代表完全同意）

8.1 审计师应该有良好的交流技巧，以便于客户与同事进行流利的口头和书面交流

8.2 审计师应该及时了解行业和监管变化以及专业标准

9. 请您根据您的工作经验和意见选择您是否同意以下陈述。（1代表非常不同意，4代表没有意见，7代表完全同意）

9.1 无论客户规模如何，审计师都应该平等对待客户

9.2 客户提供的压力不应该改变我对审计结果的看法

9.3 身为审计师，我不应该参与与审计事务所有其他非审计服务关联的客户

您已完成本次问卷调查，感谢您的参与!

Appendix 3 Contact letter (English)

Master students ask for your help with their research

Hi

This is Shihao Tang and Shen Shen, we are master student in Business Administration at Kristianstad University, Sweden. We are working on a study tries to find out the relationship between audit industry's commercialization and audit quality in Chinese audit market. We believe that commercialization is changing the audit industry, and we need your opinion and help!

We are excited to invite you to participate in a survey related to your research, which only cost you 3 to 5 minutes. Your opinions and experience will be translated into statistical analysis. The questionnaire is completely anonymous and the information it collect will use and only be used in our research. All information will be deleted after the study is completed，no need to worry about your information would be leaked. We sincerely hope that you can participate in our research.

Survey Link

Our thesis will be published on university website after being examined and our thesis have no interest in commercial use. If you are interested in the following development, please contact us, we will be happy to inform you our program and send you're a copy of our research.

Thank you for your cooperation and participation.

Best regards

Shihao Tang and Shen Shen

Appendix 4 Contact letter (Chinese)

硕士生请您帮助参加研究

您好

我们是唐世颢和申珅，瑞典克里斯蒂安斯塔德大学商业管理硕士研究生。我们正着手于一项关于审计产业商业化与审计质量在中国审计市场的影响。我们认为商业化正在改变中国的审计市场，您的意见与经验将会对我们提供很大的帮助。

我们很激动可以邀请您参加一项关于我们研究的问卷调查，只需花费您3到5分钟的时间。您的经验和意见将会转化为数据进行分析。此问卷是完全的匿名问卷，收集来的信息会且只会用于我们的研究。所有信息在研究完成后会被删除，无需担心您的信息会泄露。我们真切的希望您可以参与我们的调查。

问卷链接

我们的论文将会在被检验后发布在学校网站上，我们没有将论文用于商业用途的打算。如果您对我们接下来的进展有兴趣请联系我们，我们很高兴能通知您后续的发展以及为您发送一份我们的论文。

感谢您的合作和参与

此致 敬礼

唐世颢 申珅

Appendix 5 Reminder Letter (English)

Reminder: Master students ask for your help with their research

Hi

This is Shihao Tang and Shen Shen, we are master student in Business Administration at Kristianstad University, Sweden. Last week, we have send you a letter through contactor to invite you to participate our research. It is a study about commercialization of audit industry and audit quality in Chinese market. If you have respond, please ignore this letter. If you have not look at it, we really hope that you could spend a few minutes to participate in this survey. Your opinions and experience will be translated into statistical analysis. The questionnaire is completely anonymous and the information it collect will use and only be used in our research. All information will be deleted after the study is completed，no need to worry about your information would be leaked. We sincerely hope that you can participate in our research.

Survey Link

Our thesis will be published on university website after being examined and our thesis have no interest in commercial use. If you are interested in the following development, please contact us, we will be happy to inform you our program and send you're a copy of our research.

Thank you for your cooperation and participation.

Best regards

Shihao Tang and Shen Shen

Appendix 6 Reminder Letter　（Chinese）

提醒：硕士生请您帮助参加研究

您好

我们是唐世颢和申珅，瑞典克里斯蒂安斯塔德大学商业管理硕士研究生。上周我们通过联络人向您发送了一封邮件邀请您参加我们问卷调查。这是一份关于审计产业商业化对于中国审计质量的调查。如果您已经参与并回复，请无视这封邮件。如果您还没有看过那封邮件，我们真诚的希望您可以花费几分钟宝贵的时间参与进来。您的经验和意见将会转化为数据进行分析。此问卷是完全的匿名问卷，收集来的信息会且只会用于我们的研究。所有信息在研究完成后会被删除，无需担心您的信息会泄露。我们真切的希望您可以参与我们的调查。

问卷链接

我们的论文将会在被检验后发布在学校网站上，我们没有将论文用于商业用途的打算。如果您对我们接下来的进展有兴趣请联系我们，我们很高兴能通知您后续的发展以及为您发送一份我们的论文。

再次感谢您的合作和参与

　　　　　　　　　　　　　　　　此致　敬礼

唐世颢　申珅