Audit Quality: Does Gender Matters?

——Empirical Evidence from China

Shi Dan¹ Li Wei^{1,2}

(1. Guanghua School of Management, Peking University, Beijing, 100871, China; 2. International Accounting and Finance Research Center, Beijing International Studies University, Beijing, 100024, China)

Abstract: We investigate the impact of the gender and gender composition of auditors on audit quality and audit fees. Our results indicate that female group auditors can increase income decreasing discretionary accruals at 5% level of significance. There is no significant relationship between the sex composition of auditors and absolute discretionary accruals, income increasing discretionary accruals and income decreasing discretionary accruals. What's more, female auditors charge more than male auditors. Our conclusions provide important empirical evidence in the field of gender research in Chinese audit market.

Keywords: Gender; Gender Composition; Audit Quality; Audit Fees

1 Introduction

Audit quality is the prerequisite of guaranteeing financial information quality. High quality audit reports and efficient audit market can stimulated the development of security market. Recent years in China a sequence of audit failure events³ trigger the investor' doubts about audit quality of accounting firms and dissatisfaction with domestic audit market. For now, due to the fierce competition between accounting firms, low supervision over audit market, imperfect laws and regulations, and absence of restricting system, Chinese audit legal risks are extremely low. Under such background, it is essential that carefully examined the factors that affect audit quality, which have an important significance in theory and practice to promote the healthy development of Chinese audit market.

Current researches mainly focus on the relation between macroscopic factors, such as size of accounting firms, auditor tenure etc. and audit quality. What's more, there are many published literature to discuss the issue from the viewpoint of corporate governance (Cadbury, 1992; Hampel, 1998; Carcello & Neal, 2003). But in last few years, there has been a microscopic shift in audit quality studies, such as researches about individual auditor. Actually auditing is a professional judgment to a large extent. The auditor's characteristics will affect the audit quality more or less. So Church et al. (2008) recommend exploring the relation between auditor's characteristics (age, gender, personality, appearance etc.) and audit reports.

This paper investigates the impacts of audit gender on audit quality and audit fees from microscopic level. What's more, Bedard & Maroney(1999) indicate that impacts of gender composition of small group on group interaction and performance are important contents of behavioral accounting research field. We use a unique sample of listed companies in China, where audit reports must be audited and certified in the name of two signing certified public accountants (CPA) as well as in the name of an audit firm. This provides a special opportunity to observe the relation between gender composition of small group and audit quality which then helps us to

understand the auditor gender-audit quality relationship in China, the fastest growing economy in the world.

Our paper sheds some light on the relationship between audit gender and audit quality in economic development, which adds to the auditor gender-audit quality nexus in the literature. We believe our paper is the first to use Chinese auditor gender data to study the gender impacts on audit quality from the micro research perspective.

The rest of the paper is organized as follows: Section 2 reviews the related literature. Section 3 presents our hypothesis. Data and variables are shown in Section 4, and the empirical results are reported in Section 5. Finally, we conclude this paper in Section 6.

2 Literature Review

2.1 Impact factor of audit quality

The factors affect audit quality are various. The researches about audit quality focus on empirical analysis and the results indicate that audit firm size, auditor tenure, non-audit service, client importance, corporate governance etc. have impacts on audit quality.

Audit Firm Size. DeAngelo (1981) find that when incumbent auditors earn client-specific quasi-rents, auditors with a greater number of clients have 'more to lose' by failing to report a discovered breach in a particular client's records. This collateral aspect increases the audit quality supplied by larger audit firms. Since then many researchers support this conclusion (Nichols & Smith, 1983; Palm rose, 1988; Teoh & Wong, 1993; Dye, 1993; Becker et al., 1998; Francis et al., 1999; Reynolds & Francis, 2000). However, some researches are against DeAngelo's conclusions. For example, Imhoff (1988) find that from analyst's point of view, there is no difference in audit quality between top-eight audit firms and non-top-eight firms. Additionally, the important factor is whether auditor and manager are consistent in attitudes toward financial reports.

Auditor Tenure. Watts & Zimmerman (1983) find that longer the auditor tenure, the more dependence on clients. Auditor's objectivity and independence will be destroyed and audit quality reduces with it. The following researches confirm the negative relation between audit quality and auditor tenure (Palmrose, 1989; Deis & Giroux, 1992; Copley & Doucet, 1994; Giroux et al., 1995; Ann Vanstraelen, 2000; Doupch et al., 2001; Carey & Simnett, 2001; Davis et al., 2002). But recent analysis reaches the opposite conclusion. Geiger & Raghunandan (2002) find that shorter the auditor tenure, the more the increasing probability of audit failure. That is to say, the auditor tenure and audit quality are positive relation. Ghosh & Moon (2003) find that investors and information intermediaries perceive auditor tenure as improving audit quality. Myers & Omer (2003) find that higher earnings quality with longer auditor tenure. They interpret their results as that longer auditor tenure, on average, results in auditors placing greater constraints on extreme management decisions in the reporting of financial performance. Besides the conclusions mentioned above, some researches indicate that there is a more complicated "U-shaped" relationship than linear relationship between audit quality and audit tenure. Raghunathan et al. (1994) report that audit failure will mostly happen in the first year and longer than 5 years of audit tenure, and suggest that auditor rotation and audit quality are positive relation.

Non-Audit Service. Most of researchers focus on whether non-audit service lows audit quality. But there doesn't seem to be any definite answer. Palmrose (1986), Abdel-khalik (1990) and Davis et al. (1993) find that non-audit services do not increase auditor's reliability on their clients. Craswell & Francis (2002) and Elizabeth & Zhou (2003) find that non-audit services do not damage auditor's independence, so as to lower the quality of audit. But some other researchers

insist on contrary opinion. Bazerman et al. (1997), Beeler & Hunton (2001) and Gore et al. (2001) find that supplies of non-audit services will impair decision-making quality of auditors. Frankel et al. (2002) present evidence that non-audit services fees are positively associated with small earnings surprises and the magnitude of discretionary accruals. They also find evidence of a negative association between non-audit services fees and share values on the date the fees were disclosed.

Client Importance. The economic theory of auditor independence (DeAngelo, 1981b) suggests that auditors' incentives to compromise their independence are related to client importance. Jagan Krishnan & Jayanth Krishnan (1996) find that the relative importance of the client in the auditor's portfolio and possibility of unqualified opinion issues are negatively related. Reynolds & Francis (2001) find that Big 5 auditors report more conservatively for larger clients, suggesting that reputation protection dominates auditor behavior rather than economic dependence. Likewise, Larcker & Richardson (2004) find that auditor behavior being constrained by the reputation effects associated with allowing clients to engage in unusual accrual choices. Chung & Kallapur (2003) do not find a statistically significant association between abnormal accruals and any of the client importance measures.

Corporate Governance. Most of the researches are focus on the relation between audit quality and ownership structure, board characteristics, controlling rights and debt financing etc. Cadbury (1992) and Hampel (1998) find that improvement of corporate governance and management helps to increase the quality of audit. Chen et al. (2001) using data from the Chinese stock market, find that managerial and overseas share is negatively associated with receiving modified audit opinions. Faccio & Lang (2002) find that there is a negative relationship between the stock proportion of the first shareholder and audit quality. Additionally, a negative relation is found between audit committee independence and abnormal accruals. Reductions in audit committee independence are accompanied by large increases in abnormal accruals (Klein, 2002). Lee et al. (2004) find that an effective audit committee can help to enhance audit quality and mitigate the negative effects when auditor switch.

There are some other factors contribute as well. Impact of voluntary accounting change on net income is an important influencing factor of auditor issuing modified opinions. Terrence et al. (1994) find that audit quality is high if audit industry is very high market concentration. Balsam et al. (2003) find clients of industry specialist auditors have lower discretionary accruals and higher earnings response coefficients than clients of non-specialist auditors. This finding is consistent with clients of industry specialists having higher earnings quality than clients of non-specialists. Venkataraman et al. (2008) report robust evidence that pre-IPO audited accruals are negative and less than post-IPO audited accruals. Their results suggest that both audit quality and audit fees are higher in a higher-litigation regime, consistent with the effects an increase in litigation exposure should have on auditor incentives. Francis & Wang (2008) find that earnings quality increases for firms with Big 4 auditors when a country's investor protection regime gives stronger protection to investors; specifically, signed abnormal accruals are smaller, there is a greater likelihood of reporting losses, and earnings conservatism is greater.

2.2 Gender difference

A lot of researches focus on gender difference in corporate management and investment behavior between male and female.

Using personal account data for over 35,000 households from a large discount brokerage,

Barber & Odean (2001) document that men trade 45 percent more than women. Trading reduces men's net returns by 2.65 percentage points a year as opposed to 1.72 percentage points for women. But instead, Richard, Erik & Luo (2009) find there is little evidence that gender influences trading activity which is induced by overconfidence.

Atkinson, Baird & Frye (2003) find that male and female-managed funds do not differ significantly in terms of performance, risk, and other fund characteristics. Despite the similarities between male and female managers, they find evidence that gender influences the decision making of mutual fund investors. What's more, the net asset flows into funds managed by females are lower than by males, especially for the manager's initial year managing the fund. Using data from the U.S. mutual fund industry, Niessen & Ruenzi (2007) find that female managers are more risk averse, follow less extreme and more consistent investment styles and trade less than male managers. Although female and male managers do not differ in average performance, female managers receive significantly lower inflows.

Examining data on S&P 1500 firms over the period 1992–2004, Wolfers (2006) find no systematic differences in returns to holding stock in female-headed firms, although this result reflects the weak statistical power of their test, rather than a strong inference that financial markets either do or do not under-estimate female CEOs.

Krishnan & Parsons (2008) explore whether gender diversity in senior management influences the quality of reported earnings. Companies with more women in senior management are found to be more profitable and have higher stock returns after initial public offerings than those with fewer women in the management ranks. Earnings quality is positively associated with gender diversity in senior management.

Huang & Kisgen (2009) examine whether men and women differ in corporate financial decisions. They find that companies with female CFOs make fewer acquisitions, and acquisitions made by female CFO firms have announcement returns approximately 2% higher than those made by male CFO firms. Women appear to undertake greater scrutiny and exhibit less hubris in acquisition decisions. Female CFOs issue debt less frequently, but debt and equity issuances have higher announcement returns for female CFO firms. However, female CFO capital decisions are no more likely to move a firm toward its target leverage.

Using a large sample of Chinese listed firms, Ye, Zhang & Rezaee (2010) show that earnings quality proxies do not display significant differences for firms with female and male top executives.

In recent two years, the researches about gender difference expand into auditing territory. Ittonen, Miettinen & Vahamaa (2008) suggest that firms with female audit committee representation have significantly lower audit fees. From the audit demand perspective, these findings may indicate that female representation on audit committees reduces the need for assurance provided by external auditors. Alternatively, from the supply-side perspective, female representation may decrease audit fees by affecting the auditor's assessment of audit risk.

Chin & Chi (2008) indicate that there is no difference in industry expertise between female and male audit partners. Breesch & Branson (2009) tests their hypotheses on the basis of a laboratory experiment in which it analyzes the final written exams of 20 female and 20 male future auditors. The findings suggest that women auditors discover more potential misstatements than male auditors, though they analyze the misstatements in a less accurate manner than male auditors. The findings also indicate that women auditors are more risk-averse than male auditors. In summary, we can see that most studies show that male and female do differ in investment, financing, management, auditing activities.

2.3 Gender composition

By decomposing the criterion of decision-making accuracy, Lepine et al. (2002) illustrate how male-dominated teams may, in some contexts, constitute the worst gender composition. Specifically, as the percentage of males on a team increased, there was an exponential increase in the tendency for making decisions that were overaggressive.

Based on a real-effort experiment, Ivanova-Stenzel & Kubler (2005) find that female and male performance differ most in mixed teams with revenue sharing between the team members, as men put in significantly more effort than women. Their data also indicate that women perform best when competing in pure female teams against male teams whereas men perform best when women are present or in a competitive environment.

Mannix & Neale (2005) find that gender composition has no relation with performance outcomes of the group. By examining the performances of mixed and same-sex dyads on a group assignment for a course 'Financial Statement Analysis and Auditing', Kris, Diane & Joel (2009) confirm the effectiveness of groups: Students performed both better than the mean of their members and than their best member. Comparing dyads' performances (in relationship to their cognitive abilities) they found all-female dyads underperforming vis-à-vis all-male and mixed dyads. It is suggested that the smaller gains for individuals working in all-female dyads resulted as a consequence of the prescriptive nature of gender stereotypes activated in all-female groups working in a traditionally male domain.

3 Hypotheses

Audit quality is market assessment and the joint probability of auditor find the error in the financial reports disclosed (DeAngelo, 1981b), which indicates that auditor's professional competence and independence are essential for understanding audit's impacts on quality of financial reports. In addition, auditing itself is a process of professional judgment and decision-making. So audit quality is decided finally by the auditor's individual ability of judgment and decision-making (Knechel, 2000). However, quality of judgment and decision-making depends on auditor's characteristics, include problem solving ability(Bierstaker & Wright,2001; Libby & Tan,1992), professional knowledge(B é dard & Chi,1993;Tan & Kao,1999), risk preference(Farmer,1993;Vannieuw,2007), work experience(Early,2002;Shelton,1999), independence(DeAngelo,1981b;Moore et al.,2006) and so on.

Research findings of psychology indicate there are remarkable characteristics differences between male and female. The differences are mainly as follows:

First, male and female have different cognitive style (Halpern, 2000; Tavris & Wade, 1984). Meyers-Levy's (1989) selection hypotheses indicate that there are differences between male and female in the processing of information. Male is selective and female is extensive, which result in high working efficiency and decision accuracy in complicated decision-making environment. In auditing, this kind of difference expresses more obviously. Female auditors are more effective than male auditors in identifying when financial statements are misstated because of fraud, which has been confirmed in many studies (Chung & Monroe, 2001; O'Donell & Johnson, 2001).

Second, though some studies claimed it is gender biased that male and female have different risk preference (Schubert et al., 1999), according to sociological theories, male are more radical and more willing to take risks, which has been proved right by many empirical and multi analysis (Eagley & Steffen, 1986; Feingold, 1994; Bauer & Turner, 1974; Coet & McDermott, 1979; Diberardinis et al., 1984; Seeborg et al., 1980). Besides this, Weber et al. (2002) find that compared with male, female are risk aversion in all fields. Some researches indicate that male are more likely to overconfident (Lundeberg et al., 1994) because of their stronger self-attribution than female (Beyer, 1990). For the reason above, female auditors are more risk aversion in auditing (Gold et al., 2009) so they will collect more evidence and reduce level of importance, which will improve audit quality.

Third, sociology theory expounds the relation between gender and morality. Female are more adamant when they deny any wrongdoing. Many researches have shown that female have better moral standards than male (Vermeir&Van Kenhove, 2008). Becker & Ulstad (2007) find female students are even harder to accept cheating in exams. The survey shows that there are gender differences in moral judgment social behavior scores (Nguyen et al., 2008) and female are more hate cheating (Whitley, 2001). So, compared with male, female are more independent (Tsui, 1996). Specially in accounting area Venezia (2008) find that female students in department of accounting have a higher level of moral reasoning than male students. Moreover, Eynon et al. (1997) show female auditors have stronger moral reasoning ability. Therefore, they will be more likely to truthfully reflect and report the misstatement.

To sum up, there are significant differences in gender with problem-solving ability, risk preference and independent. Female auditors are extensive when processing information, risk aversion and more independent. They will improve audit quality because of female special characteristics.

Finally, individual more accord with gender role in the same gender group than in the mixed gender group (Weber et al., 2009). That is to say, male groups mainly show individual male's characteristics and female groups mainly show individual female's characteristics. Thus, we hypothesize:

H1: Audit quality of female audit group is higher than male audit group⁴.

China Ministry of Finance issued a circular regarding the signature of CPA on audit reports in 2001. The circular stipulates that audit reports will be valid only be signed or sealed by certified public accountants and sealed by a certified public accountant firm or an auditor firm. Thus, after 2001 audit reports are not issued by one single auditor but jointly issued by two auditors. So, whether the gender composition of the two have impacts on judgment and decision-making in auditing?

Gender composition really has impacts on group decisions (Dufwenberg & Murenb, 2006). Ivanova-Stenzel & Kubler (2005) find performance depends on the composition of the team. They show that female and male performance differ most in mixed teams with revenue sharing between the team members, as men put in significantly more effort than women. Their data also indicate that women perform best when competing in pure female teams against male teams whereas men perform best when women are present or in a competitive environment.

Halpern (2000) believe that the mixed group out performance of female and male group because of different cognitive style, which is more important than ability in group decision-making. Instead many researches indicate that the performances of same gender group are better than mixed group (Barbieri & Light, 1992; Dalton, 1990; Stephenson, 1994; Underwood et al., 1990). The possible reasons are in mixed group cohesion decrease and conflicts aggravate (Fox et al., 1989; Jackson et al., 1991; Kirchmeyer, 1995; Korsgaard & Morris, 1993).

Furthermore, Williams & O'Reilly (1998) indicate that heterogeneity of ethnicity and gender have negative impacts on group cooperation and performance. One of the causes of the phenomenon is it is more satisfied to cooperate with people who has the same attitudes (Jackson et al., 1991). Therefore, from a homologous perspective, mixed group is less effective due to opportunity reduction of homologous communication (Byrne, 1971). Our second hypothesis is:

H2: Audit quality of female audit group and male audit group is higher than mixed group.4 Data and Variables

4.1 Sample construction and data

After 2001, audit reports of Chinese listed companies should be signed by two certified public accountants. Therefore, we select all Chinese companies listed in SEC (Shanghai Stock Exchange) and SZSE (Shenzhen Stock Exchange) from 2001-2008 as our research samples. The most important explanatory variable is auditor gender and the data is manually collected from the website of CICPA (Chinese Institute of Certified Public Accountants). Other financial information is from SONOFIN database. After dropping (1) samples in the financial industry, (2) samples whose data is not disclosed or missing in the database and the website, (3) samples whose audit reports are not signed by two auditors, (4) samples whose auditor gender are uncertain, we finally get 8,543 samples from 2001-2008, among the data, there are 791 female groups, 4,129 male groups and 3,623 mixed groups.

4.2 Variables

Audit quality is unobservable and prior studies commonly use earning management, audit fees, audit opinion, audit firm size and so on as proxy variable of audit quality. The frequently used proxy variable is earning management (Warfield et al., 1995; Becker et al., 1998; Reynolds & Francis, 2000; Frankel et al., 2002; Myers et al., 2003; Ashbaugh et al., 2003; Carey & Simnett, 2006; Blouin et al., 2007). Researches have proved that accruals estimated by cross-sectional Jones Model can efficiently measure the degree of earning management of the company (DeFond & Subramanyam, 1998; Bartov et al., 2001; Kothari, 2005). Xia (2003) find that among all the modified cross-sectional models, the Basic Jones Model and the Modified KS Model, which make estimations according to the industry they belong to and take the total accruals before the below-the-line items as a dependent variable in the estimation of characteristic parameters, prove to be most effective in detecting earnings management in Chinese stock market. In order to estimate current accruals, as the management of which is more frequent, AWCA (abnormal working capital accruals) is used as the proxy variable of audit quality (DeFond & Park, 2001; Carrey & Simnett, 2006). In this paper, we use accruals estimated by cross-sectional Jones Model, Modified KS Model and AWCA respectively as the proxy variable of audit quality. The estimations are as follows:

1. Accruals estimated by cross-sectional Jones Model (JDA):

$$GA_{it} / A_{it-1} = \omega_1 (1 / A_{it-1}) + \omega_2 (\Delta REV_{it} / A_{it-1}) + \omega_3 (PPE_{it} / A_{it-1}) + \varepsilon_{it}$$

$$NDA_{it} = \omega_1 (1 / A_{it-1}) + \omega_2 (\Delta REV_{it} / A_{it-1}) + \omega_3 (PPE_{it} / A_{it-1})$$

$$JDA_{it} = TA_{it} / A_{it-1} - NDA_{it}$$
(1)

2. Accruals estimated by Modified KS Model (KDA):

 $GA_{it} / A_{it-1} = \psi_1(1 / A_{it-1}) + \psi_2(REV_{it} / A_{it-1}) + \psi_3(COST_{it} / A_{it-1}) + \psi_4(PPE_{it} / A_{it-1}) + \varepsilon_{it}$ $NDA_{it} = \psi_1(1 / A_{it-1}) + \psi_2(REV_{it} / A_{it-1}) + \psi_3(COST_{it} / A_{it-1}) + \psi_4(PPE_{it} / A_{it-1})$ $KDA_{it} = TA_{it} / A_{it-1} - NDA_{it}$ (2)

3. Abnormal working capital accruals (AWCA):

$$AWCA_{it} = WC_{it} - WC_{it-1} * (REV_{it} / REV_{it-1})$$
(3)

A detailed explanation of variables is provided in Table1.

Table 1 Variable	s of DA	Regression	Model
------------------	---------	------------	-------

Variables	Definition
GA_{it}	Total accruals, calculated as operating profit minus operating cash flow
A_{it-1}	Total assets measured at the end of the year
ΔREV_{it}	Revenue difference between t period and t-1period
PPE _{it}	Fix assets measured at the end of the year
NDA _{it}	Non-discretional accruals of t period adjusted by total assets of t-1 period
TA_{it}	Below-the-line accruals, calculated as net profits minus operating cash flow
JDA _{it}	Discretional accruals calculated based on Jones model
REV_{it}	Operating Revenue of t period
COST _{it}	Operating Cost
KDA _{it}	Discretional accruals calculated based on KS model
AWCA _{it}	Abnormal working capital accruals
WC _{it}	Non-cash working capital, calculated as (current assets-cash & liquid investments)-(current liabilities- short-term debt)
REV_{it-1}	Operating Revenue of t-1 period

4.3 Empirical testing model

We also control for other characteristics of listed firms. There is a lot of empirical evidence showing that return on assets (ROA), leverage ratio (LEV), company size (SIZE), cash flow from operations (CFO), reputation of audit firms (AUDIT), whether the company suffer loss (LOSS) and growth(GW) have impacts on earning management (Watts & Zimmerman, 1983; Defond & Jiambalro, 1994; Warfield et al., 1995; Becker et al., 1998; Dechow et al., 1995; Myers et al., 2003; Ghosh & Moon., 2005; Lu, 1999). The factors mentioned above also influence audit fees. As such, we use the following two regressions to gauge the effect of gender and gender composition on audit quality and audit fees.

$$AQ_{it}(AE_{it}) = \alpha_0 + \alpha_1 GEN_{it} + \alpha_2 ROA_{it} + \alpha_3 LEV_{it} + \alpha_4 SIZE_{it} + \alpha_5 CFO_{it} + \alpha_6 AUDIT_{it} + \alpha_7 GW_{it} + \alpha_8 LOSS_{it} + \varepsilon_{it}$$
(H1)

$$AQ_{it}(AE_{it}) = \sigma_0 + \sigma_1 MALG_{it} + \sigma_2 FEMG + \sigma_3 ROA_{it} + \sigma_4 LEV_{it} + \sigma_5 SIZE_{it} + \sigma_6 CFO_{it} + \sigma_7 AUDIT_{it} + \sigma_8 GW_{it} + \sigma_9 LOSS_{it} + \varepsilon_{it}$$
(H2)

The further explanation of variables in the two models is displayed in Table2.

Variables	Definition
AQ_{it}	Audit quality and audit fees, refer to JDA, KDA, AWCA and AE
GEN _{it}	Auditors gender, if female group GEN =1 and if male group GEN=0
MALG _{it}	Gender composition of the auditors, if male group MALG=1 and else MALG=0
FEMG _{it}	Gender composition of the auditors, if female group FEMG=1 and else FEMG=0
ROA _{it}	Return on assets, calculated as net profit divided by total assets
LEV _{it}	Leverage, calculated as total liabilities divided by total assets
SIZE _{it}	The natural logarithm of total assets
CFO _{it}	Cash flow divides by total assets
AUDIT _{it}	If the audit firm is one of big four AUDIT=1, else AUDIT=0
GW_{it}	Revenue growth rate, calculated as (revenue of this period- revenue of last period)/revenue of last period
OP_{it}	Audit opinion, if audit opinion is unqualified opinion OP=1, else OP=0
LOSS _{it}	If net profit <0 LOSS=1, else LOSS=0

Table 2 Variables of Audit Quality Regression Model

5 Empirical Analysis

5.1 Descriptive statistics

Our samples are mainly distributed in manufacturing industry and the percentage is 58.54%, which shows in Table 3.

Table 3	Industry	Distribution	of the	Samples
---------	-----------------	--------------	--------	---------

year industry	2001	2002	2003	2004	2005	2006	2007	2008	Total	Percent
Farming,forestry,animalhusbandryand fishery(A)	16	18	25	32	29	32	36	36	224	2.62%
Mining and quarrying (B)	11	13	17	18	18	17	25	25	144	1.69%
Manufacturing (C)	457	492	582	613	636	691	739	791	5001	58.54%
Electricity, coal and water production & supply (D)	27	34	41	49	51	56	60	56	374	4.38%
Construction (E)	14	11	17	18	21	26	26	28	161	1.88%
Transportation and	30	35	44	43	50	54	58	58	372	4.35%

warehousing (F)										
Information technology (G)	37	48	62	63	60	64	76	77	487	5.70%
Wholesale and retail trade (H)	69	72	78	74	70	79	77	86	605	7.08%
Real estate (J)	26	33	43	47	47	51	56	61	364	4.26%
Social services (K)	21	23	28	30	30	33	42	40	248	2.90%
Communication and culture (L)	9	9	10	10	10	10	9	10	76	0.89%
Integrated (M)	57	59	62	62	62	66	60	62	487	5.70%
Total	774	847	1006	1059	1084	1179	1264	1330	8543	100.00%
Percent	9.06%	9.91%	11.78%	12.40%	12.69%	13.80%	14.80%	15.57%	100.00%	

Table 4 and Table 5 show the results of descriptive statistics.

Variables	Ν	Mean	Standard Deviation	Median	Min.	Max.
JDA	4079	0.005	0.155	0.002	-2.377	3.062
KDA	4079	0.002	0.153	0.000	-2.146	3.066
AWCA	4020	0.003	5.216	-0.012	-196.685	237.671
AE	3604	13.047	0.604	12.972	11.156	17.881
GEN	4080	0.162	0.369	0.000	0.000	1.000
SIZE	4080	21.230	1.100	21.149	14.937	26.632
CFO	4080	0.055	0.130	0.051	-1.405	3.444
ROA	4080	0.005	1.263	0.060	-45.552	26.060
LEV	4080	0.567	0.675	0.513	0.000	20.247
GW	4080	0.557	8.338	0.139	-1.046	400.677
AUDIT	4080	0.0532	0.224	0.000	0.000	1.000
LOSS	4080	0.123	0.329	0.000	0.000	1.000

Table 4 Sample Description of H1

Table 5 Sample Description of H2

Variables	Ν	Mean	Standard Deviation	Median	Min.	Max.
JDA	7054	0.007	0.268	0.003	-2.568	17.832
KDA	7054	0.004	0.268	0.000	-2.421	17.846
AWCA	6945	0.016	4.311	-0.011	-196.685	237.671
AE	6212	13.069	0.626	13.017	10.597	17.968
MALG	7055	0.484	0.500	0.000	0.000	1.000
FEMG	7055	0.094	0.292	0.000	0.000	1.000
SIZE	7055	21.255	1.092	21.163	14.937	27.809
CFO	7055	0.057	0.129	0.052	-1.405	3.444
ROA	7055	0.011	1.273	0.061	-53.959	26.060

LEV	7055	0.552	0.611	0.508	0.000	20.247
GW	7055	0.524	7.114	0.145	-1.046	400.677
AUDIT	7055	0.056	0.230	0.000	0.000	1.000
LOSS	7055	0.115	0.318	0.000	0.000	1.000

5.2 Univariate test

AUDIT

Table 3 and Table 4 show the correlation for regression variables. We can find that GEN and JDA, KDA, AWCA, AE are not correlative highly. Similarly, the association between FEMG and JDA, KDA, AWCA is not strong. FEMG and AE are negatively related at the significance level of 5%. However, the univariate test only provide preliminary evidence, regression analysis is required to provide more conclusive evidence.

	JDA	KDA	AWCA	AE	GEN	AUDIT
JDA	1.000	0.959***	0.384***	0.012	-0.011	-0.007
KDA		1.000	0.381***	0.007	-0.012	-0.017
AWCA			1.000	0.029*	-0.003	0.007
AE				1.000	0.013	0.003
GEN					1.000	0.186***

Table 6 Spearman Correlation of Variables in H1

Note: ***, **, * denote two-tailed significance levels of 1%, 5% and 10%, respectively.

Table 7 Spearman Correlation of Variables in H2

	JDA	KDA	AWCA	AE	MALG	FEMG	AUDIT	
JDA	1.000	0.972***	0.394***	-0.003	0.008	-0.007	-0.015	
KDA		1.000	0.391***	-0.002	0.009	-0.006	-0.020	
AWCA			1.000	-0.013	0.006	-0.0003	0.006	
AE				1.000	-0.001	-0.025**	-0.004	
MALG					1.000	-0.310***	-0.100***	
FEMG						1.000	0.130***	
AUDIT							1.000	

Note: ***, **, * denote two-tailed significance levels of 1%, 5% and 10%, respectively.

5.3 Regression analysis

We use positive and negative JDA, KDA and AWCA respectively to test our two hypotheses. Table 5 shows the regression results of H1. We can see that there is no significant relation between GEN and accruals, except the positive relation between GEN and negative JDA at 5% significance level. GEN and AE are positively related at 5% significance level, which indicates that audit fees are obviously higher when the two sighed auditor are all female.

Table 8 Results of H1 from OLS Regression

Variables	JDA	JDA	KDA	KDA	AWCA	AWCA	٨E
variables	(+)	(-)	(+)	(-)	(+)	(-)	AL

1.000

Tutun	0.2831***	-0.3298***	0.3372***	-0.3166***	6.5322**	-0.6424	6.1145***
Intercept	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.0129)	(0.2283)	(<.0001)
CEN	-0.0055	0.0114**	-0.0046	0.0086	-0.0604	0.0087	0.0459**
GEN	(0.5019)	(0.0418)	(0.5818)	(0.1159)	6.5322^{**} -0.64 (0.0129) $(0.22$ -0.0604 0.00 (0.8630) $(0.89$ 0.0725 -0.01 (0.4131) $(0.64$ 2.9184^{***} -0.130 $(<.0001)$ $(<.00)$ -0.3661^{***} 0.03 (0.0029) (0.16) -0.6681 0.02 (0.44320) (0.92) 0.4603 -0.05 (0.4458) (0.63) 0.3236^{***} -0.449 $(<.0001)$ $(<.00)$ -0.4773 -0.02 (0.2705) (0.69) 1803 221 54.74 3776 $<.0001$ $<.00$ 0.1926 0.93	(0.8994)	(0.0203)
DOA	0.0025	0.0049***	0.0015	0.0046***	0.0725	-0.0106	0.0021
KUA	(0.2336)	(0.0084)	(0.4993)	(0.0084)	(0.4131)	(0.6403)	(0.7526)
	0.0546***	-0.0445***	0.0557***	-0.0438***	2.9184***	-0.1303***	0.0822***
LEV	(<.0001)	(<.0001)	(<.0001)	(<.0001)	$\begin{array}{c} 6.5322^{**} \\ (0.0129) \\ -0.0604 \\ (0.8630) \\ 0.0725 \\ (0.4131) \\ (2.9184^{***} \\ -0) \\ (<.0001) \\ (0.3661^{***} \\ (0.0029) \\ (0.4603 \\ (0.4320) \\ 0.4603 \\ (0.4458) \\ (0.3236^{***} \\ -0) \\ (<.0001) \\ (0.2705) \\ 1803 \\ 54.74 \\ <.0001 \\ 0.1926 \end{array}$	(<.0001)	(<.0001)
CIZE	-0.0108***	0.0159***	-0.0135	0.0150***	-0.3661***	0.0344	0.3216***
SIZE	(0.0001)	(<.0001)	(<.0001)	(<.0001)	6.5322** (0.0129) -0.0604 (0.8630) 0.0725 (0.4131) 2.9184*** - (<.0001) -0.3661*** (0.0029) -0.6681 (0.4320) 0.4603 (0.4458) 0.3236*** - (<.0001) -0.4773 (0.2705) 1803 54.74 <.0001 0.1926	(0.1672)	(<.0001)
CEO	-0.4153***	-0.4880***	-0.3731***	-0.4455***	-0.6681	0.0218	0.0239
CFU	(<.0001)	(<.0001)	(<.0001)	(<.0001)	6.5322^{**} -0.644 (0.0129) $(0.228$ -0.0604 0.008 (0.8630) $(0.899$ 0.0725 -0.014 (0.4131) (0.640) 2.9184^{***} -0.1303 $(<.0001)$ $(<.000)$ -0.3661^{***} 0.034 (0.0029) (0.167) -0.6681 0.021 (0.4320) (0.927) 0.4603 -0.055 (0.4458) (0.632) 0.3236^{***} -0.4498 $(<.0001)$ $(<.000)$ -0.4773 -0.029 (0.2705) (0.697) 1803 $221'$ 54.74 3776 $<.0001$ $<.0000$ 0.1926 0.933	(0.9272)	(0.6655)
	0.0084	-0.0013	0.0094	-0.0006	0.4603	-0.0552	0.7542***
AUDIT	(0.5363)	(0.8957)	(0.5168)	(0.9523)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(0.6326)	(<.0001)
CW	0.0004	-0.0015***	0.0005*	-0.0013***	0.3236***	-0.4498***	-0.0015
Gw	(0.1522)	(0.0008)	(0.0914)	(0.0059)	6.5322^{**} -0.6424 (0.0129) (0.2283) -0.0604 0.0087 (0.8630) (0.8994) 0.0725 -0.0106 (0.4131) (0.6403) 2.9184^{***} -0.1303^{***} $(<.0001)$ $(<.0001)$ -0.3661^{***} 0.0344 (0.0029) (0.1672) -0.6681 0.0218 (0.4320) (0.9272) 0.4603 -0.0552 (0.4458) (0.6326) 0.3236^{***} -0.4498^{***} $(<.0001)$ $(<.0001)$ -0.4773 -0.0291 (0.2705) (0.6972) 1803 2217 54.74 3776.22 $<.0001$ $<.0001$ 0.1926 0.9316	(<.0001)	(0.1273)
1055	0.0338***	-0.0579***	0.0404***	-0.0522***	-0.4773	-0.0291	0.1187***
L033	(0.0009)	(<.0001)	(0.0001)	(<.0001)	(0.2705)	(0.6972)	(<.0001)
Ν	2107	1972	2036	2043	1803	2217	3604
F-value	53.22	163.56	48.20	148.08	54.74	3776.22	416.02
P-value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Adj R-Sq	0.1655	0.3975	0.1565	0.3656	0.1926	0.9316	0.4796

Note: ***, **, * denote two-tailed significance levels of 1%, 5% and 10%, respectively.

The regression results of H2 are shown in Table 6. We can see that there is no significant relation between MALG, FEMG and JDA, KDA, AWCA, but MALG is negatively related with AE at 1% significance level. The results of regression have proven that compared with mix group, male and female group do not decrease the accruals significantly to improve audit quality, as Van Knippenberg &Schippers (2007)find that it is not clear that gender composition of group impact on the group performance. However, our researches discover that audit fees are lower in male audit group than female and mix group.

Table 9	Results	of H2 fr	om OLS	Regression
---------	---------	----------	--------	------------

Variables	JDA (+)	JDA (-)	KDA (+)	KDA (-)	AWCA (+)	AWCA (-)	AE
Intercept	0.4072***	-0.3059***	0.3991***	-0.2984***	5.8105***	0.2263	5.8241***
	(0.0005)	(<.0001)	(0.0009)	(<.0001)	(0.0005)	(0.6426)	(<.0001)
MALG	-0.0082	-0.0019	-0.0063	-0.0006	-0.0039	-0.0517	-0.0443***
	(0.4774)	(0.5669)	(0.5907)	(0.8523)	(0.9816)	(0.2695)	(0.0002)
FEMG	-0.0075	0.0066	-0.0122	0.0058	-0.0768	-0.0485	-0.0046

	(0.7113)	(0.2268)	(0.5529)	(0.2834)	(0.7925)	(0.5468)	(0.8189)
DOA	-0.0069**	0.0070***	-0.0072**	0.0069***	-0.1549**	-0.0040	0.0044
KUA	(0.0782)	(<.0001)	(0.0700)	(<.0001)	(0.0241)	(0.8102)	(0.3617)
LEV	0.0652***	-0.0570***	0.0741***	-0.0567***	3.2968***	-0.1377***	0.0950***
LEV	(<.0001)	(<.0001)	(<.0001)	(<.0001)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(<.0001)	(<.0001)
SIZE	-0.0172***	0.0150***	-0.0171***	0.0144***	-0.3443***	-0.0066	0.3370***
SIZE	(0.0016)	(<.0001)	(0.0023)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(0.7718)	(<.0001)	
CEO	0.5322***	-0.4527***	0.5748***	-0.4309***	1.4153**	0.2517***	0.0257
$ \begin{array}{c} \text{CFO} & \begin{array}{c} 0.5322^{***} & -0.4527^{***} & 0.5748^{***} & -0.4309^{***} & 1.4153^{**} & 0.2517^{*} \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.0123) & (0.212 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.0123) & (0.212 \\ (0.6725) & (0.5544) & (0.6946) & (0.6538) & (0.2219) & (0.887 \\ 0.0011* & 0.0004 & 0.0000 & 0.0011*** & 0.2059*** & 0.2054 \\ \end{array} $	(0.2123)	(0.5547)					
	-0.0107	-0.0042	-0.0105	-0.0031	0.4571	-0.0144	0.7969***
$\begin{array}{c} \text{ROA} & \begin{array}{c} -0.0069^{**} & 0.0070^{***} & -0.0072^{**} & 0.0069^{***} & -0.15 \\ (0.0782) & (<.0001) & (0.0700) & (<.0001) & (0.0 \\ 0.0652^{***} & -0.0570^{***} & 0.0741^{***} & -0.0567^{***} & 3.296 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.001) & (<.0001) \\ \text{SIZE} & \begin{array}{c} -0.0172^{***} & 0.0150^{***} & -0.0171^{***} & 0.0144^{***} & -0.34 \\ (0.0016) & (<.0001) & (0.0023) & (<.0001) & (<.0001) \\ \text{CFO} & \begin{array}{c} 0.5322^{***} & -0.4527^{***} & 0.5748^{***} & -0.4309^{***} & 1.41 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) \\ \text{CFO} & \begin{array}{c} 0.5322^{***} & -0.4527^{***} & 0.5748^{***} & -0.4309^{***} & 1.41 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.0023) \\ (<.0001) & (<.0001) & (<.0001) & (0.0023) \\ (0.0918) & (0.1826) & (0.0538) & (0.2 \\ (0.0918) & (0.1826) & (0.1526) & (0.0083) & (<.0028) \\ (0.0918) & (0.1826) & (0.1526) & (0.0083) & (<.0028) \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.001) \\ \text{LOSS} & \begin{array}{c} 0.1134^{***} & -0.0541^{***} & 0.1169^{***} & -0.0502^{***} & -0.22 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) \\ (0.0011) & (0.001) & (<.0001) & (<.0001) \\ (0.4 \\ \text{N} & 3640 & 3414 & 3530 & 3524 & 31 \\ \text{F-value} & 24.92 & 228.82 & 28.02 & 218.82 & 99 \\ \text{P-value} & <.0001 & <.0001 & <.0001 & <.0001 & <.0001 \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001) \\ (.0001) & (.0001) & (.0001)$	(0.2219)	(0.8870)	(<.0001)				
CW	0.0011*	-0.0004	0.0009	-0.0011***	0.2959***	-0.3954***	-0.0012
$ \begin{array}{c} {\rm ROA} & \begin{array}{c} -0.0069^{**} & 0.0070^{***} & -0.0072^{**} & 0.0069^{***} & -0.1549^{**} & -0. \\ (0.0782) & (<.0001) & (0.0700) & (<.0001) & (0.0241) & (0.720) \\ \end{array} \\ {\rm LEV} & \begin{array}{c} 0.0652^{***} & -0.0570^{***} & 0.0741^{***} & -0.0567^{***} & 3.2968^{***} & -0.13 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) \\ \end{array} \\ {\rm SIZE} & \begin{array}{c} -0.0172^{***} & 0.0150^{***} & -0.0171^{***} & 0.0144^{***} & -0.3443^{***} & -0. \\ (0.0016) & (<.0001) & (0.0023) & (<.0001) & (<.0001) & (0.0123) \\ (0.0016) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.0123) & (0. \\ \end{array} \\ {\rm CFO} & \begin{array}{c} 0.5322^{***} & -0.4527^{***} & 0.5748^{***} & -0.4309^{***} & 1.4153^{**} & 0.25 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.0123) & (0. \\ \end{array} \\ {\rm AUDIT} & \begin{array}{c} -0.0107 & -0.042 & -0.0105 & -0.0031 & 0.4571 & -0. \\ (0.6725) & (0.5544) & (0.6946) & (0.6538) & (0.2219) & (0. \\ \end{array} \\ {\rm GW} & \begin{array}{c} 0.0011^{*} & -0.0004 & 0.0009 & -0.0011^{***} & 0.2959^{***} & -0.39 \\ (0.0918) & (0.1826) & (0.1526) & (0.0083) & (<.0001) & (<. \\ \end{array} \\ {\rm LOSS} & \begin{array}{c} 0.1134^{***} & -0.0541^{***} & 0.1169^{***} & -0.0502^{***} & -0.2036 & -0 \\ (<.0001) & (<.0001) & (<.0001) & (<.0001) & (<.0001) & (0.4721) & (0. \\ \end{array} \\ {\rm N} & 3640 & 3414 & 3530 & 3524 & 3147 & 3 \\ {\rm F-value} & 24.92 & 228.82 & 28.02 & 218.82 & 99.57 & 23 \\ {\rm F-value} & <.0001 & <.0001 & <.0001 & <.0001 & <.0001 & <.0001 & <.0001 \\ {\rm AUDI} & {\rm C}.0001 & <.0001 & <.0001 & <.0001 & <. \\ {\rm AUDI} & {\rm COO} \\ {\rm CADI} & {\rm COO} & {\rm COO}$	(<.0001)	(0.2286)					
LOSS	0.1134***	-0.0541***	0.1169***	-0.0502***	-0.2036	-0.0012	0.1048***
L033	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(0.4721)	(0.9864)	(<.0001)
Ν	3640	3414	3530	3524	3147	3798	6212
F-value	24.92	228.82	28.02	218.82	99.57	2319.02	691.89
P-value	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001
Adj R-Sq	0.0558	0.3753	0.0645	0.3575	0.2200	0.8460	0.5003

5.4 Robustness test

In China, the two auditors who signed in the audit reports are usually different levels. In most cases, one is the partner or chief accountant of the audit firm and the other is audit project leader. This will reduce conflict and enhance group cohesion in some extent because of authority. But on the other hand, this maybe affects our empirical results. In China signature order is consistence with the level. So we divide the sample of mix group into two subsamples: FM group and MF group. In FM group the high level is female and MF group is just on the contrary. The results of the subsamples (Table 7 and Table 8) are consistent with our previous findings.

Variables	JDA	KDA	AWCA	AE	OP
Internet	0.2169***	0.2281***	2.2993**	6.0140***	6.3766***
Intercept	(<.0001)	(<.0001)	(0.0215)	(<.0001)	(<.0001)
MALC	0.0042	0.0041	0.1065	-0.0288*	0.0165
MALG	(0.2852)	(0.2923)	$\begin{array}{c} (0.3468) \\ (0.0608 \\ (0.0135 \\ (0.7132) \\ (0.5452) \end{array}$	(0.9016)	
FEMO	-0.0010	-0.0016	0.0608	0.0135	-0.2379
FEMG	(0.8595)	(0.7787)	(0.7132)	(0.5452)	(0.2591)
DOA	-0.0004	-0.0010	0.0262	-0.0014	-0.0524*
KUA	(0.7751)	(0.4727)	(0.5285)	(0.8271)	(0.0568)
	0.0497***	0.0502***	0.5273***	0.0819***	3.1700***
LEV	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
SIZE	-0.0081***	-0.0087***	-0.1200***	0.3278***	-0.5099***

Table10 Results of Robust Test (FM)

	(<.0001)	(<.0001)	(0.0100)	(<.0001)	(<.0001)
CEO	-0.0015	0.0070	-0.6751*	0.0304	-1.8382***
CFO	(0.9089)	(0.5828)	(0.0689)	(0.5431)	(<.0001)
	-0.0027	-0.0030	0.1661	0.7728***	0.2473
AUDII	(0.7253)	(0.6837)	(0.4405)	(<.0001)	(0.4507)
CW	0.0006***	0.0007***	0.3848***	0.0012 (0.1908)	
Gw	(0.0039)	(0.0004)	(<.0001)	-0.0012 (0.1808)	
LOGG	0.0372***	0.0370***	-0.1578	0.0968***	1.1237***
LUSS	(<.0001)	(<.0001)	(0.2996)	(<.0001)	(<.0001)
Ν	5346	5346	5271	4715	5347
F-value	66.95	70.79	468.20	514.26	
Wald Chi-Square					532.78
P-value	<.0001	<.0001	<.0001	<.0001	<.0001
Adj R-Sq	0.1000	0.1052	0.4438	0.4949	

Note: ***, **, * denote two-tailed significance levels of 1%, 5% and 10%, respectively.

Table 11 Results of Robust Test (MF)

Variables	JDA	KDA	AWCA	AE	OP
Tedanarad	0.4678***	0.4732***	3. 5699***	5.8800***	5.7683***
Intercept	(<.0001)	(<.0001)	(0.0005)	(<.0001)	(<.0001)
MALC	-0.0066	-0.0078	-0.0190	-0.0573***	-0.0446
MALG	(0.4076)	(0.3221)	(0.8605)	(<.0001)	(0.7050)
FEMO	-0.0146	-0.0160	-0.0549	-0.0161	-0.2824
FEMG	(0.2348)	(0.1938)	(0.7433)	(0.4558)	(0.1630)
DOA	-0.0056**	-0.0059**	-0.0717**	0.0066	-0.0603**
KOA	(0.0270)	(0.0207)	(0.0380)	(0.1779)	(0.0209)
	0.0524***	0.0532***	0.8530***	0.0987***	3.3138***
LEV	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
CLZE	-0.0210***	-0.0213***	-0.1876***	0.3348***	-0.4839***
SIZE	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
CEO	0.5070***	0.5135***	0.6629*	0.0181	-1.7922***
CFU	(<.0001)	(<.0001)	(0.0702)	(0.6999)	(<.0001)
	0. 0030	0.0018	0.2418	0.7927***	0.0536
AUDII	(0.8559)	(0.9111)	(0.2788)	(<.0001)	(0.8766)
CW	0.0011**	0.0012**	0.4005***	-0.0013	
Gw	(0.0183)	(0.0134)	(<.0001)	(0.1675)	
LOSS	0.0734***	0.0721***	-0.0104	0.1218***	1.2472***
LUSS	(<.0001)	(<.0001)	(0.9457)	(<.0001)	(<.0001)
Ν	5787	5787	5694	5101	5788
F-value	60.64	62.48	457.39	549.16	
Wald Chi-Square					602.99
P-value	<.0001	<.0001	<.0001	<.0001	<.0001
Adj R-Sq	0.0849	0.0873	0.4191	0.4917	

Note: ***, **, * denote two-tailed significance levels of 1%, 5% and 10%, respectively.

We add year variables in the regression model in order to control the year effect to the result. In addition we use the model based on performance-matched discretionary accruals (Kothari, 2005) to make comparisons with the results using traditional discretionary accrual measures. The results are all consistent with our previous findings.⁵

6 Conclusions

This study investigates the relationship between gender, gender composition of the auditors and audit quality in Chinese market. Our results indicate that female group auditors can increase income decreasing discretionary accruals at 5% level of significance. There is no significant relationship between the sex composition of auditors and absolute discretionary accruals, income increasing discretionary accruals and income decreasing discretionary accruals, which is different from the results of Niskanen et al. (2009). What's more, female auditors charge more than male auditors. The most probable reason is that compared with male auditors, female auditors are risk aversion, so they will spend more time and labor on the audit project they are responsible for. The audit quality is not improved, but the audit fees increase, which charged based on time and labor. As for audit fees of mix group are higher than male group, this may be the cause of the two aspects: first, the gender difference described above; second, though audit quality does not change, cohesive force of the group become stronger because of similarity, so the audit efficiency is raised and the time is shorten as a result. The audit fees naturally decrease.

This paper makes a wide and in-depth investigation about the relationship between auditor gender, gender composition and audit quality based on the special institution background in China. We use a variety of methods measuring audit quality to ensure the veracity and reliability of our results.

The limitation of the paper is that it is difficult to control the effects of audit group on auditor individual. We can not control the effect of same gender group on gender, although individual fit better with sex roles in same gender group than in mixed group (Weber et al., 2009).

References

[1] Atkinson, S. M., S. B. Baird and M. B. Frye, 2003. Do female mutual fund managers manage differently? Journal of Financial Research 26: 1-18.

[2] Balsam S, J Krishnan and J. S. Yang. 2003. Auditor industry specialization and earnings quality. Auditing A Journal of Practice and Theory(22):71-97.

[3] Barber, B., and T. Odean. 2001. Boys will be boys: Gender, overconfidence, and common stock investment. Quarterly Journal of Economics 116: 261-92.

[4] Bazerman, M. H., K. P. Morgan, and G. F. Loewensein. 1997. The impossibility of auditor independence. Sloan Management Review. (Summer):89-94.

[5] Cadbury, A.1992. The financial aspects of corporate governance. London: Committee on the Financial Aspects of Corporate Governance.

[6] Carcello, J.V. & Neal., T.L. 2003. Audit committee characteristics and auditor dismissals following "new" going-concern reports. The Accounting Review: 95-117.

[7] Chen, Charles J. P., Chen, Shimin and Su Xijia. 2001. Profitability regulation, earnings management and modified audit opinion. Auditing: A Journal of Practice and Theory. (20):9-30.

[8] Chin, C-L., and H-Y Chi. 2008. Sex Matters: gender differences in audit quality. Working paper presented at the 2008 Annual Meeting of the American Accounting Association, August 3-6, Anaheim.

[9] Chung, Janne & Gary Monroe .2001. A research note on the effects of gender and task complexity on an audit judgment. Behavioral Research in Accounting, 13, pp. 111-126.

[10] Church, B. K., Davis, S. M. and McCracken, S. A. 2008. The auditor's reporting model: A literature overview and research synthesis, Accounting Horizons, 22(1), pp. 69-90.

[11] DeAngelo L. 1981. Auditor size and audit quality. Journal of Accounting and Economics, (3): 183-199.

[12] DeFond. M. C.W.Park. 2001. The reversal of abnormal accruals and the market valuation of earnings surprises. The Accounting Review. 76: 375-404.

[13] Francis, Jere R. and Declun Wang. 2008. The joint effect of investor protection and Big 4 audits on earnings quality around the world. Contemporary Accounting Research(1):157-91.

[14] Frankel, Johnson and Nelson. 2002. The relations between auditors fee for non-audit services and earnings quality. The Accounting Review,(77):71-105.

[15] Hardies, Breesch & Branson. 2010. Do (fe)male auditors impair audit quality? Evidence from modified audit opinions. Working paper.

[16] Hampel, R. 1998. Committee on corporate governance: final report. London: Gee Publishing.

[17] Hay, D. C., and R. W. Knechel. 2010. The effects of advertising and solicitation on audit fees. Journal of Accounting and Public Policy 29 (1): pp. 60-81.

[18] Huang & Kisgen. 2009. Gender and Corporate Finance. Working paper.

[19] Ittonen, Miettinen & Vahamaa. 2008. Does female representation on audit committees affect audit fees? Working paper.

[20] Ivanova-Stenzel, Radosveta & Dorothea Kübler. 2005. Courtesy and idleness: gender differences in team work and team competition. SFB 649 Discussion Paper 2005-049.

[21] Jackson, S., Brett, J., Sessa, V., Cooper, D., Julin, J., & Peyronnin, K. 1991. Some differences make a difference: individual dissimilarity and group heterogeneity as correlates of recruitment, promotions and turnover. Journal of Applied Psychology, 76, 675-689.

[22] Jianqiao Lu, 1999. The empirical study of earning management: evidence from Chinese listed companies. China Accounting Research, 9: 25-35

[23] Knechel, R. W. 2000. Behavioral research in auditing and its impact on audit education, Issues in Accounting Education, 15(4), pp. 695-712.

[24] Kothari, S.P, Andrew J. Leone, Charles E. Wasley. 2005. Performance matched discretionary accrual measures. Journal of Accounting and Economics, 39:163-197.

[25] Kris, Diane & Joel. 2008. Male and female auditors: who in this land is fairest of all? Working paper.[26] Levi, Maurice D., Kai Li, and Feng Zhang. 2008. Mergers and acquisitions: the role of gender. Working paper.

[27] Lijun Xia, 2003. Application of earnings management measuring models in the Chinese stock market. China Accounting and Finance Review 5: 123-154

[28] Meyers-Levy, Joan. 1989. Gender differences in information processing: a selectivity interpretation. Patricia Cafferata & Alice M. Tybout (Eds) Cognitive and Affective Responses to Advertising. Lexington (Mass.): Lexington Books, pp. 219-260.

[29] Terrence B. O Keefe, Dan. A. Simunic, Michael T Stein. 1994. The production of audit services: evidence from a major public accounting firm. Journal of Accounting Research (3)241-262.

[30] Watts R, Zimmerman J. 1983. Agency problems, auditing, and the theory of the firm: some evidence. Journal of law and economics, 26(3):613-633.

[31] Weber, Bernhard; Marion Wittchen & Guido Hertel. 2009. Gendered ways to motivation gains in

groups sex roles. A Journal of Research, in press.

[32] Williams, K., & O'Reilly, C. 1998. The complexity of diversity: a review of forty years of research. In B. Staw & R. Sutton (Eds.), Research in organizational behavior (Vol. 21, pp. 77-140). Greenwich, CT: JAI Press.

[33] Wolfers, Justin. 2006. Diagnosing discrimination: stock returns and CEO gender, Journal of the European Economic Association 4, 531-541.

[34] Ye, Zhang & Rezaee. 2010. Does top executive gender diversity affect earnings quality? A large sample analysis of Chinese listed firms. Advances in Accounting, incorporating Advances in International Accounting. In press.

¹ Shi Dan, Ph.D candidate at the Guanghua School of Management, Peking University.

² Corresponding author, Liwei, Ph.D candidate at the Guanghua School of Management, Peking University.

³ In recent years, a number of well-known enterprises at home and abroad such as Enron, WorldCom, Xerox, Yin Guangxia, Zhengbaiwen, have financial scandal, which caused a worldwide integrity of the accounting crisis.

In China audit reports should be signed by two auditors. If the two auditors are both female, we call female group; if the two auditors are both male, we call male group; if one is female and the other is male, we call mix group. ⁵ For space reasons, we don't show the regression results.