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Guidance is Not Always Better: The Effect of Structured Guidance and Skepticism on Auditors' Planning Materiality

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Abstract

In this paper we examine the effect of professional skepticism on auditor judgments on planning materiality. An experimental design was conducted with sixty-two auditors from a large public accounting firm in Thailand.Based on measuring the professional skepticism score of Hurtt (2010), results from our study indicate that when faced with structured materiality guidance, audit managers who have less professional skepticism make inappropriate planning materiality assessments but there is no effect of structured guidance on those who have more professional skepticism. Our results contribute to the literature on materiality judgments and professional skepticism by providing evidence of the dysfunctionality of structured guidance in audit planning materiality and by shedding light on the benefit of using professional skepticism to reduce the detrimental effects of structured guidance. This study also provides important insights for standard setters regarding the enhancing the effectiveness of audit process from raising individual skepticism during the process of determining both overall materiality and performance materiality levels.

Keywords

Professional Skepticism, Planning Materiality, Structured Guidance

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Introduction

The concept of materiality is important for the entire audit process, and it has been the subject of much prior auditing research (Eilifsen & Messier, 2015) Planning materiality, or the setting of overall materiality at the start of the audit, can influence the overall audit process. When auditors set an unrealistically high materiality level, they underestimate audit risks and underperform necessary audit procedures. This could reduce their ability to detect existing material misstatements and negatively affect audit quality. In contrast, if auditors set an unreasonably low materiality level, they overestimate risks and over-perform audit procedures, leading to audit inefficiency. Both types of errors are costly to public accounting firms.

Regulators and standard setters have issued guidance to help auditors make decisions on planning materiality. However, the results of using structured guidance are mixed. Prior research has found that structured guidance improves auditors' judgment in many contexts. For example, it increases audit efficiency (McDaniel, 1990) and enhances accuracy, consistency, and consensus of decision making on relatively structured tasks that involve linear combinations of cues (Ashton, 1992). On the other hand, some prior studies show that structured guidance can lower judgment performance as it induces auditors to process fewer risk factors that are not incorporated within such guidance (Asare & Wright, 2004; Todd & Benbasat, 1992; Wheeler & Arunachalam, 2008). Apart from lowering cognitive effort, structured guidance also leads to decision bias towards the cues or called confirmation bias effects (Bedard & Biggs, 1991). Auditors may rely on structured guidance for supporting what they previously existing believe that using step-by-step instruction is suitable.

The implication of using professional skepticism has been realized in audit processes (American Institute of Certified Public Accountants, 1997a). The International Standards of Auditing (ISAs) No. 200 clearly requires auditors to plan and perform audits with professional skepticism recognizing that situations may exist that lead to materially misstatement in financial statements. Results from a prior study (Hurtt, 2010) suggest that an auditor who has high professional skepticism tends to search for more information when reviewing working papers, especially with high risk audit clients. Even though there is increasing realization of the importance of professional skepticism and the inefficient application of professional skepticism in auditors' judgment on the likelihood of fraud (Harding & Trotman, 2017), the effects of structured materiality guidance and individual professional skepticism on planning materiality process remain unclear.

The purpose of this study was to investigate whether auditors with different skepticism levels would determine identical materiality levels when facing structured

materiality guidance. We examined the impact of auditors' skepticism in the structured guidance setting because a recent study suggests a high level of consistency across accounting firms (Eilifsen & Messier, 2015) whereas using structured guidance could impair auditor's judgement by inducing auditors not to consider unique client characteristics when assessing client risks (Audsabumrungrat et al., 2015) While maintaining consistency, the characteristics of professional skepticism, including questioning mind, suspension of judgment and search for knowledge would be able to reduce the fixation effect on structured guidance by searching other related factors outside the guidance. More specifically, auditors with a high degree of professional skepticism would be willing to wait and search for information which entails a greater cognitive effort. Therefore, this study posits that a high level of professional skepticism mitigates the quality decrement of materiality assessments resulting from the use of structured guidance.

To test our prediction, a 2x1 between subject experimental design was used. Sixty-two audit managers from one of the Big 4 public accounting firms in Thailand participated in the study. This study used structured guidance for auditors' planning materiality and measured the individual level of professional skepticism by using Hurtt's questionnaire and his measure scale (Hurtt, 2010). The total score of 180-points was transformed into a 100-point scale. The median (mean) scores were 67.73 (68.93). "High" and "low" individual skepticism was divided by the median. Participants who gained the scores above or below the median are assigned to the "high" and "low" professional skepticism group, respectively. After reading the case, participants were asked to indicate both overall and performance materiality assessments. After participants finished their task and answered the manipulation questions, demographic questions and a set of post experimental questions were asked.

Based on Hurtt's scale, our results show that the dysfunctional effect of structured guidance depends on the level of individual professional skepticism. Auditors who have high professional skepticism make more appropriate planning materiality compared to those who have low professional skepticism. Therefore, individual skepticism utilized in the planning stage of the audit process could lower the auditors' fixation on structured guidance.

This study contributes to the academic literature on materiality by providing what we believe is the first evidence on the impact of guidance structure and the individual level of professional skepticism on auditors' materiality determination. We provide the evidence of using and validating the Hurtt's measurement of professional skepticism in materiality determination and present whether a highly skeptical auditor makes more conservative and appropriate planning materiality. Prior research suggests

that auditors are more conscious and make appropriate judgments when they justify their planning materiality (Audsabumrungrat et al., 2015). Similarly, our study has shed some light on the advantage of professional skepticism in lowering the fixation on a structured guidance.

Our study also has implications for the auditing practice. The findings contribute to audit firms and standard setters by illustrating that overreliance on structured guidance could lead to improper auditors' planning materiality judgments. Practically, structured guidelines may not always be appropriate for all circumstances. The role of audit firms-level should emphasize the risks of material misstatement from inappropriate judgments. Consistent with International Standards on Auditing (ISAs No.200), auditors should apply professional skepticism and be aware of any circumstances leading to misstatements. Hence, auditors should contemplate relevant factors outside those stated in the detailed guidelines. Conclusively, structured guidance should be carefully utilized and audit firms should apply some methodologies to raise skeptic level of their staffs such as using justification (Audsabumrungrat et al., 2015).

Background and Hypothesis Development

Standard setters have issued various definitions of materiality with the common theme that information is considered material if the judgments of the users can be altered by the omission or misstatement of the information (IASB, 2009b)[1]. The issue of materiality is explicit throughout the audit process, from planning audit work, collecting and evaluating audit evidence to forming an audit opinion (Audsabumrungrat et al., 2015). Auditing standards state that auditors should consider audit risk and materiality in order to obtain sufficient and appropriate evidence upon which to properly evaluate clients' financial statements (IASB 2009b). In the planning stage, auditors determine

[1] The International Accounting Standards Board (IASB) provides the definition of materiality in its Framework for the Preparation and Presentation of Financial Statements as "information is material if its omission or misstatement could influence the economic decisions of users taken on the basis of the financial statements." The Financial Accounting Standards Board (FASB) defines materiality in the glossary of Statement of Financial Accounting Concepts No. 2, Qualitative Characteristics of Accounting Information, as "the magnitude of an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would have been changed or influenced by the omission or misstatement." The International Federation of Accountants (IFAC) provides the following definition of materiality in the International Standards on Auditing 320: "misstatements, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statement."

the nature and scope of work, along with the timing and extent of audit procedures to be executed by the audit team.

Auditors determine an *"overall planning materiality*" or the magnitude of materiality for each client in the planning stage. Factors that are related to planning materiality include the client's business, the size of the entity, the nature of the client's operation and related transactions, as well as the control mechanisms of the client (Blokdijk, Drieenhuizen, Simunic, & Stein, 2003). This planning materiality is closely associated with risk assessment, and it has an impact on audit planning as well as the nature, extent and timing of audit procedures applied to particular accounts and transactions. In addition, auditors should determine the level of "*performance materiality*" for particular account balances. Performance materiality need to be set at lesser amounts than overall materiality for the financial statements as a whole to alleviate the aggregation of undetected or uncorrected misstatements that exceeds overall planning materiality level (ISA 320, 2010). Consistent with using audit guidelines for small-and medium-sized entities, auditors should apply the concept of materiality in planning and performing the audit to determine materiality for the financial statement and performance materiality level for small-and medium-sized entities (IFAC, 2018).

Appropriate materiality planning is necessary for auditors to obtain sufficient evidence to make a reasonable assessment of misstatements in financial statements. There are two ramifications of improper planning materiality (Audsabumrungrat et al., 2015). First, if auditors underestimate risks and set the materiality level too high, they will under-plan audit procedures, leading to inadequate audit evidence collection for their audit opinions. Incorrect audit opinions or unfairly stated financial statements can result in higher litigation and reputation risk for auditors. Second, if auditors overestimate risks and set the materiality level too low, they can over-audit and undertake some unnecessary audit procedures, causing inefficiency. Therefore, inappropriate planning materiality can result in under-auditing (ineffectiveness) or over-auditing (inefficiency).

Structured Guidance

Regulators and standard setters and regulators have also issued guidance to help auditors make decisions on planning materiality. For instance, Statement on Auditing Standard (SAS) No. 47 and No. 107 provide quantitative guidelines for auditors to evaluate materiality. The International Federation of Accountants (IFAC) also provides quantitative guidance in its implementation of standards (IFAC, 2011). There are variations in the amount of structure offered in the materiality guidance provided by standard setting bodies, such as the American Institute of Certified Public Accountants

(AICPA), the Securities and Exchange Commission (SEC), the International Federation of Accountants (IFAC), and the International Auditing and Assurance Standards Board (IAASB). For instance, the Audit and Accounting Manual (AICPA, 1997b) suggests materiality benchmarks to be 5- 10% of income, or 1-1.5% of the greater between total assets and revenues, and suggests using the larger of the two benchmarks (see Chen et al., 2008). In its implementation guidelines for the audit of small and medium sized firms, the IFAC recommends benchmarks such as 3- 7% of profit from continuing operations, or 1-3% of revenues or expenditures, or 1-3% of assets, or 3-5% of equity (IFAC, 2011).

In contrast, in the revised draft of ISA 315 *Identifying and Assessing the Risk of Material Misstatement through Understanding the Entity and Environment* by the IAASB, quantitative guidance for setting planning materiality is limited, and this standard leaves materiality decisions to auditors' professional judgment. This is consistent with the concerns by regulators over the reliance on quantitative benchmarks in assessing materiality with a call for the consideration of qualitative factors (SEC, 1999).

Public accounting firms have developed structured guidance to assist their staff in making planning materiality judgments and to increase consistency within the firm. A recent study of materiality guidance by public accounting firms in the United States documents consistency amongst these firm in terms of the materiality bases (income before tax, revenue, total assets) used and the corresponding percentages applied to those materiality bases (Eilifsen & Messier, 2015). Audsabumrungrat et al. (2015) indicate that three of the firms provide some form of guidance in terms of quantitative rules-of-thumb and/ or materiality bases upon which to base planning materiality levels. Only one of these firms had used such an approach in the past but recently stopped this practice and switched to a more judgmental approach.

Professional Skepticism

Professional skepticism is important for audit practices and audit standards incorporating requirements for audit professionals (AICPA, 1997a, 1997b). SAS No. 1 requires auditors to use professional skepticism in term of "Due Professional Care". According to SAS No.99, professional skepticism requirements are intended to enhance auditors' questioning minds when they audit their clients to improve audit quality. Professional skepticism is vital in the conduct of an audit planning materiality as dictated by the Auditing Standard. Hence, during determination of planning materiality level in the planning phase, an auditor is required to exercise professional skepticism, being alert to conditions or information that may indicate possible material misstatement.

Prior research has been extensive and continually interested in the characteristics of individual auditors as they affect audit performance (Francis, 2011; Gul et al., 2013; Nelson & Tan, 2005). One attribute that may vary across auditors is the level of skepticism they bring to an engagement (Hurtt et al., 2013). Anecdotal evidence suggests that professional skepticism enhances audit quality. For example, The benefits of using a skeptical frame are conspicuous with non-rotating auditors (Bowlin et al., 2015). Bowlin et al. (2015) represented auditors' skepticism by asking participants to assess clients in term of their dishonesty rather than their honesty. Even though professional skepticism is fundamentally critical to the audit profession, it is difficult to measure individual characteristics.

Hurtt (2010) developed a scale to measure professional skepticism in terms of skepticism personality traits. She defined professional skepticism as a multi-dimensional construct, broken into six characteristics: questioning mind, suspension of judgment, search for knowledge, interpersonal understanding, autonomy, and self-esteem. The first three characteristics refer to how auditors evaluate evidence before making their decision as stated in SAS No.1. Interpersonal understanding deals with personal aspects when auditors evaluate evidence as recommended in SAS No. 99. The last two characteristics, autonomy and self-esteem, indicate the individual ability to obtain related and useful information for executing more efficient action. A prior study conducted by (Fullerton & Durtschi, 2004) that was based on Hurtt's score suggests that internal auditors who have high professional skepticism are more likely to search for more information in fraud detection than those who have low professional skepticism. Harding & Trotman (2017) suggested that auditors should adopt both their own judgements (inward) and doubt with management representations (outward), and be skeptical in their audit tasks. In addition, Cohen et al. (2017) revealed that highly skeptical auditors are more confident with their skepticism and judgment when they perceive that the audit firm supports job-related attitudes and outcomes. As a consequence, they are less likely to leave the audit profession.

A questioning mind would drive auditor behavior to adopt a questioning approach when considering the gathered information. Skeptical auditors would ask themselves whether such information supports or contradicts other evidence and consider whether audit planning or procedures should be adjusted. Construal level theory from psychology suggests that there are two levels of construal when an individual processes information. High-levels are abstract and simple while low-level are detailed and specific (Trope & Liberman, 2010). The prior study shows that, comparing to low-level abstract thinking auditors, auditors with high-level abstract thinking are less

likely to agree with such managment aggressive assumptions that seem to be reasonable (Backof et al., 2018). In addition, the recent study supports that an abstract mindset orientation renders auditors to be more skeptical when an audit task requires a broader focus (Fehrenbacher et al., 2020).

Based on Hurtt's professional skepticism score and construal level theory, we expect that the negative effect of structured guidance on materiality decision quality discussed earlier would not occur with highly skeptical auditors. Therefore, we expect that auditors with high professional skepticism level will be more aware of the risks of the client, exert a questioning mind, think broader, and make more appropriate materiality assessments. Specifically, highly skeptical auditors would not merely follow structured guidance, but have to take client's risks into consideration to make a more appropriate materiality assessment. On the contrary, less skeptical auditors would stick with the structured guidance and follow its instructions step by step, thus ignoring significant information when planning materiality. This leads to our hypothesis that:

Hypothesis: Low level of skepticism auditors exposed to structured guidance will make less appropriate materiality assessment than those who have high level of skepticism auditors.

Method

Participants

We tested our hypotheses by conducting an experiment with sixty-two auditors from a large public accounting firm in Thailand[2]. After excluding participants with incomplete responses and those who failed to understand the material, fifty-four respondents were examined in our study. The participants had a mean working experience of 10.82 years. Since planning materiality is practically performed by audit managers or higher positions in audit firms, we engaged audit managers, senior managers, and directors as participants in this study. Our participants were highly experienced respondents including 36 audit managers (67 percent), 15 senior managers (28 percent), and 3 directors (6 percent).

Materials

We based our case study on actual financial information, but the name of the company was assumed. In order to avoid language limitations, the experimental

[2]This firm provides structured guidance for planning materiality process.

materials were presented in Thai. We consequently translated them into English and did a back translation to ensure equivalence in the interpretation of the instrument.

The case materials involved the setting of planning materiality during the audit of a client – a hypothetical listed company named "*Airlines Company*." Airlines Company operated a low-cost airline business. It was asset-intensive; the current financial statements showed high total assets (27,739.32 million baht), with earnings before tax of 2,309. 09 million baht and total revenues of 25,355. 51 million baht. Overall planning materiality based on the total assets was higher than that based on either revenue or net income. If participants followed the structured guidance, they would set up the materiality amounts as 1-1. 5% of total assets. Following Audsabumrungrat et al. (2015), we designed the case such that its application - without consideration of other qualitative factors – could lead to non-conservative and inappropriate materiality judgments. In our case materials, the client had received compensation from winning law suits for about 2,050 million baht in the current year, which was recognized as "*Other Income*." This transaction was a one-time gain which should be considered as a non-recurring item and consequently be excluded from the calculation of materiality as the basis for planning materiality.

Design

We employed a 2 x 1 (level of skepticism x structured guidance form) between-subjects design. We used a practice identified in professional auditing manuals [specifically, the Audit and Accounting Manual (AICPA, 2005)] [3] as the structured planning materiality. All participants were instructed to determine both overall and performance materiality amounts by following these procedures:

Step 1: Use 5-10% of earnings before income tax
Step 2: Use 1-1.5% of total assets or total revenues, whichever is higher
Step 3: Take the higher amount of step 1 or 2

A key design feature of our experiment is that the structured guidance, although allowed in both standards and public accounting firms, is potentially non-conservative since it allows for a higher planning materiality to be used. The audit partners we spoke to indicated that this approach would, as a general rule, be applicable to clients that are asset intensive (including this client), and that this approach is used to achieve higher audit efficiency when the client has good internal controls.

[3] A variation of this is also referred to in current auditing textbooks e.g., Arens, Elder, Beasley, and Jones (2015)

With respect to the level of professional skepticism, we asked thirty questions from Hurtt (2010) to measure individual professional skepticism and classified the level of professional skepticism by median score. The questions in Hurtt's instrument were translated to Thai and consequently translated back into English. The back translation was done to ensure equivalence in the interpretation of the instrument. Participants were asked to respond the questions related to the level of professional skepticism over Hurtts' scale on a 6-point Likert scale (1 strongly disagree to 6 strongly agree) to measure their behaviors and characteristics. There were 30 questions with a total score of 180 points. The reliability of the instruments was measured by the Cronbach's alpha. The Cronbach's alpha of 30 questions was 0.81, and above the acceptable norm of 0.70 (Cortina, 1993).

The total score of 180 points was converted into a 100-point scale. The median (mean) score of participants' skepticism was 67.78 (68.93) with a range from 57.78 to 89.44. Since participants' skepticism was positive skewed, we used the median score for classifying participants as high or low level of professional skepticism. Participants who scored equal or above 67.78 were assigned to the high level of professional skepticism, and those who scored less than 67.78 were low. In sum, twenty-eight participants were classified as high profession skepticism, and twenty-six participants was classified as low condition.

Experimental Procedures

The experiment was conducted during training session of the public accounting firm under our supervision. Before deciding to participate, participants were informed of the purpose and requirements of this study. Participants who volunteered were required to sign informed consent forms.

In our case materials, participants took the role of an in-charge auditor. All participants received a package of material consisting of the client's background information, three-year financial statements, and an answer sheet for the dependent variable. After reading the case materials, participants were asked to provide the basis and the percentage used for calculating the materiality amount, along with the final planning materiality. After completing the materiality task, they completed demographic and post-experimental questionnaires. On average, participants took approximately 15 minutes to complete the task.

Results

Manipulation Checks

We asked two manipulation check questions related to understanding clients' businesses. In the first question, participants were asked to indicate the client's main business as related to marine services, airlines services, sales, or any other import businesses. All participants correctly responded to the first question. The second question asked about a client's business strategy, a low-cost versus a differentiated strategy. Three participants failed to understand the client's business strategy, hence, were excluded from further analysis.

Test of Hypotheses

The results as shown in Table 1 are based on fifty-four participants[4]. Panel A presents descriptive statistics for the overall planning materiality amount measured by experimental conditions, and Panel B reports the main effects of the level of skepticism on auditors' overall planning materiality as a dependent variable. Our hypothesis proposes that the dysfunctional effects of structured guidance on auditors' planning materiality are related to the level of professional skepticism. Guidance setting in our materials leads to higher materiality assessments. However, highly skeptical professional auditors are less likely to rely on the guidance than auditors with a low level of skepticism, and they will make lower materiality amounts. The results in Table 1 Panel B show the simple main effect of professional skepticism is statistically significant (p = 0.03). The mean responses of overall materiality amount for participants in the high and low level of professional skepticism are 77.72 and 138.73, respectively. The results are consistent with our hypothesis.

Prior studies suggest that experience helps auditors to make appropriate decisions (Kaplan et al., 2008). To eliminate the confounding effect of working with professional skepticism when the participants determine materiality, we used working experience as a covariate (hereafter, audit tenure). An overall ANCOVA in Table 1 Panel C shows a significant effect between low and high levels of professional skepticism on materiality amount (p = 0.05). The simple main effect of professional skepticism remains marginally significant (p = 0.07). Overall, the results are similar to the main results. Audit tenure does not impact overall planning materiality of participants (p = 0.13).

[4] We exclude 8 participants who was either incomplete the task or failed the manipulation checks questions.

Table 1 The Effect of Professional Skepticism on Overall Planning Materiality

Panel A: Descriptive Statistics, n = sample size across conditions

Professional skepticism	**Planning Materiality (amount in million Baht)[a]**		
	N	**Mean**	**S.D.**
High	28	77.72	106.25
Low	26	138.73	121.85
Total	54	107.10	117.05

Panel B: Simple main effect of professional skepticism

Sources	**Std. Error**	***t*-statistics**	***p*-value[+]**
Professional skepticism	31.05	-1.95	0.03**

Panel C: Overall ANCOVA

Sources	**Sum of squares**	**df**	**Mean Square**	***F*-statistics**	***p*-value[++]**
Model	79,846.52	2	39,923.26	3.15	0.05**
Professional skepticism	42,344.25	1	42,344.25	3.34	0.07*
Audit Tenure	29,675.19	1	29,675.19	2.34	0.13
Error	646,302.43	51	12,672.60		

[a] Materiality amount was set by participants. A smaller value indicates a higher- quality materiality assessment. Audit tenure indicates total year of working experiences in auditing as a covariate. [+]One-tailed equivalent. [++]Two-tailed equivalent. ***,**, and * respectively denote the 1%, 5% and 10% significance levels.

According to ISA 320 (2010), auditors should set up both overall and performance materiality amount in audit procedures. Thus, after answering the overall planning materiality, all participants were also asked to indicate the performance materiality amount in the next step. Based on forty-nine participants[5], the results are shown in Table 2. Panel A presents descriptive statistics for the performance materiality amount measured by

[5] We exclude two participants who did not complete a performance materiality question, and there were three aberrations.

experimental conditions, and Panel B reports the main effects of the level of skepticism on auditors' performance as a dependent variable. The results are consistent with our hypothesis. Panel B of Table 2 Panel shows the simple main effect of professional skepticism is statistically significant (p = 0.01). The mean responses of performance materiality amount for participants in the high and low level of professional skepticism are 18.73 and 54.22, respectively. High professional skepticism auditors make lower materiality amounts than low professional skepticism auditors. The results confirm that professional skepticism also impacts the performance materiality assessments.

In addition, Panel C of Table 2 shows a significant effect between low and high professional skepticism on the performance materiality amount (p = 0.04). The simple main effect of professional skepticism remains significant (p = 0.04). Overall, the results are similar to the main results. Performance materiality assessment was not affected by audit tenure (p = 0.26). The effects of professional skepticism on overall and performance materiality are shown pattern in Figure 1 and 2.

Table 2 The Effect of Professional Skepticism on Performance Materiality

Panel A: Descriptive Statistics, n = sample size across conditions

Professional skepticism	**Planning Materiality (amount in million Baht)[a]**		
	N	**Mean**	**S.D.**
High	23	18.73	25.57
Low	26	54.22	69.09
Total	49	37.56	55.73

Panel B: Simple main effect of professional skepticism

Sources	**Std. Error**	***t*-statistics**	***p*-value**[+]
Professional skepticism	14.56	-2.44	0.01**

Table 2 The Effect of Professional Skepticism on Performance Materiality (Continued)

Panel C: Overall ANCOVA

Sources	Sum of squares	df	Mean Square	*F*-statistics	*p*-value[++]
Model	19,122.57	2	39,923.26	3.38	0.04**
Professional skepticism	12,722.73	1	42,344.25	4.52	0.04**
Audit Tenure	3,749.82	1	29,675.19	1.33	0.26
Error	129,974.75	46	12,672.60		

[a] Materiality amount was set by participants. A smaller value indicates a higher-quality materiality assessment. Audit tenure indicates total year of working experiences in auditing as a covariate.
[+]One-tailed equivalent. [++]Two-tailed equivalent. ***,**, and * respectively denote the 1%, 5% and 10% significance levels.

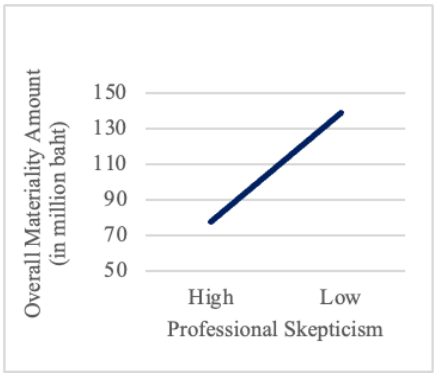

Figure 1 Overall materiality amount

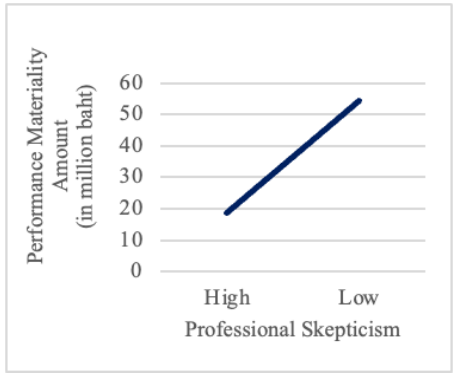

Figure 2 Performance materiality amount

Discussion

In this study, we conducted an experiment to investigate how auditors' planning materiality determination was affected by individual professional skepticism conditional on using structured materiality guidance. The audit task in our experiment incorporates non-recurring item features which were unable to capture the structured materiality guidance, making it less appropriate to simply rely on the structured guidance without considering this transaction. This result indicates that audit managers make less appropriate materiality planning judgments both overall and performance materiality when using structured guidance, and that this detrimental influence of structured materiality guidance is reduced when there is high professional skepticism.

There are cross-sectional variations among public accounting firms in their use of structured materiality guidance. There has been no investigation of the joint effects of materiality guidance and individual professional skepticism characteristic on auditors' materiality judgments. Our study extends extant theoretical understanding of the joint effects of decision aids (circumstance variable or outside factor) and personal professional skepticism (trait variable or inside factor of auditor) measuring using Hurtt's scale.

Materiality setting is one of the key important tasks of auditors. When auditors determine an inappropriate materiality amount, they may take high risks of material misstatements that could have a negative effect on audit quality. This study contributes generally to the audit literature. Unlike previous research that structured guidelines to induce auditors to make less appropriate materiality assessments (Audsabumrungrat et al., 2015). Our results show that the adversary impact of using step-by-step materiality guidance, when facing more complicated circumstances, occurs noticeably with only auditors that have a low level of skepticism. The usefulness of structured guidelines for determining materiality may be limited under less complex audit tasks. Additionally, we extend the prior literature on professional skepticism (Hurtt, 2010) by illustrating the impact of auditors' skepticism for planning materiality assessment task. Our study has shed some lights on the benefit of professional skepticism in lowering the fixation when using a structured guidance.

This study also has an implication to standard setters and raises their awareness in issuing such structured guidance to be utilized. Although the structured guidance can improve consistency or reduce variation, it can limit considering all related information. This investigation can help public accounting firms in their consideration of using such a structured guidance, especially for those auditors with a low level of skepticism. The findings of this study demonstrate that highly skeptical auditors make more appropriate decisions regarding planning materiality than those with a low level of skepticism. Specifically, highly skeptical auditors will consider the relevant factors outside the guidance and decide to make more appropriate materiality amount based on the whole information. Audit firms may improve the audit quality of audit task by introducing semi-structured or qualitative features to reduce an overreliance on structured guidance.

Our study is subject to the following limitations. First, this study examined a client setting that involved a moderate level of complexity. When a client setting becomes too complex, it is possible that the mitigating effect of professional skepticism might deviate. Second, planning materiality was determined by an individual auditor in our setting. In some situations, the audit team may collectively determine the planning materiality amount or discuss its appropriateness after an individual auditor has made a

tentative assessment. The results in this study may not extend to that type of situation. We speculate that team discussions might stimulate personal skepticism in such situations. Third, participants in our experiment were all at the audit manager level. In practice, senior auditors also make materiality assessments. Finally, we conducted our experiment with auditors from one of the BIG 4 public accounting firms where provides structured guidance for determinging materiality in the audit process. The results may be limited to other audit firms who use different guidances such as qualitative, guidance that does not provide step-by-step instruction, or guidance in other format. Future research can investigate these issues.

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