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Auditor Industry Specialization, Audit Experience and Accounting Restatement

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Abstract: This study empirically explored, the influence of experience on auditor specialization and experience to provide empirical evidence for management of how to select high audit quality auditor (firms). The empirical data including listed companies in Taiwan from 2000-2009. This study use regression to test the relationship between auditor's expertise, experience and their audit quality. The empirical results for impacts of industry specialists indicated that companies audited by industry specialist auditors (firms) are less likely than companies audited non-specialist auditors (firms) to facing accounting restatements. This study also find that industry experience of auditors is significantly negatively associated company accounting restatements. Since, the restatement of financial restatements is a negative image for the company, this study suggest company managements hiring industry specialist auditor or an experienced auditor can reduce the possibility of restatement. For stakeholders, company managements hiring industry specialist or an experienced auditor signals that this company may possessed better financial statement quality. The results of this study extend literature by providing empirical evidence to the importance of auditor experience on their audit quality while the role of audit experience in forming expertise has been ignored by prior studies. The study contribute to auditor specialization literature by providing the evidence for the impacts of audit experience of auditor specialization and accounting restatement which is suggested to be one of the most appreciable quality of externally reported financial statement by prior studies.

Key words: Auditor's industry specialty, auditor's experience, accounting restatement, appreciable, experience

INTRODUCTION

The impact of auditor expertise on audit quality has been extensively discussed in accounting and auditing studies and specialist auditors tend to produce higher-quality audits (Balsam *et al*., 2003; Chin and Chi, 2009; Dunn and Mayhew, 2004; Krishnan, 2003; Lim and Tan, 2008; Payne, 2008; Romanus *et al*., 2008; Schauer, 2002). Prior empirical studies have commonly used firm-year to calculate the market share of audit firms (or auditors) and identify specialists for each year as a means of measures auditor specialization. While this identification procedure is simple and clear, it ignores the role of audit experience in forming expertise and audit experience should be an important component for determining industry auditor specialization. Numerous empirical studies have focused on industry specialist auditors which measured annual year market share; however, researchers have not yet empirically demonstrated the influence of auditor experience. As such, the purpose of this study is to explore empirically the influence of experience on auditor specialization.

Prior studies have revealed that specialist auditors provide higher-quality audits in general (Balsam *et al*., 2003; Chin and Chi, 2009; Dunn and Mayhew, 2004; Krishnan, 2003; Lim and Tan, 2008; Payne, 2008; Romanus *et al*., 2008; Schauer, 2002). Furthermore, researcher have suggested that the higher quality provide by industry specialist auditors results in more positive market reactions (Balsam *et al*., 2003; Dunn and Mayhew, 2004; Lim and Tan, 2008; Datar *et al*., 1991; Willenborg, 1999; Balvers *et al*., 1988) and higher audit fees (Basioudis and Francis, 2007; Ferguson *et al*., 2003; Francis *et al*., 2005; Zerni, 2011).

Because, it has been demonstrate that industry specialist auditors provide higher audit quality, the forming process of their audit quality has also been noticed. Concerning the influence of audit experience, behavioral experimental studies have found that auditor performance is enhanced by industry-based experience (Bedard and Biggs, 1991; Biggs *et al*., 1993; Bonner and Lewis, 1990; Moroney, 2007; Moroney and Carey, 2011) and industry specialists can benefit from their specialization experience (Moroney and Carey, 2011). Moroney (2007) indicated that industry specialists without task-based experience can outperform auditors who have neither industry nor task-based experience. Solomon *et al*. (1999) also indicated that the time industry specialists spend on auditing clients in a single industry increases their experience of on the job and staff training. In addition, studies on audit tenure have revealed that audit quality may increase by developing a greater

understanding of a client's business and industry (Carcello and Nagy, 2004; Myers *et al*., 2005; Johnson *et al*., 2002; Geiger and Raghunandan, 2002; Palmrose, 1986a). For instance, Cenker and Nagy (2008) suggested that a better understanding of a client's industry could lead to a higher quality audit; therefore, audit experienceshould influence audit quality. Simply speaking, audit quality of auditors that become industry specialists during their first year should not be the same as that of auditors who have 5 years of industry specialist experience. Prior empirical studies have typically used firm-year to calculate market share and identify specialists annually; however, researchers have not yet empirically demonstrated the influence of audit experience.

Among financial reporting for quality indicators, accounting restatement is the mostappreciable quality of externally reported financial statements. For regulars, Schroeder (2001), indicated that the Securities and Exchange Commission (SEC) considers accounting restatements "the most visible indicator of improper accounting". For capital markets, Richardson *et al.* (2002) suggested that accounting restatements are caused by managers who adopt more aggressive accounting policies. Because auditors are required to ensure the quality of financial statements, they play a critical role in financial reporting quality. Further for reducing accounting restatements Chin and Chi (2009) and Romanus *et al.* (2008) suggested that, compared to companies that are audited by non-specialist auditors, companies audited by specialist auditors are less likely to issue accounting restatements.

The empirical results for impacts of industry specialists suggest that that companies audited by industry specialist auditors (firms) are less likely than companies audited non-specialist auditors (firms) to process accounting restatements, complies with the results of Chin and Chi (2009). For the impacts of audit experience, this study find that industry experience of auditors is significantly negatively associated company accounting restatements. Furthermore, for the influence of industry specialist experience, this study find that support our hypothesis, the impact of industry specialization on audit quality will be more significant for more experienced industry specialist auditors while the influence of audit firm specialization is decreasing by auditor industry specialist experience. However, we do not find the evidence for the effects of specialist auditors with less specialist experience in a specific industry on audit quality increases with industry experience.

The results of this study extend literature by providing empirical evidence to demonstrate the important of auditor experience on their audit quality while the role of audit experience in forming expertise has been ignored by prior studies. Furthermore, this study contribute to auditor specialization literature by providing the evidence for the impacts of audit experience of auditor specialization and accounting restatement which is suggested to be one of the most appreciable quality of externally reported financial statement by prior studies.

Institutional background, literature review and hypotheses development

Institutional background: In contrast to audit reports of public companies which are only required to disclose the names and cities of audit firms in the US, the regulations in Taiwan require that two audit partnersfrom the same audit firm certify audit reports of public companies. Additionally, reported must also include the audit partners' names. According to the Taiwan Certified Public Accountant Act, Article 20, A CPA may act individually in establishing a single-person accounting firm or two or more CPAs may act together either as cosignatories co-located entities in organizing a cosignatory co-location accounting firm or as partners in organizing a joint accounting firm to engage in CPA practice.

The study also defines the term "cosignatory co-location accounting firm" as a form of business that is run together by co-located cosignatories who accept business separately and assume liabilities separately. Dissimilar to the audit environment in the US which primarily operate in a partnership style, most accounting firms in Taiwan are operated as co-located cosignatory accounting firms. Because auditors in Taiwan accept business and assume liabilities separately, industry specialty and experience are moreimportant for individual auditors.

As prior studies have suggested, knowledge gained from experiences will influence an auditors' judgment; therefore, audit quality should vary with the experience of the specialist auditor. Although, prior empirical studies have widely discussed the influence of industry specialist auditors on quality of financial reporting, most have used one-year market share to measure auditors' industry specializations. Because of this method, research has not yet empirically demonstrated the influence of audit experience. The regulations in Taiwan require that audit partners disclose their names in audit reports which provides us the opportunity to examine the effects of experience on audit quality. By using this unique setting, this study will trace the audit experience of auditors and investigate whether general audit experience, industry specific experience or both drive the differential audit quality of industry specialization.

Literature review and hypotheses development: Prior studies of auditor specialization have revealed that specialist auditors provide higher-quality audits by restraining discretionary accruals (Balsam *et al*., 2003; Krishnan, 2003), improving disclosure quality (Balsam *et al*., 2003; Dunn and Mayhew, 2004; Payne, 2008; Schauer, 2002), diminishing incidence of fraud (Carcello and Nagy, 2004) and reducing accounting restatement (Chin and Chi, 2009; Romanus *et al*., 2008). For earnings quality (Balsam *et al*., 2003; Krishnan, 2003) found that firms that were audited by industry specialists have lower abnormal accruals. Chin and Chi (2009) also demonstrated that clients of industry specialists were less likely to make SEC-prompted restatements. Using AIMR scores to measure financial reporting quality (Dunn and Mayhew, 2004) found a positive relation with disclosure quality and the indicator that an industry expert conducted the audit. Moreover, Carcello and Nagy (2004) indicated that clients who were audited by industry specialist had a lower incidence of financial fraud. Prior studies have also suggested that companies that were audited by industry specialists experienced more positive market reactions (Balsam *et al*., 2003; Dunn and Mayhew, 2004; Lim and Tan, 2008; Pittman and Fortin, 2004) and industry specialists could obtain audit fee premiums zby providing higher quality audits (Basioudis and Francis, 2007; Ferguson *et al*., 2003; Francis *et al*., 2005; Zerni, 2011).

However, although researchers have extensively discussed the impact of auditor expertise on audit quality, most auditor specialization related studies have ignored the influence of auditor experience. Ferguson *et al*. (2003), indicated that extensive industry knowledge resides in individual experts and is acquired through experience working in a specific industry. That is, researchers should consider auditors' experience in auditing a specific industry as a measure for auditor specializations. Studies of audit experience have also found that auditors' knowledge, acquired through experience, is an important component of audit expertise. Research in professional settings has demonstrated that both task and industry-based knowledge may improve judgment quality by recalling appropriate information, combining information in unique ways and disregarding distracting information (Moroney, 2007; Moroney and Carey, 2011; Bonner, 1990; Bonner *et al*., 1992; Libby and Luft, 1993; Paulus and Yang, 2000; Smith and Kida, 1991; Heiman-Hoffman *et al*., 1994).

Prior empirical research typically used firm-year to calculate the market share of auditors (or audit firms) and identify specialists annually. That is, researchers have calculated auditor specialization separately every single year. While this identification procedure is simple and clear, it ignores the role of audit experience in forming expertise. However, audit experience should be an important component for auditor industry specialization. Ferguson *et al*. (2003) indicated that extensive industry knowledge resides in the individual expert and is acquired through experience working in a specific industry; that is, researchers should consider auditor experience in a specific industry to measure auditor specializations. As numerous empirical studies have focused on industry specialist auditors, researchers have not yet empirically demonstrated the influence of audit experience. As such, the purpose of this study is to explore empirically the influence of experience on auditor specialization.

Behavioral experimental studies have demonstrate that an individual's task knowledge may improve judgment quality by recalling appropriate information, combining information in unique ways and disregarding distracting information for individuals (Bonner, 1990; Bonner *et al*., 1992; Libby and Luft, 1993; Paulus and Yang, 2000; Smith and Kida, 1991; Frederick *et al*., 1994).

Examining the association between individual auditors' experiences and professional judgments, researchers have found that experience of individual auditors effect professional judgment (Bonner, 1990; Frederick *et al*., 1994; Agoglia *et al*., 2009; Lehmann and Norman, 2006). By examining the effect of experience in selecting and weighting analytical procedures for risk task and control risk task of auditors, using an experimental method Bonner (1990) suggested that task-specific knowledge aided the performance of experienced auditors in cue selection and cue weighting components only in analytical risk assessments. Additionally Frederick *et al*. (1994) used the structure of auditors' knowledge of financial statement errors to examine the association between individual auditor's experience and his or her professional judgments. These researchers found that, while the categorizations of staff (who have less experience planning audit tests organized by audit objectives) were more closely related to auditing standards and textbooks, auditor categories appeared to be influenced by audit planning and testing procedures. Similarly, Lehmann and Norman (2006) investigated problem representation and judgment by auditing professionals within the context of a going-concern task and found that more experienced auditors has more concise problem representations than did novice auditors. Moreover Agoglia *et al*. (2009) extended their studies to the experience effect of fraud assessment documentation structure on the audit review team's ability to control weaknesses. Findings suggest that task-specific

experience moderated the effect of documentation structure on reviewers' identifications of control weakness.

MATERIALS AND METHODS

The effects of industry experience: Prior studies of audit experience have suggested that auditors' knowledge as acquired through experience, is an important component of audit expertise. Research in professional settings has demonstrated that an individual's task knowledge may improve his or her judgment quality by recalling appropriate information, combining information in unique ways and disregarding distracting information (Bonner, 1990; Bonner *et al*., 1992; Libby and Luft, 1993; Paulus and Yang, 2000; Smith and Kida, 1991; Frederick *et al*., 1994).

Concerning the association between industry-based experience and auditor performance, experimental studies have suggested that industry experience and training provide auditors with opportunities to accumulate sub-specialty knowledge (Bonner and Lewis, 1990; Bonner, 1990; Taylor, 2000). In addition, studies related to audit tenure have suggested that audit quality can be enhanced by developing greater understanding of a client's business and industry (Carcello and Nagy, 2004; Myers *et al*., 2005; Johnson *et al*., 2002; Geiger and Raghunandan, 2002; Palmrose, 1986b). Cenker and Nagy (2008) also indicated that a better understanding of a client's industry would lead to higher quality audits. According to the literature and principles, auditors with more industry experience should provide higher quality audits.

From the viewpoint of experience in the process of becoming an industry specialist (Moroney and Carey, 2011) documented that auditors gain experience that is more relevant as they move along the continuum from novice to expert and continued experience in auditing within one industry will improve non-specialist auditor performance. They also indicated that while knowledge obtained from task experience can be transferred from one client to another, without relevant industry knowledge, the benefit of task experience is limited. Moreover Biggs *et al*. (1993) suggested that industry experience provides the opportunity to understand the influence of industry-specific economic events for some clients.

In practice, audit quality of those auditors that become industry specialists after the first year should not be the same as that of auditors who have five (or even more) years of industry specialist experience. This is especially, the case when the "first-year specialist" audits this industry for the first time and he or she becomes a specialist only because he or she is engaged by a large company. From this argument, the incremental effects of auditor specialization on audit quality should increase with specialist experience. Consequently, this study proposes that compared to less experienced industry specialist auditors who become specialist more lately, the incremental audit quality for more experienced industry specialist auditors who become specialist after a longer period should be higher. As such, the first hypothesis is developed as follows:

- H_1: compared to less experienced industry specialist auditors, the impact of industry specialization on audit quality will be more significant for more experienced industry specialist auditors

Except for the specialist experience of auditors, non-specialist experience in a specific industry also provides industry expertise. In practice, although the incremental effects of auditor specialization on audit quality of "younger" (fewer years experience) specialist auditors may be lower than that of "older" (more years experience) specialist auditors, non-specialist experience in auditing other clients may offer a context that auditors can refer to which could help them with a task set in a specific industry. Based on this argument, the effects of specialist auditors with less specialist experience in a specific industry on audit quality should increase with industry experience. Consequently, this study proposes that, for auditors who become specialist quicker, the incremental audit quality of industry specialist auditors depends on the auditor's industry experience stry-related knowledge. Moroney and Carey (2011) suggested that although sustained exposure to clients within a single industry initially improves auditor performance. Therefore, there may be merit in non-specialist auditors having a number of clients across a few industries. The second hypothesis is developed as follows.

H_2: Compared to less experienced industry auditors, the impacts of industry specialization on audit quality will be more significant for more experienced industry auditors

Research design

Measures of auditor industry specialization: Following prior studies (Balsam *et al*., 2003; Chin and Chi, 2009; Krishnan, 2003; Carcello and Nagy, 2004; Cenker and Nagy, 2008), we use auditors' market shares to measure auditor specialization. Because, the most often used basis of measuring market share is the total sales of clients in a specific industry. We then rank all auditors in each industry by their market share and define the top 10% as industry specialist audit Partners to construct and

indicator variable (PSPE) that will equal one if specific individual audit partner is an industry specialist and zero otherwise. Similar, we will rank all auditors in each industry by their market share and define the top 20% as industry specialist audit Firms to construct and indicator variable (FSPE) that will equal one if the audit firm is an industry specialist and zero otherwise.

Because prior studies have indicated that, when knowledge provides important explanations for variations in auditors' industry expertise, it is difficult for partners to share knowledge with other partners within an audit firm or practice office (Chin and Chi, 2009), we will only use industry specialization at the partner level to test the experience of auditors on audit quality. In Taiwan, two partners must audit the financial statements of public companies and both must sign their names to the audit reports. This requirement for dual signatures raises a measurement issue concerning the identification of individual specialists. Grounded on the assumption of knowledge spillover which ever partner is the specialist can share his or her knowledge with the entire audit team. Consequently, as long as one of a company's auditors is a specialist, the company is classified as a specialist group.

Measures of auditor experience: Prior studies on audit experience have suggested that auditors' knowledge as acquired through experience, is an important component of audit expertise. Research in professional settings have also demonstrated that an individual's task knowledge may improve judgment quality by increase the auditor's ability to recall appropriate information, combine information in unique ways and disregard distracting information (Bonner, 1990; Bonner *et al*., 1992; Libby and Luft, 1993; Paulus and Yang, 2000; Smith and Kida, 1991; Frederick *et al*., 1994).

From the viewpoint of knowledge accumulation as the number clients that an auditor has audited increases, the task experience of the auditor increases and these experience and training provide auditors with an opportunity to accumulate task knowledge. Additionally, seniority may also influence an individual's judgment quality. As individuals gain seniority, the number of opportunities for auditing-related works also increases. As such, audit quality enhances with the increasing knowledge that is obtained from experience. Consequently, this study considered both the number of clients audited and the seniority of the auditor when measuring experience.

Measures of auditor industry experience: Since, the general experience in auditing clients in other industries may also provide valuable knowledge and help auditors with task in different industries, this study will use the total number of times audits in all industry to measure the general experience of an auditor. For calculating the "total number of times audits" generally, we will first trace the years an auditor has worked in the industry from 1983 to the certain year and then identified the number of clients this auditor have in all industry. After that, we use the total number of clients in these years he (or she) has audited to measure the industry experience an auditor has.

Measures of auditor general experience: This study will use the total number of times audits in a specific industry to measure the industry experience of an auditor. For calculating the "total number of times audits" in a specific industry, we will first trace the years an auditor has worked in the industry from 1983 to the certain year and then identified the number of clients this auditor have in this industry. After that, we use the total number of clients in these years he (or she) has audited in the specific industry to measure the industry experience an auditor has.

Empirical model: To examine the hypotheses, this study provides the following regression to test or hypotheses according to (Chin and Chi, 2009):

$$RES = \alpha_0 + \alpha_1 FSPE + \alpha_2 PSPE + \alpha_3 EXPIND + \alpha_4 SIZE + \alpha_5 ROA + \alpha_6 LEV + \alpha_7 RAISE + \delta YEAR + \varphi INDUSTRY + \varepsilon \quad (1)$$

Where:

RES = An indicator variable equals to one if the company i restates its financial statement in year t and zero otherwise

FSPE = An indicator variable equals to one if company I audited by a specialist audit firm in year t and zero otherwise

PSPE = An indicator variable equals to one if company i audited by a specialist audit partner in year t and zero otherwise

EXPIND = The total number of clients in these years he (or she) has audited to measure the industry experience an auditor has

SIZE = Natural logarithm of sales

ROA = Net income before extraordinary items divided by total assets

LEV = Total liabilities divided by total assets

RAISE = Sum of additional cash raised from the issuance of common and preferred stock and the issuance of long-term debt, defiated by average total assets

YEAR = A dummy variable denote the fiscal year of a sample company

INDUSTRY = A dummy variable denote industry a sample company belongs in

ε = An error term

Table 1: Sample selection and distribution of observations

Panel A: Sample selection	Value
Total number of restatements announced from 2000-2009	232
Less: accounting changes or changes in reporting entity	(46)
Other required or routine restatements	(22)
Observations without the other financial data	(14)
Restatement companies with required information	150
Add: non-restatement companies over the period	5,352
Number of company-years in the final sample	5,502

Table 2: Panel B; frequency of restatements by category

Parameters	SEC-initiated	Company or auditor-initiated	Total
Type of restate reasons			
Revenue recognition	15	14	29
Cost or expense	10	11	21
Reclassification	1	13	14
Restructurings and write-down	0	28	28
Related-party transactions	11	26	37
Others	12	9	21
49		101	150
Type of financial statements restated			
Quarterly-only	38	73	111
Annual	11	28	39
49	101	-	150

Table 3: Panel C; Temporal distribution of accounting restatements

	SEC-initiated		Company or auditor-initiated		Total	
Years	n	Percentage	n	Percentage	n	Percentage
2000	3	6.12	11	10.89	14	9.33
2001	3	6.12	10	9.90	13	8.67
2002	6	12.24	6	5.94	12	8.00
2003	4	8.16	9	8.91	13	8.67
2004	6	12.24	8	7.92	14	9.33
2005	7	14.29	15	14.85	22	14.67
2006	6	12.24	11	10.89	17	11.33
2007	4	8.16	11	10.89	15	10.00
2008	6	12.24	15	14.85	21	14.00
2009	4	8.16	5	4.95	9	6.00
	49	100.00	101	100.00	150	100.00

The discussed variables in this study include the FSPE, PSPE and EXPIND which will be used to examine the influence of auditor specialization and experience on audit quality. If the sign of these terms are positive our hypotheses will be supported. That is more experienced specialist auditors may improve the quality of company earnings by reducing accounting restatements.

In addition, this study will include company Size (SIZE); Return on Earnings (ROA); Leverage (LEV); additional cash Raised from the issuance of Stock (RAISE) to control the influence of company size (Myers *et al*., 2005) financial states (DeFond and Jiambalvo, 1991) growth opportunity (Richardson *et al*., 2002; Aier *et al*., 2005) and capital effects on restatement probabilities as suggested by prior studies.

Sample selection: The empirical data tested in this study including listed companies in Taiwan from 2000-2009. All required data will be gathered from the Taiwan Economic Journal Database (TEJ) and the Taiwan Market Observation Post System.

To avoid nonrandom matched sampling for infrequent events such as accounting restatements, we use a non-matched procedure that is in line with prior studies (Chin and Chi, 2009; Cram *et al*., 2007; Richardson *et al*., 2003). Because prime audit quality in reducing accounting restatements should influence financial reporting quality at the time that a misstatement occurs, we will use the time of restatement to examine the association of our main variables, rather than the time the restatement is announced (Myers *et al*., 2005). This study will delete observations that do not have complete auditor's data and eliminate observations that do not have sufficient financial data. After applying the above criteria presented in Panel A of Table 1, we obtain a total sample with 5,502 observations. Table 2 displays the sample distributions.

Panel B of Table 3 shows that compared to SEC-initiated ones, more restates are initiated by company or auditors in our sample. Besides, among reasons of restates, "related-party transactions" appears to be the most frequent one. The possible reason is that numerous

companies in Taiwan have long-term investments in China while the accounting standards are different between China and Taiwan, some related-party transactions of companies are according to financial statements in different basis. The conversion process may increase the odds of slip and increase the possibility of financial restatements as a result.

RESULTS AND DISCUSSION

Descriptive statistics: Table 4 presents the descriptive statistics of main variables for testing our hypotheses. For comparing the company features of companies that do and do not process accounting restatement, we present the descriptive statistics of asset-impairment and non-asset-impairment companies, respectively. Table 4 shows that the Mean (0.313) and the Median (0.000) of the indicator variable FSPE which denote a company is audited by specialist audit firm is significant lower for restatement companies. That is, on average, companies that restate financial statements are less likely to be audited by specialist audit firms. Similar, for individual audit partner, Table 4 also reveals that, on average, companies that restate financial statements are less likely to be audited by specialist audit partners.

For auditor experience, compared to auditors of non-restatement companies who have about 14 year audit experience (EXPGN) and 12 years of public companies audit experience (EXPUB) and mean of both EXPGN (13.46) and EXPUB (10.73) are significant lower for restatement companies. The findings imply that restated financial statements are more likely to be audited by auditors with less general audit experiences, in accordance with our hypothesis. Furthermore, compared to auditors of non-restatement companies who have about 9 year industry audit experience (EXPIND), auditors' average industry experience is only 8 years for restatement companies. In other words, restated financial statements are more likely to be audited by auditors with less industry audit experiences. For company characteristics, Table 4 shows that the mean (median) of SIZE and LEV are significant higher for restatement companies which indicate that compared to companies that do not restate their financial statements, companies that process accounting restatements tend to have larger size and higher leverage.Furthermore, the significantly lower mean (median) of ROA in Table 4 suggest that restatement companies are likely to experience worse operational performance. However, we do not find a significant difference of mean (median) for RAISE between restatement and non-restatement companies.

Associations amongaudit firm specialist, individual partner specialist, and audit experience on restatements: Table 5 and 6 presents the Pearson and Spearman Correlations among main variables for restatement and non-restatement companies respectively. For industry specialist variables, we find that PSPE and FSPE are positively correlated since audit firms with specialist auditor are more likely to become specialized audit firms. However, Table 5 and 6 reveals that the positive correlation between PSPE and FSPE is significant only in non-restatement companies. In other words, compared to industry specialist audit partners of non-restatement companies, specialist audit partners of restatement companies are less likely to work in industry specialist audit firms.

The regression results for the impacts of audit firm specialist, individual partner specialist, auditor industry experience on accounting restatements are summarized in

Table 4: Descriptive statistics for restatement versus non-restatement companies

	Restatement (n = 150)		Non-restatement (n = 5352)		Mean difference		Median difference	
Variables	Mean	Median	Mean	Median	t-value	Sig.	Z-value	Sig.
FSPE	0.313	0.000	0.415	0.000	-2.311	0.023**	-2.188	0.029**
PSPE	0.009	0.000	0.079	0.000	-7.221	0.000***	-2.736	0.006***
PSPEEXP	0.107	0.000	0.251	0.000	-2.449	0.016**	-1.892	0.058*
EXPGN	13.464	14.500	13.959	13.000	-2.446	0.016**	-2.285	0.022**
EXPPUB	10.732	14.500	11.990	13.000	-0.960	0.339	-0.621	0.535
EXPIND	8.304	8.000	9.490	9.000	-2.574	0.013**	-2.544	0.011**
SIZE	15.522	15.531	15.025	14.705	3.574	0.000***	4.100	0.000***
ROA	5.387	4.425	10.337	7.655	-4.829	0.000***	-5.615	0.000***
LEV	0.658	0.577	0.431	0.497	7.031	0.000***	7.295	0.000
RAISE	0.008	0.000	0.009	0.000	0.891	0.612	0.612	0.541

***, **, * denotes significance at <0.01, 0.05, 0.10 levels, respectively, for two-tailed t-tests of differences in means; ###, ##, # denotes significance at <0.01, 0.05, 0.10 levels, respectively, for two-tailed Wilcoxon tests of differences in medians; variable definitions: FSPE = an indicator variable equals to one if company i audited by a specialist audit firm in year t and zero otherwise; PSPE = an indicator variable equals to one if company i audited by a specialist audit partner in year t, and zero otherwise; EXPIND = the total number of clients in these years he (or she) has audited to measure the industry experience an auditor has; SIZE= natural logarithm of sales; ROA= net income before extraordinary items divided by total assets; LEV= Total Liabilities Divided by total assets; RAISE= sum of additional cash raised from the issuance of common and preferred stock and the issuance of long-term debt, deflated by average total assets; YEAR = a dummy variable denote the fiscal year of a sample company; INDUSTRY = a dummy variable denote industry a sample company belongs in Table

Table 5: Correlation coefficients of variables

Panel A: Correlation coefficients of variables for non-restatement companies (n = 150)

Variables	PSPE	PSPEEXP	FSPE	EXPGN	EXPPUB	EXPIND	SIZE	ROA	LEV	RAISE
PSPE	1	0.455**	0.141	-0.065	-0.061	-0.006	0.125	0.034	-0.034	-0.013
		(0.000)	(0.139)	(0.499)	(0.522)	(0.951)	(0.190)	(0.719)	(0.725)	(0.890)
PSPEEXP	0.498**	1	0.104	0.041	0.045	0.098	0.212*	-0.019	0.017	-0.016
p	(0.000)	(0.276)		(0.664)	(0.635)	(0.306)	(0.025)	(0.846)	(0.857)	(0.865)
FSPE	0.141	0.179	1	-0.16	-0.155	0.009	-0.007	-0.002	0.027	-0.057
	(0.139)	(0.059)		(0.092)	(0.103)	(0.922)	(0.944)	(0.986)	(0.774)	(0.548)
EXPGN	-0.075	0.01	-0.183	1	0.997**	0.635**	0.008	0.204*	-0.154	0.067
	(0.432)	(0.917)	(0.053)		(0.000)	(0.000)	(0.930)	(0.031)	(0.105)	(0.480)
EXPPUB	-0.074	0.014	-0.182	0.997**	1	0.632**	0.015	0.208*	-0.153	0.067
	(0.441)	(0.880)	(0.054)	(0.000)		(0.000)	(0.879)	(0.028)	(0.106)	(0.480)
EXPIND	0.012	0.149	0.016	0.63**	0.627**	1	0.136	0.1	0.004	0.149
	(0.902)	(0.117)	(0.864)	(0.000)	(0.000)		(0.152)	(0.295)	(0.970)	(0.117)
SIZE	0.139	0.236*	0.013	-0.009	-0.011	0.126	1	-0.132	0.423**	0.027
	(0.143)	(0.012)	(0.888)	(0.924)	(0.905)	(0.185)		(0.164)	(0.000)	(0.778)
ROA	0.084	-0.025	-0.099	0.166	0.161	0.084	-0.172	1	-0.42**	0.072
	(0.380)	(0.794)	(0.301)	(0.081)	(0.090)	(0.376)	(0.069)		(0.000)	(0.451)
LEV	-0.051	0.059	0.038	-0.208*	-0.207*	0.003	0.359**	-0.501**	1	-0.188*
	(0.591)	(0.537)	(0.694)	(0.028)	(0.029)	(0.973)	(0.000)	(0.000)		(0.047)
RAISE	-0.029	0.212*	0.022	-0.124	-0.122	-0.033	0.119	-0.092	0.106	1

Table 6: Panel B; correlation coefficients of variables for non-restatement companies (n = 5352)

Variables	PSPE	PSPEEXP	FSPE	EXPGN	EXPPUB	EXPIND	SIZE	ROA	LEV	RAISE
PSPE	1.000	0.682***	0.271***	0.064***	0.064**	0.075***	0.283***	0.054***	0.004	-0.007
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.781)	(0.596)
PSPEEXP	0.740**	1.000	0.307***	0.083***	0.084**	0.138***	0.330***	0.075***	-0.009	-0.026*
	(0.000)		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.493)	(0.060)
FSPE	0.271**	0.350**	1.000	-0.026**	-0.018	-0.031**	0.201***	0.062***	0.018	-0.001
	(0.000)	(0.000)		(0.053)	(0.178)	(0.025)	(0.000)	(0.000)	(0.197)	(0.932)
EXPGN	0.062**	0.065**	-0.035*	1.000	0.996**	0.650***	0.175***	-0.029**	-0.035**	-0.021
	(0.000)	(0.000)	(0.010)		(0.000)	(0.000)	(0.000)	(0.036)	(0.011)	(0.118)
EXPPUB	0.063**	0.065**	-0.028*	0.996**	1.000	0.652***	0.180***	-0.029**	-0.035**	-0.021
	(0.000)	(0.000)	(0.042)	(0.000)		(0.000)	(0.000)	(0.035)	(0.011)	(0.119)
EXPIND	0.074**	0.123**	-0.031*	0.637**	0.639**	1.000	0.181***	-0.032**	-0.035**	-0.048***
	(0.000)	(0.000)	(0.022)	(0.000)	(0.000)		(0.000)	(0.018)	(0.011)	(0.000)
SIZE	0.209**	0.256**	0.175**	0.159**	0.161**	0.181**	1.000	0.028**	0.244***	-0.020
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		(0.041)	(0.000)	(0.143)
ROA	0.065**	0.083**	0.058**	-0.027*	-0.027	-0.027*	-0.027*	1.000	-0.261***	0.066***
	(0.000)	(0.000)	(0.000)	(0.047)	(0.052)	(0.046)	(0.046)		(0.000)	(0.000)
LEV	0.008	0.007	0.029*	-0.038**	-0.037**	-0.040**	0.275**	-0.272**	1.000	-0.061***
	(0.568)	(0.617)	(0.036)	(0.005)	(0.007)	(0.003)	(0.000)	(0.000)		(0.000)
RAISE	-0.008	-0.009	0.008	-0.012	-0.013	-0.020	0.068**	0.075**	0.039**	1.000
	(0.542)	(0.525)	(0.570)	(0.386)	(0.350)	(0.147)	(0.000)	(0.000)	(0.004)	

***, **, * denotes significance at <0.01, 0.05, 0.10 levels, respectively, for two-tailed t-tests of differences in means; variable definitions: FSPE = an indicator variable equals to one if company i audited by a specialist audit firm in year t, and zero otherwise; PSPE = an indicator variable equals to one if company i audited by a specialist audit partner in year t and zero otherwise; EXPIND = the total number of clients in these years he (or she) has audited to measure the industry experience an auditor has; SIZE= natural logarithm of sales; ROA= net income before extraordinary items divided by total assets; LEV = total liabilities divided by total assets; RAISE = sum of additional cash raised from the issuance of common and preferred stock and the issuance of long-term debt, deflated by average total assets; YEAR = a dummy variable denote the fiscal year of a sample company; INDUSTRY = a dummy variable denote industry a sample company belongs in, the Pearson (Spearman) correlations are in the lower (upper) triangle, and p-values are in parentheses below the coefficients

Table 7. The results for the influence of industry specialists show that the indicators of audited by industry specialist audit firms (FSPE) and individual specialists audit partners (PSPE) are both significantly negatively associated with the companies' accounting restatements. The results suggest that companies audited by industry specialist auditors (firms) are less likely than companies audited non-specialist auditors (firms) to process accounting restatements.

In practice, audit quality of those auditors that become industry specialists after the first year should not be the same as that of auditors who have more years of industry specialist experience. From this argument, the incremental effects of auditor specialization on audit quality should increase with specialist experience. Consequently, this study proposes that, compared to less experienced industry specialist auditors who become specialist more lately, the incremental audit quality for more experienced industry specialist auditors who become specialist after a longer period should be higher. Table 8 presents the impacts of the impact of industry specialization on accounting restatements. To explore the influence of specialist experience, we divide sample companies into auditor with 1 year specialist experience, auditor with two year specialist experience and auditor with more than three specialist experience. We

Table 7: Logistic regression results for audit firm specialist, audit partner specialist and audit experience

	Audit firm specialist Model (1)		Individual partner specialist Model (2)		Audit experience Model (3)		Combined audit firm and partner specialist and audit experience Model (4)	
Variables	Coefficient	Sig.	Coefficient	Sig.	Coefficient	Sig.	Coefficient	Sig.
Intercept	-25.165	0.997	-25.114	0.997	-25.073	0.997	-25.231	0.997
FSPE	-0.605	0.008***	-	-	-	-	-0.443	0.054*
PSPE	-	-2.558	0.003***	-	-	-	-2.274	0.028**
EXPIND	-0.051	0.025**	-0.047	0.037**	-	-	-	-
SIZE	0.171	0.037**	0.1900.021**	0.171	0.036**	0.235	0.005***	-
ROA	-0.030	0.002***	-0.032	0.002***	-0.032	0.001***	-0.030	0.002***
LEV	3.0030.000***	2.931	0.000***	2.832	0.000***	2.730	0.000***	-
RAISE	0.983	0.682	0.863	0.715	0.801	0.732	0.656	0.784
YEAR	Not reported	-	Not reported	-	Not reported	-	Not reported	-
INDUSTRY	Not reported	-	Not reported	-	Not reported	-	Not reported	-
Cox and Snell R^2	0.033	-	0.034	-	0.032	-	0.035	-
Nagelkerke R^2	0.181	-	0.188	-	0.179	-	0.196	-
Sig.	0.000	-	0.000	-	0.000	-	0.000	-
N	5502	-	5502	-	5502	-	5502	-

Table 8: Correlation coefficint of 3 variable

	One year specialist experience 1		Bellow two year specialist experience 2		>3 year specialist experience 3	
Variables	Coeff.ient	Sig.	Coefficent	Sig.	Coeffient	Sig.
Intercept	-25.664	0.998	-25.462	0.997	-25.485	0.997
FSPE	-0.453	0.057*	-0.413	0.076*	-0.402	0.082*
PSPE	-17.239	0.995	-17.263	0.994	-1.919	0.063*
EXPIND	-0.048	0.035**	-0.045	0.045**	-0.047	0.039**
SIZE	0.218	0.013**	0.221	0.011**	0.228	0.008***
ROA	-0.030	0.004***	-0.030	0.003***	-0.030	0.003***
LEV	2.629	0.000***	2.728	0.000***	2.735	0.000***
RAISE	0.689	0.773	0.770	0.746	0.631	0.792
YEAR	Not reported	-	Not reported	-	Not reported	-
INDUSTRY	Not reported	-	Not reported	-	Not reported	-
Cox and Snell R^2	0.037	-	0.038	-	0.037	-
Nagelkerke R^2	0.197	-	0.203	-	0.199	-
Sig.	0.000	-	0.000	-	0.000	-
N	5502	-	5502	-	5502	-

***, **, * denotes significance at <0.01, 0.05, 0.10 levels, respectively, for two-tailed t-tests of differences in means; variable definitions: FSPE = an indicator variable equals to one if company i audited by a specialist audit firm in year t and zero otherwise; PSPE = an indicator variable equals to one if company i audited by a specialist audit partner in year t and zero otherwise; EXPIND = the total number of clients in these years he (or she) has audited to measure the industry experience an auditor has; SIZE = natural logarithm of sales; ROA = net income before extraordinary items divided by total assets; LEV = total liabilities divided by total assets; RAISE = sum of additional cash raised from the issuance of common and preferred stock and the issuance of long-term debt, deflated by average total assets; YEAR = a dummy variable denote the fiscal year of a sample company; INDUSTRY = a dummy variable denote industry a sample company belongs in

find that the negatively association between audit partner industry specialization and accounting restatements is significantly only for auditor who possess more than three specialist experience. This finding support our hypothesis that compared to less experienced industry specialist auditors, the impact of industry specialization on audit quality will be more significant for more experienced industry specialist auditors. On the other hand from Table 8, we find that the significance of negatively association between audit firm industry specialization and accounting restatements are decline by the auditor specialist years which implies that the influence of audit firm specialization is decreasing by the increase specialist experience. However, we do not find the evidence the effects of specialist auditors with less specialist experience in a specific industry on audit quality increases with industry experience.

Additional analyses: The effects of firm industry specialization experience because prior studies have indicated that, when knowledge provides important explanations for variations in auditors' industry expertise, it is difficult for partners to share knowledge with other partners within an audit firm or practice office (Chin and Chi, 2009) we only used industry specialization at the partner level to test the experience of auditors on audit quality.

However (Simunic and Stein, 1987) suggested that technology, physical facilities, personnel, and organization control systems provided by audit firms might be important factors to improve audit quality. Furthermore, prior studies of auditor industry specialization have revealed that firm-level industry expertise has value to clients and capital markets believe that financial statements that are audited by industry specialist auditing firms are of higher quality (Balsam *et al*., 2003; Dunn and Mayherw, 2004; Krishnan, 2003; Payne, 2008).

Table 9: Logistic regression results for the effects of firm industry experience on restatements

	Audit firm specialist Model 1		Individual partner specialist Model 2		Audit experience Model 3	
Variables	Coefficient	Sig.	Coefficient	Sig.	Coefficient	Sig.
Intercept	-25.518	0.997	-	-	-25.482	0.997
FSPEEXP	-0.078	0.001***	-	-	-16.818	0.794
PSPEEXP	-	-	-0.011	0.001***	-0.069	0.002***
SIZE	0.208	0.012**	0.241	0.007***	0.218	0.009***
ROA	-0.031	0.002***	-0.032	0.001***	-0.031	0.002***
LEV	2.916	0.000***	2.861	0.000***	2.883	0.000***
RAISE	0.723	0.762	0.817	0.731	0.759	0.749
YEAR	Not reported	-	Not reported	-	Not reported	-
INDUSTRY	Not reported	-	Not reported	-	Not reported	-
Cox and Snell R^2	0.034	-	0.033	-	0.035	-
Nagelkerke R^2	0.189	-	0.184	-	0.195	-
Sig.	0.000	-	0.000	-	0.000	-
N	5502	-	5502	-	5502	-

***, **, * denotes significance at <0.01, 0.05, 0.10 levels, respectively, for two-tailed t-tests of differences in means; variable definitions: FSPE = an indicator variable equals to one if company i audited by a specialist audit firm in year t and zero otherwise; PSPE = an indicator variable equals to one if company i audited by a specialist audit partner in year t and zero otherwise; EXPIND= the total number of clients in these years he (or she) has audited to measure the industry experience an auditor has; SIZE = natural logarithm of sales; ROA= net income before extraordinary items divided by total assets; LEV = total liabilities divided by total assets; RAISE = sum of additional cash raised from the issuance of common and preferred stock and the issuance of long-term debt, deflated by average total assets; YEAR = a dummy variable denote the fiscal year of a sample company; INDUSTRY = a dummy variable denote industry a sample company belongs in

Table 8 presents the impacts of the impact of firm industry experience on accounting restatements. Model 1 and 2 of Table 9 shows that FSPEEXP (variable of "firm specialist experience") and PSPEEXP (variable of "audit partner specialist experience") is significantly negatively associated with accountings restatements when consider the firm and auditor experience respectively. However, Model 3 of Table 9, reveals that when consider specialist experience of firm and audit partner together, the influence of specialist experience will be significant only for individual audit partners.

Robussness test: To ensure that the results of this study are not driven by the measurement of specialist auditors, this study use the following alternative cut-off points to define specialist auditors and audit firms as robustness tests. First, this study will define the top five auditors and the two largest audit firms as specialists. Second, while it is unclear whether the forte of specializing in an industry is accrued from auditing a large number of clients or a few large clients (Chin and Chi, 2009; Krishnan, 2003; Zerni, 2011). this study further use the number of clients as an alternative proxy for industry auditor specialists to test the hypotheses. The results remain similar.

The impact of auditor industry specialization on audit quality has been extensively discussed in accounting and auditing studies and specialist auditors tend to produce higher-quality audits. Prior empirical studies have commonly used firm-year to calculate the market share of audit firms (or auditors) and identify specialists for each year as a means of measures auditor specialization. While this identification procedure is simple and clear, it ignores the role of audit experience in forming expertise and audit experience should be an important component for determining industry auditor specialization. As numerous empirical studies have focused on industry specialist auditors which measured annual year market share, researchers have not yet empirically demonstrated the influence of auditor experience. As such, the purpose of this study is to explore empirically the influence of experience on auditor specialization.

Among financial reporting for quality indicators, accounting restatement is the most appreciable quality of externally reported financial statements. As prior studies have suggested, knowledge gained from experience will influence auditors' judgments and audit quality vary with the experience of specialist auditors.

Despite the restatements that are related to principle changes, recording mistakes, oversights, earnings management, or fraud may introduce accounting restatements. Therefore, more experienced specialist auditors, who are expected to produce a higher quality audit (than less experienced ones), should have more professional ability to discover and reduce such restatements. This study expects that, compared to companies that are audited by less experienced specialists, companies that are audited by more experienced specialists will be less likely to issue financial restatements.

This study proposes that compared to less experienced industry specialist auditors who become specialist for more lately, the incremental audit quality for more experienced industry specialist auditors who become specialist after a longer period should be higher.

The empirical results for impacts of industry specialists, in accordance with the results of (Chin, 2009)

suggest that that companies audited by industry specialist auditors (firms) are less likely than companies audited non-specialist auditors (firms) to process accounting restatements. For the impacts of audit experience, this study find that industry experience of auditors is significantly negatively associated company accounting restatements.

For the influence of industry specialist experience, this study find that the negatively association between audit partner industry specialization and accounting restatements is significantly only for auditor who possess more than three specialist experience. That is, the impact of industry specialization on audit quality will be more significant for more experienced industry specialist auditors. This findings support our hypothesis that compared to less experienced industry specialist auditors. On the other hand, the results reveal that the influence of audit firm specialization is decreasing by the increase specialist experience. However, we do not find the evidence for our second hypothesis that the effects of specialist auditors with less specialist experience in a specific industry on audit quality increases with industry experience.

The results of this study extend literature by providing empirical evidence to demonstrate the important of auditor experience on their audit quality while the role of audit experience in forming expertise has been ignored by prior studies.

CONCLUSION

This study expects to contribute to auditor specialization literature by providing the evidence for the impacts of audit experience of auditor specialization and accounting restatement which is suggested to be one of the most appreciable quality of externally reported financial statement by prior studies.

Since, the restatement of financial restatements is a negative image for the company, our study suggestcompany managements hiring industry specialist auditor or an experienced auditor can reduce the possibility of restatement. For investors and stakeholders, company managements hiring industry specialist auditor or an experienced auditor signals that this company may possessed better financial statement quality.

REFERENCES

Aier, J.K., J. Comprix, M.T. Gunlock and D. Lee, 2005. The financial expertise of CFOs and accounting restatements. Account. Horiz., 19: 23-135.

Agoglia, Beaudoin and Tsakumis, 2009. The effect of documentation structure and task-specific experience on auditors' ability to identify control weaknesses. Behav. Res. Account., 21: 1-17.

Basioudis, I.G. and J.R. Francis, 2007. Big 4 audit fee premiums for national and office-level industry leadership in the United Kingdom. Auditing: J. Pract. Theory, 26: 143-166.

Bedard, J.C. and S.F. Biggs, 1991. The effect of domain-specific experience on evaluation of management representation in analytical procedures. Auditing: J. Pract. Theory, 15: 77-95.

Biggs, S.F., M. Selfridge and G.R. Krupka, 1993. A computational model of auditor knowledge and reasoning processes in the going-concern judgment. Auditing: J. Pract. Theory, 14: 82-99.

Bonner, S. and B.L. Lewis, 1990. Determinants of auditor expertise. J. Account. Res., 28: 1-20.

Bonner, S.R., 1990. Experience effects in Auditing: The role of task-specific knowledge. Account. Rev., 65: 72-92.

Bonner, S., J. Davis and B. Jackson, 1992. Expertise in corporate tax planning: The issue identification stage. J. Account. Res., 30: 1-27.

Balsam, S., J. Krishnan and J. Yang, 2003. Auditor Industry Specialization and Earnings Quality. Auditing: J. Pract. Theory, 22: 71-97.

Carcello, J.V. and A.L. Nagy, 2004. Audit firm tenure and fraudulent financial reporting. Auditing: J. Pract. Theory, 23: 57-71.

Cenker, W.J. and A. Nagy, 2008. Auditor resignations and auditor industry specialization. Account. Horiz., 22: 279-295.

Chin, C. and H.Y. Chi, 2009. Reducing Restatements with Increased Industry Expertise. Contemp. Account. Res., 26: 729-765.

Carcello, J.V. and A.L. Nagy, 2004. Client size, auditor specialization and fraudulent financial reporting. Managerial Auditing J., pp: 651-668.

Cram, D.P., I. Stuart and V. Karan, 2007. Review of choice based and matched sample studies in auditing research.

Dunn, K.A. and B.W. Mayhew, 2004. Audit Firm Industry Specialization and Client Disclosure Qualit. Rev. Account. Stud., 9: 35-58.

DeFond, M.L. and J. Jiambalvo, 1991. Incidence and circumstances of accounting errors. Account. Rev. 66: 3: 643-55.

Frederick, D.M., V.B. Heiman-Hoffman and R. Libby, 1994. The structure of auditor's knowledge of financial statement errors. Auditing: J. Pract. Theory, 13: 1-21.

Francis, J., R. LaFond, P. Olsson and K. Schipper, 2005. The market pricing of accruals quality. J. Account. Econ., 39: 295-327.

Ferguson, A.C., J.R. Francis and D.J. Stokes, 2003. What matters in audit pricing: industry specialization or overall market leadership? Account. Finance, 46: 97-106.

Geiger, M.A. and K. Raghunandan, 2002. Auditor tenure and audit reporting failures. J. Pract. Theory,21: 67-78.

Heiman-Hoffman, V.B., R. Libby and D.M. Ferderick, 1994. The structure of auditors' knowledge of financial statement errors. Audit., 13: -21.

Johnson, E., K. Khurana and J.K. Reynolds, 2002. Audit-Firm tenure and the quality of financial reports. Contemp. Account. Res., 19: 637-660.

Krishnan, G.V., 2003. Does Big 6 Auditor Industry Expertise Constrain Earnings Management? Account. Horiz., 17: 1-16.

Lim, C.Y. and H.T. Tan, 2008. Non-audit service fees and audit quality: The impact of auditor specialization. J. Account Res., 46: 199-246.

Lehmann, C.M. and C.S. Norman, 2006. The effects of experience on complex problem representation and judgment in auditing: An experimental investigation. Behav. Res. Account., 18: 65-83.

Libby, R. and L. Luft, 1993. Determinants of judgment performance in accounting settings: Ability, knowledge and motivation. Account. Organiz. Soc., pp: 425-450.

Myers, J.N., L.A. Myers and Z.V. Palmrose, 2005. The length of auditor-client relationships and financial statement restatements. Working paper, University of Texas A&M.

Moroney, R., 2007. Does industry expertise improve the efficiency of auditor judgment? Auditing: J. Pract. Theory, 26: 69-94.

Moroney, R. and P. Carey, 2011. Industry-versus task based experience and auditor performance. Auditing: J. Pract. Theory Am. Account. Assoc., 30: 1-18.

Paulus, P.B. and H. Yang, 2000. Idea generation in groups: A basis for creativity in organizations. Organiz. Behav. Hum. Decision Processes, 82: 76-87.

Palmrose, Z.V., 1986a. Predicting takeover targets: A methodological and empirical analysis. J. Account. Econ., 8: 3-35.

Palmrose, Z.V., 1986b. Audit fees and auditor size: further evidence. J. Account. Res., 24: 97-110.

Payne, J.L., 2008. The Influence of Audit Firm Specialization on Analysts' Forecast Errors. Auditing: J. Pract. Theory, 8227: 109-136.

Pittman, J.A. and S. Fortin, 2004. Auditor choice and the cost of debt capital for newly public firms. J. Account. Econ., 37: 113-136.

Romanus, R.N., J.J. Maher and D.M. Fleming, 2008. Auditor industry specialization, auditor changes and accounting restatements. Account. Horiz., 22: 389-413.

Richardson, S., I. Tuna and M. Wu, 2003. Capital market pressures and earnings management: The case of earnings restatements. Working paper, University of Pennsylvania.

Richardson, S.A., A.I. Tuna and M. Wu, 2002. Predicting earnings management: The case of earnings restatements. Soc. Sci. Res. Network.

Schauer, P.A., 2002. The effects of industry specialization on audit quality: an examination using bid-ask spreads. J. Account. Finance Res., 10: 76-86.

Solomon, I., M.D. Shields and O.R. Whittington, 1999. What do industry-specialist auditors know? J. Account. Res., 37: 191-208.

Smith, J.F. and T. Kida, 1991. Heuristics and biases: expertise and task realism in auditing. Psycho. Bull., pp: 472-489.

Schroeder, M., 2001. SEC list of accounting-fraud probes grows. Wall Street J., pp: C1.

Simunic, D. and M. Stein, 1987. Product differentiation in auditing: Auditor choice in the market for unseasoned new issues. Can. Certified Gen. Account. Res. Foundation, Vancouver.

Taylor, M.H., 2000. "The effects of industry specialization on auditors' inherent risk assessments and confidence judgments. Contemp. Account. Res., 7: 693-712.

Zerni, M., 2011. Audit partner specialization and audit fees: some evidence from Sweden. Contemp. Account. Res., Vol. 28.