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6

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External auditors' trust and perceived quality of interactions

Kwok Yip Cheung¹* and Chung Yee Lai²

Abstract: The external auditor cooperates and communicates with the audit committee of a company to ensure effective external audit, including detection of material misstatements in financial statements. Trust is an important element to facilitate information exchange and cooperation. This exploratory research examines the impacts of external auditors' trust in audit committee members' competence, integrity and goodwill on perceived quality of their interactions. Through questionnaire survey, the data were collected from audit managers, senior managers, directors and partners in Hong Kong with a response rate of 27.2 percent. Partial least square structural equation modeling and principal component analysis were employed to test the proposed model. The results reveal that the external auditor's competence trust and integrity trust in the audit committee members are two strong motivators, which improve their interactions with the audit committee. The findings also confirm that perceived quality of interactions during preengagement investigation mediates the impacts of competence trust and integrity trust on perceived quality during audit performance stage. The implication of the study is that audit committee members should display high levels of competence and integrity for better interactions with external auditors. These findings provide inspirations for board of directors, executives and policymakers to implement policies that enhance trust among actors to improve audit quality.

Subjects: Accounting; Corporate Governance; Corporate Social Responsibility & Business Ethics

Keywords: Competence trust; integrity trust; Goodwill trust; Audit quality; perceived quality of interactions

1. Introduction

In the current study, the researchers investigate the determinants of external auditors' perceived quality of interactions with audit committee members using questionnaire survey. Over the last two decades, there has been dramatic changes on the landscape of corporate governance, including the changing expectation on the duties of audit committee. They are no longer expected to be passive observers but critical actors in audit quality assurance. The passage of the Sarbanes-Oxley Act of 2002 (SOX) stressed the important role of audit committee for good corporate governance including audit quality. Interactions between the independent external auditor (henceforth "auditor") and members of audit committee (henceforth "audit committee") have significant impact on audit quality (HKICPA, 2010). For promoting effective communication between the auditor and the audit committee, the Public Company Accounting Oversight Board (PCAOB)





approved Auditing Standard (AS) No. 16, Communications with Audit Committees (Public Company Accounting Oversight Board (PCAOB), 2012) to facilitate the audit committee's monitoring role and thus enhance audit quality. Prior research highlighted the important gap of empirical study to examine the interrelationships required between various actors involved (the audit committee and auditor) in corporate governance for achieving high audit quality (Carcello et al., 2011; J. R. Cohen et al., 2004). The importance of effective communication between the auditors and audit committees is stressed in all phases of an audit. Since the passage of SOX, its importance has been everincreasing (J. Cohen et al., 2010). Under this context, examining the motivators that contribute to effective interactions becomes crucial. Inadequate interactions between the auditors and the audit committee will lead to ineffective meetings and insufficient information for the auditors to assess potential risk and managers' integrity, as well as determine appropriate scope of audit and understand firm operations (Beasley et al., 2009). As a result, the audit quality will be reduced.

Effective two-way communication between the auditor and audit committee is encouraged under the new standard for flexible information exchange according to the company's situations and needs. As mentioned by James R. Doty, the PCAOB Chairman, the new standard "moves the auditor's communication with the audit committee away from compliance checklists, and decisively in the direction of meaningful, effective interchange" and recognizes the pivotal role of both parties in financial reporting (Public Company Accounting Oversight Board (PCAOB), 2012). From this perspective, less formal channels and less rigid communication are expected, allowing auditors and audit committees to communicate effectively and work towards higher audit quality (Beasley et al., 2009; Turley & Zaman, 2007).

Through communication with the audit committee, the auditor is responsible for finding out the qualitative aspects of the firm's significant accounting practices, including the highly subjective assumption that the management adopts in estimation. Nevertheless, they have discretions over the level of details requested in communications (AS 1301[Public Company Accounting Oversight Board (PCAOB), 2012]; ISA 260[International Auditing and Assurance Standards Board (IAASB), 2009]). However, inadequate studies were conducted on investigating the factors that affect the quality of interactions between the audit committee and auditor regardless of the strong emphasis on communications by policymakers and accounting firms (International Auditing and Assurance Standards Board (IAASB), 2014 & Public Company Accounting Oversight Board (PCAOB), 2015). Based on social interdependence theory, the researchers hypothesize that the auditor' trust in audit committee improves the quality of their interactions during pre-engagement investigation and during audit performance. Moreover, it is hypothesized that the quality of interactions during pre-engagement investigation is an important variable that meditates the effects of the auditor's trust in the audit committee's competence and integrity on the quality during audit performance. Thus, the current study seeks to answer the following research question:

Does external auditors' trust in audit committee members enhance the perceived quality of their interactions?

The current research attempts to make contributions to the existing literature as follows. First, to the best knowledge of the researchers, this is the first investigation about the impacts of the auditor's trust on interactions with the audit committee, which are essential for quality audit work. Second, this study has practical implications in the Hong Kong business context. It reflects that high levels of auditor's trust in the audit committee improve their interactions during the pre-engagement investigation so that the auditor can better understand the conduct of the clients' management, quality control system and governance structure. Appropriate resources such as audit hours can be allocated for the audit. Their trust also improves the quality of their interactions during audit performance, enabling the auditor to improve their risk assessment and obtain support from the audit committee when they have disagreement with clients' management. Further, the audit committee is willing to follow up outstanding actions arising from their discussion. Third, the findings provide significant insights for policy-makers to mandate the inclusion of financial and industry experts in the audit

committee for building competence trust and thus facilitating interactions with the auditors. The results also highlight the importance for audit committee to display their integrity and competence to auditors, to facilitate high quality of interactions and improve audit quality accordingly.

After this introduction, the next section of the paper provides the background for the study in Hong Kong. The third section discusses the theoretical framework for studying the relationships between independent variables (competence, integrity and goodwill trust) and dependent variables (perceived quality of interactions). The fourth section reviews relevant research literature and develops hypotheses to be tested. The fifth section describes the research methods. The sixth section presents the results of questionnaire survey. The seventh section presents the findings. The last section concludes with discussion of directions for future research.

2. Background for the study

Hong Kong is an appropriate venue for the study. First, Hong Kong corporate governance follows "Comply or Explain approach" for corporate governance (Hong Kong Stock Exchange, Appendix 2021). Hong Kong Standard on Auditing 260, Communication with Those Charged with Governance, does not specify the details of the interactions or communication between the auditor and audit committee. Though the auditor's communication or interaction with the audit committee is on voluntary basis, trust plays an important role in information exchange.

Second, recent studies highlighted the deteriorating corporate governance situation in Hong Kong. For instance, the poor level of corporate transparency and board responsibilities among Hong Kong listed companies were highlighted by Michael and Goo (2015). Therefore, the audit committee and auditor play an important role in safeguarding the interests of shareholders by enhancing audit quality through their interactions.

Third, Hong Kong listed companies are dominated by firms in consumer goods and property sectors that require significant qualitative judgment about fair value of assets and accounting estimates (Cheung & Adelopo, 2022). This suggests that the interactions between the auditor and audit committee are critical for making appropriate qualitative judgment. Kang and Kim (2019) observe that because of the retail industry's labour-intensive operations and tremendous capital investment, the sector is more prone to earnings management. Likewise, Pozzoli and Paolone (2018) also argue that businesses related to real estate and property management are also susceptible to earnings management due to manipulation arising from impairment, fair value measurement and restructuring activities.

Lastly, under the influence of Chinese culture, the corporate governance structure of Hong Kong firms is characterized by interpersonal relationship and reciprocal connections (known as "guanxi" in Chinese), which highly rely on informal relationships instead of formal written agreements (Jaggi et al., 2009). The sharing of information highly relies on the relationships between the auditor and audit committee. Establishing and building trust in relationship is expected to help create strong bond and facilitate interactions between both parties.

3. Theoretical framework

Social interdependence theory explains the role of trust in interactions by stating that actors have interactions due to interpersonal interdependence (Deutsch, 1949). Positive interdependence exists when individuals' achievement of outcomes is influenced by the actions of others, promoting their mutual efforts to goal attainment. As people perceive their actions could increase the chance of outcome achievement, they would have stronger motivation to exhibit cooperative behavior (Bertucci et al., 2016; Johnson et al., 2014; Ortiz et al., 1996).

Positive interdependence involves certain psychological processes, including substitutability and positive cathexis (Johnson & Johnson, 2015; Kramer & Brewer, 1984). Substitutability refers to the extent to which an individual acts to substitute for the others' actions (Deutsch, 1949). Because of

positive interdependence, people may display stronger motives to substitute their actions for others' actions (Johnson, 2003; Johnson & Johnson, 2015; Johnson et al., 2014; Kramer & Brewer, 1984) and provide more assistance to others (Bertucci et al., 2016; Johnson & Johnson, 2015). With the aim of goal attainment, actors would have higher commitment to make contributions, challenge the inferences and conclusions each other for better decision-making and problem solving (Johnson & Johnson, 2015). Positive cathexis associates with the emotional investment of positive psychological energy in others rather than oneself (Bertucci et al., 2016; Johnson, 2003; Johnson & Johnson, 2015; Kramer & Brewer, 1984). It is possible that the cathexis attached to individuals' actions to be extended to others. Positive interdependence associates with promotive interaction-individuals encouraging and facilitating each other's efforts to achieve team goals and mutual benefits (Deutsch, 1949; Johnson, 2003; Johnson & Johnson, 2015; Kramer & Brewer, 1984). When individuals make progress towards their goals, they react positively and reinforce their cooperative behaviors. This can be applied to the interdependence between the auditors and audit committee. Since trust reduces their cost and increase substitutability and positive cathexis to engage in interactions, the auditors and audit committee are likely to have more effective interactions for achieving the common goals to enhance audit guality and protect company image.

4. Literature review and hypotheses development

4.1. Interactions between the auditor and audit committee

HKICPA, 2010) states that communications and interactions between the auditor and audit committee are important determinants of audit quality. The practicality and reliability of audit reporting relies on the interactions between the audit committee and auditors to discuss issues including the barriers to the auditor's objectivity, major risks identified and the audit scope (HKICPA, 2010). The effective interactions between the audit committee and auditor are a critical contribution to audit quality enhancement (HKICPA, 2010). Accounting and Corporate Regulatory Authority (2010) states that regular interactions between the audit committee and audit team are essential for preventing an external audit from becoming a mechanical process. The audit committee and auditor do not operate on their own but interact with each other to discuss issues related to the external audit (Sharma et al., 2011). From the perspective of audit auality, the auditors' trust in the audit committee encourages their collaboration with the audit committee to determine the scope of audit. If trust is established, the auditor will be more likely to receive reliable and detailed information about the internal quality control mechanism and the integrity of the company management. Also, the audit committee will have a higher chance to support the position of the auditor when the auditor has disagreements with the management. As a result, the audit quality could be enhanced.

4.2. Trust as an antecedent of perceived quality of interactions

Trust relates to the beliefs of individuals about the likelihood of getting positive outcomes from interactions with others, indicating whether others will behave as they have promised (Dhillon, 2001; Pasiouras et al., 2021). More specifically, trust can be considered as the assumptions that an actor makes on others' actions in order to adjust their cooperative effort (Kramer et al., 1996). Trust increases the likelihood that the trustors will take risks to initiate an exchange relationship (Dirks and Skarlicki, 2008) so they start to interact, resulting in mutually beneficial interactions (Hardin, 1993). Jiang et al., 2013) examine the relationships between trust, reliance, and long-term business relationships. They find that trust and reliance facilitate long-term business relationships. Silva et al. (2012) investigate the relationships between shared values, partner similarity communication, opportunistic behavior, trust, and performance and document that trust improves performance. Since the auditor relies on the audit committee' competence to determine scope of audit and appropriateness of audit plan, its integrity to receive reliable information and goodwill to cooperate with the auditor, therefore, it is expected that the auditor places trust in the audit committee due to their perceptions of the audit committee's competence, integrity and goodwill.

4.3. Competence trust

Competence trust is defined as the trust in actors' technical capabilities and skills that empower the actors to perform the obligations (Shazi et al., 2015). This trust associates with technical competence, predictability, dependability, and fairness (Aoki, 2020). According to Das and Teng (2002), competence trust is a crucial source of productive interactions. Trust in other's competence facilitates collaborative work and contributes to a belief that shared knowledge would be efficiently applied. (Mohammed & Kamalanabhan, 2020). Moreover, competence trust increases the confidence level of decision the actors make and results in higher commitment by the actors. The level of competence trust among the actors positively correlates with team effectiveness (Mohammed & Kamalanabhan, 2020; Parayitam & Papenhausen, 2018). The respect and confidence by actors are strong motivators for competent actors to share their different thoughts. Though actors who display distinct views may feel hesitant about how these views will be challenged, competence trust helps overcome such hesitation (Roy & Dugal, 1998). In addition, Lewicki et al. (1998) states that groups with lower levels of competence trust would have less confidence in their members. As a result, they tend to communicate with "professional courtesy" while minimizing the challenges on others (including constructive disagreements) when making decisions. Additionally, actors with low competence trust might avoid expressing different views due to little enlightenment expected from other actors.

Based on extant literature regarding the effect of competence trust on interactions, it can be assumed that competence trust positively correlates with external auditors' perceived quality of interactions. Hence, the following hypotheses are proposed:

H1: External auditor's competence trust is positively related to their interactions with the audit committee during the pre-engagement investigation.

H2: External auditor's competence trust is positively related to their interactions with the audit committee during audit performance.

4.4. Integrity trust

Integrity trust concerns about the trust in honesty, motive, and character of the actors working in the organization that positively affect the outcomes (Connelly et al., 2018). Actors have higher tendency to engage in cooperative interactions where perceptions of honesty and expectations of behavioral reliability are high. Positive expectations about the actor's intentions reduce relational concerns, facilitate more transparent communication, and create a deeper commitment to the common good. Actors become more open to sharing knowledge and ideas, highlighting strengths as well as weaknesses, and working together to troubleshoot problems in relationships with other actors if they trust them (Ghosh & Fedorowicz, 2008). Ozer et al. (2018) confirm the important role of the assistance processes (such as information sharing, advice provision and delegation) in trust building. Usoro et al. (2007) conduct a study on knowledge sharing in the context of virtual communities and reveal that integrity trust positively correlates to knowledge sharing and conclude that it should be promoted. Similar findings are reported in the study of Tschannen-Moran (2001), in which integrity trust is found to be instrumental for facilitating collaboration between the actors. The recent research by Liu et al. (2022) also finds integrity trust the strongest factor of one's acceptance on natural gas extraction. Individuals had higher intention to accept it as the decision-making process was considered transparent and fair.

Extant literature suggests that integrity trust has significant impacts on interactions among the actors that improves organizational performance. Therefore, it is assumed that integrity trust positively influences the auditor's interactions with the audit committee during pre-engagement investigation and audit performance. Hence, the following hypotheses are proposed: H3: External auditor's integrity trust is positively related to the perceived quality of their interactions with the audit committee during pre-engagement investigation.

H4: External auditor's integrity trust is positively related to the perceived quality of their interactions with the audit committee during audit performance.

4.5. Goodwill trust

The benevolence dimension of trust prevents actors from playing opportunistically. Because of the demand for complementary resources, actors understand mutual support is necessary for accomplishing collective goals. This leads to interdependency, in which actors depend on their partners and become more exposed to risks and uncertainties (Gomes et al., 2016). Goodwill trust refers to the performance of actors exceeding contractual agreements between the partners (Newell et al., 2019). Goodwill trust is established reciprocally by affirming that an individual acts in such a way consistent with the interest of his or hers (Newell et al., 2018). Zand (1972) supports that goodwill trust fosters information sharing between business partners, increases each party's willingness to accept dependence on the other, and raises the general motivation to implement agreement. Goodwill can be regarded as the commitment of a party to provide helpful information to the others (Massaro et al., 2019), allowing actors to build trust in partners who care about their businesses and goals. Among various dimensions of trust, goodwill trust (a party's positive expectation toward the other party's credibility and benevolence) serves as an important contributor for facilitating cooperation and coordination under informal governance mechanism. There are two main reasons. First, the continuity and solidarity encouraged by goodwill trust may foster bilateral deterrence and commitment to the relationship, thus facilitating firms to act reciprocally and to consider mutual interests (Poppo & Zhou, 2014). Second, a trusting environment allows the firms' engagement in extensive communication and continual mutual adjustment on an informal basis, enabling concerted coordination (Fames et al., 2008).

The extant literature provides support that goodwill trust is essential for more effective interactions. Therefore, it is assumed that goodwill trust positively influences the perceived quality of interactions during pre-engagement investigation and audit performance. Hence, the following hypotheses are proposed:

H5: External auditor's goodwill trust is positively related to the perceived quality of their interactions with the audit committee during pre-engagement investigation.

H6: External auditors' goodwill trust is positively related to the perceived quality of their interactions with the audit committee during audit performance.

4.6. Interactions during pre-engagement investigation and audit performance

Continued interactions among actors generate trust, which will have positive consequences on decision quality (Parayitam & Papenhausen, 2018). The auditor is more willing to interact with the audit committee if the auditor develops a strong relationship with the audit committee. (Krishnamoorthy et al. 20020032). A strong relationship could be developed at the preengagement stage, in effect enhancing the quality of their interactions during audit performance stage later. This is consistent with the idea of co-evolution of relationships suggested by Merry (1999), who states that interdependence between organizations encourages the actors to adapt to and suit themselves to the behaviors of each other. Prior studies also reflect consistent view that higher quality of interactions at the early stage contributes to quality interactions at the later stage of a relationship (Edelenbos & Eshuis, 2012; Minnaar et al., 2017; Oortmerssen et al., 2014).

During the pre-engagement investigation stage of an external audit, the auditor has interactions with the audit committee to determine the conduct of management, the quality control procedures and resources expected to be used. If trust is established at this stage, those details could be discussed effectively under high quality of interactions. It is reasonable to expect that such interactions will still last during audit performance stage. Following the studies by Minnaar et al. (2017), Oortmerssen et al. (2014), and Edelenbos and Eshuis (2012), the researchers have formulated the following hypotheses to examine the meditating effects of perceived quality of interactions during pre-engagement investigation on the relationships between three dimensions of trust and the quality of interactions during audit performance. Hence, the following hypotheses are proposed:

H7: External auditors' perceived quality of interaction during pre-engagement investigation will positively influence perceived quality of interaction during audit performance.

H8: External auditors' perceived quality of interactions during pre-engagement investigation mediates the relationship between competence and perceived quality of interactions during audit performance.

H9: External auditors' perceived quality of interactions during pre-engagement investigation mediates the relationship between integrity trust and perceived quality of interactions during audit performance.

H10: External auditors' perceived quality of interactions during pre-engagement investigation mediates the relationship between goodwill trust and perceived quality of interactions during audit performance.

5. Research designs

5.1. Data collection and sampling

This study adopted the questionnaire survey (Likert scale, 1 = strongly disagree to 5 = strongly agree) to collect data and adopted the structural equation modelling approach for analysis. The data were collected from audit managers, senior managers, directors and partners of audit firms. The potential participants of the study were identified through audit firms' websites, Linkedin profiles, and google search. Emails were sent to participants for obtaining their consent to take part in an online questionnaire survey between June 2016 and December 2016.

The questionnaire was evaluated by five experts to ensure grammatical accuracy and appropriate content design before sending it to the potential auditors. Comments were given from two university scholars with research experience in auditing, one audit manager and two audit partners. Changes on wordings were made and redundant descriptions were removed to ensure the content validity.

As it was difficult to estimate the total population size, Hair et al.'s (2011) criteria were employed to determine the sample size, i.e., 5 to 10 responses per item. As the number of items is 20, a total of 100 to 200 sample size is considered sufficient for this study. To ensure adequate number of samples, the questionnaire was sent to 493 potential participants with 286 participants being identified from the firms' websites, 197 participants from Linkedin profiles, and 10 of them from google search engine. A consent form and an electronic link were sent to them as invitation to the study. If they indicated their agreement to participate in it, a questionnaire was emailed to them.

A total of 142 responses were received from the auditors. Eight responses were eliminated because of incomplete information in questionnaires. A total of 134 usable responses were collected with a response rate of 27.2 percent, which fits the suggested sample size for conducting structural equation modeling (between 100 and 150 responses) (Tabachnick & Fidell, 2001).

Table 1. Composition of invited po	ırticipants	T
Participants	Frequency	Percentage
Auditors identified from firms' website	286	58.01%
Auditors identified from Linkedin	197	39.95%
Auditors identified from google search	10	2.02%
Participant types		
Big Four auditors	375	76%
Non-big Four Auditors	118	24%
Audit partners/directors	320	65%
Audit managers/senior audit managers	173	35%
Big Four audit partners/directors	227	71%
Non-big Four audit partners/ directors	93	29%
Big Four managers	140	81%
Non-big Four managers	33	19%

Table 1 shows the compositions of the auditors invited to participate in the survey. As for the demographic profile of participants, 76 percent of the invited auditors were from Big Four audit firms, 65 percent of the participants identified themselves as audit partners/directors and 35 percent reported themselves as audit managers/senior audit managers. There were 71 percent of participants being audit partners/directors from Big Four audit firms and 29 percent from non-Big Four audit firms. Among the audit managers/senior audit managers, 81 percent were from Big Four audit firms. Thus, most of the invited auditors were audit partners/top management of Big Four audit firms.

5.2. Instrumentation

This study has adapted established scales from the past studies. The scale containing four items for measurement of perceived quality of interaction during pre-engagement investigation was adapted from the studies of Butcher et al. (2013), Accounting and Corporate Regulatory Authority (2010), and KPMG (2013b). The scale containing seven items for the measurement of perceived quality of interactions during audit performance was adapted from Deloitte (2015), Contessotto and Moroney (2014), and Al-matarneh (2011), and KPMG (2013). The competence trust scale containing three items was adapted from studies of Kramer et al. (1996) and McKnight et al. (2002). The goodwill scale containing three items was adapted from the studies of Sako (1992) and Sako and Help (1998). The integrity trust containing three items was adapted from the studies of McKnight et al. (2002) and Kramer et al. (1996). The questionnaire is shown in Table 2. The scales from the past studies are summarized in Table 3

6. Empirical results

6.1. Stage 1: Variable selection

As the perceived quality of interactions consists of large amount of variables, the researchers use principal component analysis to find the latent variables to measure perceived quality of interactions at different stages of the external audit. Variance accounted for (VAF) is used to find the principal components (Linting et al., 2007; Linting & Van der Kooij, 2012). Kaiser (1960) recommends retaining all factors with eigenvalue larger than 1. Table 4 shows that the eigenvalues of Factor 1, Factor 2 and Factor 3 are 4.134, 1.373 and 0.9902, respectively. The scree plot in Figure 1 shows that only the eigenvalues of Factor 1 and Factor 2 are above 1. Thus, the study uses two

This questionnaire is to be completed by the audit committee members in external audits.	This questionnaire is to be completed by the external auditor. For statements 1–20, please indicate which of 1 to 5 best represents your general experience with audit committee members in external audits.	uditor. For statements 1-	-20, please indicate which of	1 to 5 best represents you	ır general experience with
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
 Audit committee mem- bers are generally an important source of information about the conduct of senior man- agement for pre- engagement investiga- tion. 		2	m	4	2
(2) Audit committee mem- bers are generally willing to discuss their com- pany's governance struc- ture with me for pre- engagement investiga- tion.		2	m	4	ۍ
(3) Audit committee mem- bers are generally willing to tell me their com- pany's policies about the supervision of quality control process of finan- cial reporting.	1	2	m	4	2
(4) I generally have produc- tive discussions with audit committee mem- bers when assessing cli- ents' business risk.	-1	2	m	4	S

Table 2. Questionnaire

(Continued)

This questionnaire is to be completed by the audit committee members in external audits.	completed by the external c in external audits.	auditor. For statements 1	This questionnaire is to be completed by the external auditor. For statements 1–20, please indicate which of 1 to 5 best represents your general experience with audit committee members in external audits.	f 1 to 5 best represents you	r general experience with
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
(5) Audit committee mem- bers generally meet with me without the atten- dance of management and executive directors.	F -1	2	m	4	Ŋ
(6) I am generally satisfied that audit committee members properly follow- up outstanding actions arising from my discus- sions with them.	-1	2	m	4	N
(7) In general, I communicate effec- tively with audit commit- tee members about the approach to monitor internal control systems.		2	m	4	N
(8) I often openly commu- nicate unadjusted audit differences to audit com- mittee members.	1	2	m	4	N
(9) In general audit com- mittee members support my position when I have disagreements with cli- ents' management.	F	2	m	4	S
	-		-		(Continued)

Table 2. (Continued)

This questionnaire is to be completed by the audit committee members in external audits.	This questionnaire is to be completed by the external auditor. For statements 1–20, please indicate which of 1 to 5 best represents your general experience with audit committee members in external audits.	auditor. For statements 1–.	20, please indicate which o	f 1 to 5 best represents you	r general experience with
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
(10) I am generally satisfied that audit committee members had appropri- ate dialogues with me on the major issues from the external audit.	-	2	m	4	2
(11) I generally have pro- ductive discussions with audit committee mem- bers about hours to be spent on external audits.		2	m	4	2
(12) In my experience as an external auditor, I rarely question audit commit- tee members' capabil- ities.		2	m	4	2
(13) The ability of audit committee members is generally important to the smooth working of the audit process.		2	m	4	5
(14) In general, I could rely on audit committee members' knowledge to facilitate my audit plan- ning.	F-1	2	m	4	2

Table 2. (Continued)

(Continued)

This questionnaire is to be completed by the audit committee members in external audits.	This questionnaire is to be completed by the external auditor. For statements 1–20, please indicate which of 1 to 5 best represents your general experience with audit committee members in external audits.	uditor. For statements 1-	20, please indicate which o	f 1 to 5 best represents you	r general experience with
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
(15) Audit committee mem- bers generally address auditing and reporting issues honestly.	1	2	c	4	S
(16) I find that audit com- mittee members' actions often match their words when they are asked about how they evaluate internal control systems.	1	2	m	4	S
(17) I feel that I rarely need to be aware that infor- mation from audit com- mittee members may be misleading.		2	m	4	2
(18) Audit committee mem- bers are generally repu- table and I am inclined to trust them.		2	m	4	2
(19) I can generally rely on audit committee mem- bers to help me beyond the minimum require- ments of the formal engagement contract.		2	m	4	2

Table 2. (Continued)

(Continued)

Table 2. (Continued)
This questionnaire is to be completed by the external auditor. For statements 1–20, please indicate which of 1 to 5 best represents your general experience with addit committee members in external audits.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
(20) In dealing with audit committee members, I generally do not spend a lot of time haggling over issues, such as responsibility for pro- blems.	1	7	m	4	S

Table 3. Constructs and source	es	
Construct(s)	items	Source(s)
Competence trust (independent)	3	Kramer et al. (1996); McKnight et al. (2002).
Integrity trust (independent)	3	McKnight et al. (2002); Kramer et al. (1996).
Goodwill trust (independent)	3	Sako (1992); Sako and Help (1998).
Perceived quality of interaction during pre-investigation engagement (mediator)	4	Butcher et al. (2013); Accounting and Corporate Regulatory Authority (2010); KPMG (2013).
Perceived quality of interaction during audit performance (dependent)	7	Deloitte (2015); Contessotto and Moroney (2014), Al-matarneh (2011); KPMG (2013).

Table 4. Princip	oal component analysi	s and initial eigen	value	
Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	4.13402	2.76091	0.3758	0.3758
Factor 2	1.37311	0.38288	0.1248	0.5006
Factor 3	0.99023	0.11541	0.0900	0.5907
Factor 4	0.87483	0.09868	0.0795	0.6702
Factor 5	0.77615	0.07907	0.0706	0.7408
Factor 6	0.69708	0.12711	0.0634	0.8041
Factor 7	0.56998	0.02450	0.0518	0.8559
Factor 8	0.54547	0.14719	0.0496	0.9055
Factor 9	0.39828	0.04152	0.0362	0.9417
Factor 10	0.35676	0.07268	0.0324	0.9742
Factor 11	0.28408		0.0258	1.0000

factors as perceived quality of interactions: Factor 2 serves as a construct for measuring the perceived quality of interactions during pre-engagement investigation (PQIPI). Factor 1 serves as a construct for measuring the perceived quality of interactions during audit performance (PQIAP). The formation of the two principal components as dependent variables of the study is consistent with HKICPA (2017) Standard on Auditing 220 (HKSA 220), Quality Control for Audits of Financial Information, which highlighted that audit quality is impacted by the interactions of the auditor and client at the pre-engagement investigation that leads to acceptance and continuance of client relationships. HKSA 220 underlined that before the engagement, the auditor should understand the integrity of the clients and find out whether the engagement team has the necessary resources. Questions 1, 2 and 3 are related to the understanding of the integrity of the clients and Question 11 is related to the resources of the auditor. Questions 4, 5, 6, 7, 8, 9 and 10 are related to the activities performed regularly during the audit performance. In regard to the independent variables of the study, the auditor's trust in the audit committee's competence (CT), integrity (IT) and goodwill (GWT) are measured as three different latent variables.

Table 5 shows that rotated component matrix. The optimal threshold for including an item is 0.5, but past studies argue that even 0.4 would be acceptable for exploratory studies (Field, 2016; Manodongwe & Jaravaza, 2020) while for confirmatory studies, 0.7 would be the threshold. Question 8 contained in the construct for the perceived quality of interactions during audit performance (Factor 1) is below the threshold of 0.5, but above 0.4. Thereby, the researchers determine to include the question 8 at this stage

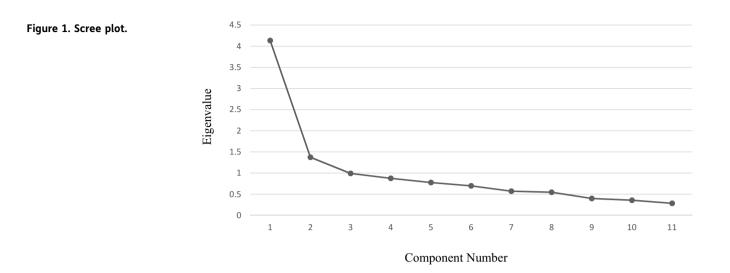


Table 5. Rotated compone	ent matrix	
	Factor 1	Factor 2
Question 10	0.7534	0.1509
Question 9	0.7343	-0.0936
Question 7	0.6224	0.4330
Question 4	0.6223	0.3865
Question 6	0.6030	0.2833
Question 5	0.5035	0.2604
Question 8	0.4534	0.1246
Question 1	0.0496	0.8150
Question 2	0.1236	0.7618
Question 3	0.1925	0.7307
Question 11	0.3250	0.5765

Variables with total VAF of 0.25 or higher were chosen. This research also applies Comrey's (1973) rules of thumb for VAF in a variable per component: 10% (poor), 20% (fair), 30% (good), 40% (very good) and 50% (excellent). Therefore, two variables with VAF close to 0.25 or higher were carefully selected for further analysis. The eigenvalues represent the VAF by the principal components across variables. The proportion of VAF by a component equals to its eigenvalue divided by the number of analysis variables (Saukani & Ismail, 2019). Table 6 shows that total VAF across the two components is 50.06% (with VAF of Component 1 = 26.04% and Component 2 = 24.03%), so the two components are chosen for further study.

6.2. Stage 2: Main analysis

6.2.1. Common method bias

This study used Harman's single-factor test for assessing common bias threat (Harman, 1976). According to this method, the data are free from bias if single factor accounts less than 50 percent variations in the data. In this study, single factor explains 32.22% of the overall data, implying that common method bias is not a threat to data credibility (Podsakoff, 2003).

Table 6. Retained	factors			
Factor	Variance	Difference	Proportion	Cumulative
Factor 1	2.86438	0.22163	0.2604	0.2604
Factor 2	2.64275		0.2403	0.5006

			Convergent Validity		
Constructs Items Standardized Cronbach's Alpha factor loading (á)			Composite reliability (CR)	Average Variance Extracted (AVE)	
Competence trust (CT)	CT1	0.808			
	CT2	0.724 .716	0.838	0.635	
	CT3	0.852			
Integrity trust (IT)	IT1	0.891			
	IT2	0.867 .744	0.853	0.663	
	IT3	0.666			
Goodwill trust (GWT)	GWT1	0.781			
	GWT2	0.754 .717	0.841	0.863	
	GWT3	0.758			
Perceived quality of	PQIB1	0.792			
interactions during pre-	PQIB2	0.724 .748	0.841	0.569	
engagement investigation	PQIB3	0.779			
(PQIPI)	PQIB4	0.720			
Perceived quality of	PQIAP1	0.793			
interactions during audit	PQIAP2	0.590			
performance	PQIAP3	0. 723 .768	0.844	0.522	
(PQIAP)	PQIAP4	0.796			
	PQIAP5	0.693			

6.2.2. Measurement model

Partial Least Square Structural Equation Modeling (PLS-SEM) is adopted in this study. PLS-SEM has advantages as it runs data on small sample size, is suitable for the prediction and avoids inadmissible solution (Fornell & Larcker, 1982). First, a measured model was developed to assess the appropriateness of the data, Second, a structural equation model was performed to test the hypothesized relationships. The measurement model contains standard factor loadings (SFL) of the items, Cronbach alpha, composite reliability (CR), and average variance extracted (AVE). To establish convergent validity, the values of CR must be greater than 0.70 and AVE must be greater than 0.50 (Hair et al., 2011)). Initially, measurement model results are not satisfactory as the values of standard factor loadings and AVEs for the constructs of perceived quality of interactions during audit performance are below the recommended thresholds. Therefore, questions 8 (standard factor loading: 0.453) and 9 (standard factor loading: 0.536) were deleted. After second analysis, the values of CR and AVE are falling within the recommended ranges. The results of the measurement model are shown in Table 7. KMO and Bartlett test are introduced to test the item-test

Table 8. KMO and Bartlett's test				
Kaiser-Meyer-Olkin Measure of Sampling Adequacy 0.826				
Barlett's Test of Sphericity	Approx. Chi-Square	355.687		
	Df	36		
	Sig.	0.000		

correlation. Table 8 shows that KMO and Bartlett's results are within acceptable range, where KMO is greater than 0.5 and Bartlett's test result is smaller than 0.05 (Aller et al., 2013). This confirms that the data are sufficient for further analysis.

Further, the study assessed the discriminant validity as per Fornell & Larcker's, 1982) criterion. They suggest that the values of square root of AVEs of all constructs must be greater than the inter-correlations among the constructs. The results of Table 9 depict that the square root of AVEs are greater than the correlations among constructs for establishment of discriminant validity.

Model productivity was assessed through the values of R^2 . In this study, the value of R^2 is 32.2 percent, suggesting good prediction of the overall model. Further, blindfolding method was applied to assess the value of cross redundancy (Q^2) that represents predictive relevance of the model. The value of (Q^2) above 0 indicates predictive relevancy in the model. In this study, the value of (Q^2) for perceived quality of interactions during pre-engagement investigations audit performance are from 13.5 percent to 15 percent, respectively, indicating predictive relevancy of the model in this study.

6.2.3. Hypotheses testing

This study used PLS-SEM to test the hypothetical model. Table 10 depicts the results of hypothesis testing. Hypothesis 1 is supported, indicating that competence trust is positively related to perceived quality of interactions during pre-engagement investigation ($\beta = 0.307$; t = 3.437; p < 0.01). Hypothesis 2 is not supported, indicating that competence trust is not significantly and positively related to perceived quality of interactions during audit performance ($\beta = 0.065$; t = 0.818; p > 0.10). Hypothesis 3 is supported, implying that integrity trust is positively related to perceived quality of interactions during pre-engagement investigation ($\beta = 0.202$; t = 2.060; p < 0.05). Hypothesis 4 is supported, revealing that integrity trust is positively related to perceived quality of interactions during audit performance ($\beta = 0.393$; t = 4.382; p < 0.01). Hypothesis 5 is not supported, showing that goodwill trust is not positively and significantly related to perceived quality of interactions during pre-engagement investigation ($\beta = 0.142$; t = 1.357; p > 0.10). Hypothesis 6 is not supported, indicating that goodwill trust is not positively and significantly linked to perceived quality of interactions during that goodwill trust is not positively and significantly linked to perceived quality of interactions during that goodwill trust is not positively and significantly linked to perceived quality of interactions during that goodwill trust is not positively and significantly linked to perceived quality of interactions during audit performance is rejected ($\beta = 0.154$;

Latent variables	Mean	S.D	ст	IT	GWT	PQIPI	PQIAP
CT	3.624	0.682	0.797				
IT	3.761	0.624	0.588	0.799			
GWT	3.547	0.697	0.421	0.633	0.814		
PQIPI	3.722	0.665	0.474	0.454	0.422	0.754	
PQIAP	3.941	0.563	0.462	0.569	0.633	0.567	0.723

Where CT is competence trust; IT is integrity trust; GWT is goodwill trust, PQIPI is perceived quality of interactions during pre-engagement investigation; PQIAP is perceived quality of interactions during audit performance; S. D = Standard deviation

Table 10. Hypotheses testing				
Hypotheses	Beta	p-values	t-values	Decision
H1: CT -> PQIPI	0.307	0.001***	3.437	Supported
H2: CT -> PQIAP	0.065	0.414	0.818	Not supported
H3: IT -> PQIPI	0.202	0.039**	2.060	Supported
H4: IT -> PQIAP	0.396	0.000***	4.382	Supported
H5: GWT -> PQIPI	0.142	0.175	1.357	Not supported
H6: GWT -> PQIAP	0.154	0.110	1.598	Not supported
H7: PQIPI -> PQIAP	0.292	0.000***	3.665	Supported
H8:CT -> PQIPI -> PQIAP	0.090	0.019**	2.340	Supported
H9: IT -> PQIPI -> PQIAP	0.059	0.066**	1.841	Supported
H10: GWT -> PQIPI -> PQIAP	0.113	0.211	1.251	Not supported

Where CT is competence trust; IT is integrity trust; GWT is goodwill trust, PQIPI is perceived quality of interactions during pre-engagement investigation; PQIAP is perceived quality of interactions during audit performance. *, ** and *** represents p-value less than 10 percent, 5 percent and 1 percent, respectively.

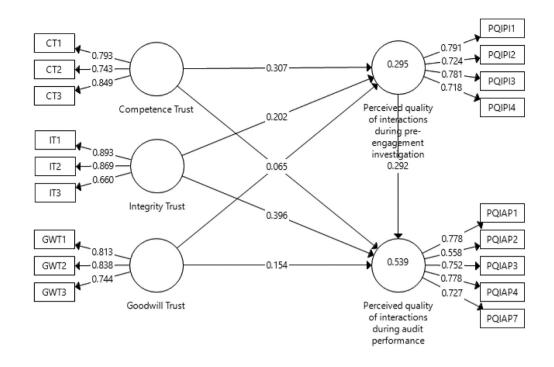
t = 1.598; p > 0.10). Hypothesis 7 is supported, showing that perceived quality of interactions during pre-engagement investigation is positively related to perceived quality of interactions during audit performance (β = 0.292; t = 3.665; p < 0.01).

Hypothesis 8 is supported, indicating that the perceived quality of interactions during pre-engagement investigation mediates the relationships between competence trust and perceived quality of interactions during audit performances ($\beta = 0.090$; t = 2.340; p < 0.05). Hypothesis 9 is supported, implying that the perceived quality of interactions during pre-engagement investigation mediates the relationships between integrity trust and perceived quality of interactions during audit performance ($\beta = 0.059$; t = 1.841; p < 0.066). Hypotheses 10 is not supported, indicating that the perceived quality of interactions during pre-engagement investigation does not mediate the relationship between goodwill trust and perceived quality of interactions during audit performances is rejected ($\beta = 0.113$; t = 1.251; p > 0.10). The coefficients and research model are presented in Figure 2.

7. Discussion

The objective of this study is to study the impacts of three dimensions of the auditor's trust in the audit committee on perceived quality of their interactions. Drawing on social independence theory, the researchers observe that competence and integrity trust reduce the cost of interactions, so they have better quality of interactions. This is essential as they depend on each other to enhance audit quality to protect the interests of shareholders. These findings are consistent with prior studies. For example, the studies conducted in the government and private organizations reveal that competence trust affirms that partners have the required skills to execute the project (Aoki, 2020; Connelly & Zweig, 2015), and competence increases the interactions among the members (Bogt & Tillema, 2016; Das & Teng, 2002). The results are consistent with recent studies that establish that integrity trust improves the perceived quality of interactions (Han et al., 2021; Liu et al., 2022). In addition to this, the results document that goodwill trust in the audit committee has insignificant effects on perceived quality of interactions, which contradicts the findings of previous studies (Jiang et al., 2013; Xue et al., 2018). However, these findings match with the thought of researchers who asserted that the impacts of goodwill trust are not a constant factor during interactions and it would change with time (Wang et al., 2017; Zhou et al., 2014). For instance, Wang et al. (2017) suggest that goodwill trust has U-shape effects on knowledge sharing and creation. The costs of sustaining goodwill trust with partners may overweigh the advantages it brings to the firm (Villena et al., 2011). Extra goodwill trust may diminish the firm's monitoring efforts, lead to possible opportunistic behaviors (Molina-Morales et al., 2011; Zhou et al., 2014) and restrain

Figure 2. Research model.



a firm's motivation to critically evaluate acquired knowledge (Ireland & Webb, 2007). Moreover, goodwill trust usually links to strong emotional bonds with alliance partners, which can be a possible trap for the firm to fall in unhealthy relationships (Poppo et al., 2008; Robson et al., 2008). Similarly, in the context of auditing, goodwill trust may enhance interactions. However, if goodwill trust exceeds a certain level, auditor's professional skepticism will be impaired, leading to fewer interactions. The effects may be cancelled out, causing insignificant effects in the study.

The findings of this study are consistent with prior studies that trust enables actors to exchange information (Bogt & Tillema, 2016; Minnaar et al., 2017), particularly the confidential and sensitive information in the audit. The prior studies support the views that if one trusts another, the one will be willing to exchange confidential and sensitive information (Bryan et al., 2010; Fiala et al., 2013). If the auditor trusts the audit committee, they will share sensitive and confidential information about management. For instance, the auditor may report to the audit committee if the management is reluctant to document and support certain accounting estimates, or about the failure to respond to the request for assessing the company' ability (HKICPA, 2021a). If these happen in reality, the audit committee can follow up with the management for providing the documents and judgments as soon as possible, allowing the auditor to have sufficient evidence to form their opinions.

The study results also reveal that the perceived quality of interaction pre-engagement investigation positively influences the perceived quality of interaction during audit performance. Further, the findings reveal that perceived quality of interaction during pre-engagement mediates the impacts of trust in the audit committee's competence and integrity on perceived quality of interaction during audit performances. These findings align with past studies that perceived quality of interaction at early stage reduces information asymmetry and improves organizational performance in achieving the targets (Minnaar et al., 2017; Van Oortmerssen et al., 2014). This implies that the audit committee should demonstrate high levels of integrity and competence at the early stage of the audit (pre-engagement investigation).

One implication of the findings is that if the auditor trusts that the audit committee displays high levels of competence and integrity, the auditor intends to spend more effort on indepth discussion with audit

committee. The auditor needs to exchange information with the audit committee for devising appropriate audit plans (Accounting and Corporate Regulatory Authority, 2010; HKICPA, 2010). Not only does this allow the audit committee to understand and approve the scope of the audit, as well as provide inspirations about the audit approach of the audit team but also allow the auditor to understand the clients' business including the risks (HKICPA, 2010). In this way, the auditor can devise suitable audit plans and subsequent audit approaches suitable for the significant risk area. The audit risks will become more transparent to the auditors as they will become diligent when discussing the company's issues and operations with the audit committee. The audit committee provides comments on how the audits are conducted so that the audit will be more appropriate for company operations. Furthermore, as the auditor has better quality of interactions with the audit committee, it may be willing to support the auditor's position when the auditor has disagreements with management. This supports the views that policymakers should mandate that the audit committee have financial and industry expertise so that the audit committee can display their competence so that the auditor can place their trust in the audit committee. The policy makers should also mandate that audit committee members in a firm with material financial misstatements should not be allowed to seat in other companies as audit committee members so that they can display sufficient integrity for interactions with the auditor.

8. Summary and conclusion

This study evaluates the auditor's trust in the perceived quality of interactions during pre-engagement investigations and during audit performances. The study results reveal that the auditor's trust enhances the perceived quality of interactions with the audit committee. Hence, this improves pre-engagement investigation and audit performance and, thereby, audits quality. This research is essential for the auditor and audit committee. The audit committee has to behave with high levels of competence and integrity so that the auditor can trust the audit committee, resulting in improved quality of interactions. For instance, only being competent is not sufficient for facilitating interactions. The audit committee must behave with high levels of integrity as well. This research also provides insights to policymakers to mandate that the audit committee must display high levels of competence and integrity, particularly in the preengagement investigation. Thereby, they will have a better quality of interactions and audit quality to protect the interests of the shareholders. Although this study is novel toward understanding interactions between the auditor and audit committee during the pre-engagement investigation and audit performance, it has certain limitations. The first limitation is the small sample used in this study for data analysis. Future studies may include a large sample size that could help generalize the results to a larger population. The second limitation is that the survey was conducted among auditors working in Hong Kong. Future studies can include a sample of auditors from other countries to understand better the interactions between the auditor and audit committee during the pre-engagement investigation and audit performance. Future researchers would find it interesting to examine the moderating effects of the auditor's trust on the relationships between audit committee characteristics and audit quality. Further, future research may investigate how goodwill trust facilitates interactions while, to a certain level, impairs auditor's professional skepticism.

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