Group judgment and decision making in auditing: Past and future research

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A B S T R A C T

We examine the research literature on audit groups/teams focusing on three main areas: the hierarchical review process, brainstorming as part of the fraud detection planning process, and consultation within firms. We restrict our discussion of these three literatures to judgment and decision making (JDM) experiments. We consider research where two or more individuals within the audit firm interact with one another face-to-face, electronically, or where one person prepares/reviews working papers for another. We outline future research within each of the above areas, as well as considering other areas of future research involving within-firm group interactions related to audit teams in context, shared mental models, and audit team diversity (including sustainability assurance), as well as interactions with groups outside the audit firm, particularly audit committees.

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1. Introduction

The judgment and decision making (JDM) literature in auditing emerged in the early 1970s, with *Accounting, Organizations and Society* (AOS) playing a significant role in the early development of this field (Libby & Lewis, 1977, 1982). While most JDM audit literature concentrates on individual auditor judgments (Nelson & Tan, 2005), audits are generally conducted by groups. They often involve a hierarchical team where preparers may stylize audit tests and working papers depending on the reviewer, and the review process will be affected by a range of preparer, task and environmental factors (Rich, Solomon, & Trotman, 1997a, 1997b). Concentrating on single-person studies is problematic, as psychology research shows the results of these studies often do not generalize to multi-person settings (Solomon, 1987).

Audit group research draws not only on the wider audit JDM experimental literature for both theory and methods, but also on the social psychology/organizational behavior literature. The latter literature has a long history (see Lorge, Fox, Davitz, & Brenner, 1958, for an early review). Some evidence of the extent of group research

is its inclusion as one of three key parts of the *Annual Review of Psychology* in 1961 (McGrath & Kravitz, 1982) leading to regular review papers of new research being published in the *Annual Review of Psychology* from 1962 to 1991, approximately every three years. With the increased impetus on group research, the reviews in the *Annual Review of Psychology* from 1996 then began to be split into more specialized subsections of group/team research.[1]

1.1. Scope of this review

Our working definition of research on audit groups/teams includes research where two or more individuals within the audit firm interact with one another. This interaction can be face-to-face, electronic, or one person preparing/reviewing working papers for another. It implies that the persons are mutually aware of one another and take into account the actions of other group members (McGrath & Kravitz, 1982). Our definition is broad enough to include group interactions between an auditor and other internal

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[1] Guzzo and Dickson (1996) and Ilgen et al. (2005) distinguish their reviews from previous research based on their focus on team performance in organizational contexts, where work groups and teams are normally embedded in organizations and exist over a period in time. In comparison, Kerr and Tindale (2004) restrict themselves to cover group performance and decision making with a focus on the groups' outputs (e.g., solutions, decisions) and the processes employed by groups.

parties, for example studies where the auditor consults with others in the firm (both auditors and other specialists).

Auditors also interact with other professions outside the audit firm including others involved in corporate governance such as client management and the audit committee, and external specialists especially for complex estimates. We exclude the literature on auditor-client negotiations given its coverage in recent review papers (e.g., Brown & Wright, 2008). We include interactions between auditors and audit committees in future research, given the enhanced role of audit committee members (ACMs) for effectively overseeing the financial reporting and auditing process (CAQ, 2014; FEE, 2014; FRC, 2013; Peecher, Solomon, & Trotman, 2013) and because we see this as an important area of future research not yet reviewed.

We restrict our review to JDM experiments, although we draw on field studies in considering future research, and focus on four main areas:

- The hierarchical review process: the process is a key control mechanism within audit firms which affects both reviewer behavior and preparer behavior. Reviewer behavior includes comparisons of outputs with other group formats (e.g., interacting and nominal groups); different structures of the review process; factors affecting the output of the review process; and cognitive effects of taking a reviewer role. Preparer behavior includes both the effect of the review process as a form of accountability, as well as the motives/actions of preparers including persuasion.
- Brainstorming: as part of the fraud detection planning process, auditing standards require a discussion (brainstorming meeting) between audit team members, including how and when the client's financial statements may be susceptible to material misstatement due to fraud. We consider nominal versus interacting group brainstorming, face-to-face versus electronic brainstorming, and the relationship between various judgments made within the brainstorming session.
- Consultation within firms: in addition to the review process, consultation with other auditors (i.e., advice seeking and giving) is common and can reduce uncertainty about difficult decisions and help auditors defend a position to various stakeholders. We consider the justifiability of consulting advice, how auditors use or follow consulting advice, and their willingness to consult, in both formal and informal settings.
- New directions and future research: in addition to future research discussed within the context of the above three areas, we consider other areas of future research involving within-firm group interactions related to audit teams in context, shared mental models, and audit team diversity (including sustainability assurance), as well as interactions with groups outside the audit firm, particularly audit committees.

Previous research on multi-auditor judgments (Rich, Solomon, & Trotman, 1997b; Solomon, 1987) distinguishes between the terms 'audit teams' and 'audit groups', where 'audit teams' refers to the hierarchical review process and 'audit groups' refers to situations where auditors solve a particular problem or perform a task as a group. However, more recent research in psychology has suggested the distinction is "a rather artificial one", with Kerr and Tindale (2004, p. 624) explaining the difference as follows:

"Team research tends to focus on relatively longer-term groups with multiple task responsibilities, often functioning within an organization. … Small group performance research, on the other hand, tends to be basic research …, and is usually studied experimentally in ad-hoc laboratory groups. However, there are many exceptions to these general rules. …"

The related research in the audit literature has elements of both group and team research as described above. For example, in practice, groups within audit firms are normally part of a team which exists over time, has multiple responsibilities, and generally operates within the organization. On the other hand, the actual research conducted on groups in auditing invariably is not conducted within actual teams and generally studies ad-hoc groups where the participants may or may not have previously worked together (for exceptions see Tan & Jamal, 2001; Trotman, 1985). Participants may have never met other group members, may have met them socially or at training, or may have worked together on a number of audits. Thus we use the terms 'team' and 'groups' interchangeably.

1.2. Group audit JDM literature over time

Table 1 divides 57 group audit JDM papers across four leading international journals — *Accounting, Organizations and Society* (AOS), *Contemporary Accounting Research* (CAR), *Journal of Accounting Research* (JAR), and *The Accounting Review* (TAR) (Panel A) — and across time (Panel B).[2] A number of important observations can be made. First, under the heading 'Pre-review interacting groups' only three papers are included, which were all published in JAR in the 1980s. However, we note some of the other papers in the review process category include an interacting group as a comparison (Owhoso, Messier, & Lynch, 2002; Trotman, 1985) and all the brainstorming papers include an interacting group (except Hammersley, Bamber, & Carpenter, 2010). However, the nature of the task in the brainstorming studies involves idea generation, whereas in the review process studies the task is usually evaluation or estimation.[3]

Second, there are two quite different streams of research on the review process, with one looking at the effects of the review process on the reviewer (and comparing the quality of the audit post-versus pre-review) and the other examining the effects on the preparer via accountability and justification. Both categories have a substantial number of papers (23 and 18 respectively). However, we note that there have been only three papers on the effects of the review process on the reviewer in the last decade (Frank & Hoffman, 2015; Peecher, Piercey, Rich, & Tubbs, 2010; Tan & Tan, 2008). We do not believe this is due to a decrease in the importance of this topic, but is more related to the difficulties of obtaining participants with sufficient seniority to carry out the review. On the other hand, papers on the effects of the review process on the preparer, while first appearing almost a decade after those papers on the effects on the reviewer, have continued into the current decade. Third, the titles of the review process papers on 'effects on the reviewer' and 'effects on the preparer' are quite different, with 19 of the 23 'effects on the reviewer' papers including the word 'review' in their title, indicating the papers are clearly about the review process. In contrast, only five of the 18 'effects on the preparer' papers include the word 'review', suggesting that these papers are more about accountability and justification, with the review process as the means of inducing these behaviors.

Fourth, the brainstorming papers have all been published

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[2] While we note that Table 1 is limited to these four journals, throughout the paper we do refer to some important papers in other journals, particularly *Auditing: A Journal of Practice & Theory*.

[3] This is an important distinction and the results are often not transferable across tasks (see Kerr & Tindale, 2004).