



An Overview of Behavioral Audit Research Over The Past 20 Years

Arnie Wright
Northeastern University

ISAR
University of Maastricht
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Introduction

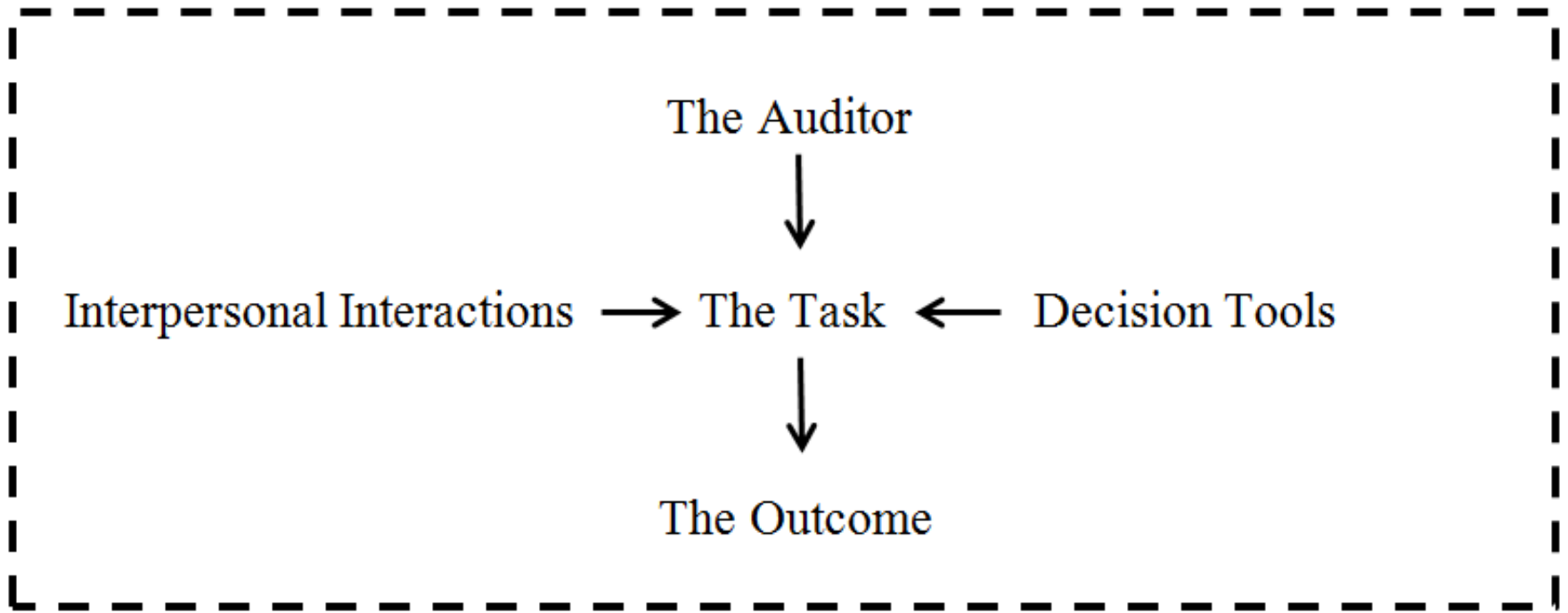
Plan of attack

- Discussion of a model
- Review of some major findings
- Opportunities for future research



Model of Auditor Judgment Factors

Audit Environment



Elements of the Model

- **Audit Environment:** Factors that set the stage/context for auditor judgments, e.g., budget/deadline pressures, rewards, sanctions, firm policies/norms, accounting/auditing standards, litigation risk, legislative/regulatory factors
- **The Auditor:** Attributes of the individual auditor, e.g., ability, knowledge and expertise, skepticism, biases, motivation
- **The Task:** Nature of the task, e.g., structure, complexity, knowledge requirements
- **Interpersonal Interactions:** Relationships with others, e.g., audit team, client, audit committee, PCAOB inspectors, consultants, internal auditors, second partner review
- **Decision Tools:** Mechanisms to facilitate completion of the task, e.g., firm audit manual, standard audit programs, checklists, prompts, continuous auditing, XBRL

Audit Environment

Time Budget and Time Deadline Pressures

Budget pressure: time allowed to complete the task. Time deadline pressure: need to complete a task by a certain date.

Surveys, case studies (e.g., Kelley et al. 1999; and Houston 1999) suggest audit effectiveness is impaired by time budget pressure (e.g., premature audit program sign-offs and underreporting of chargeable time).

Experiments by Choo (1995) and Glover (1997) find that as time deadline pressure increases up to moderate levels, auditor judgment performance improves because of a reduction in usage of nondiagnostic cues. However, at higher levels performance declines because relevant cues also ignored.

Audit Environment

Litigation Risk

Most of the behavioral research on this topic is experimental.

Financial condition is the primary driver of assessments of litigation risk, extent of evidence, and fees (Pratt and Stice 1994).

Further, litigation risk affects a number of auditor judgments, e.g., going concern reports (Blay 2005).

Audit Environment

Litigation Risk

A number of experimental studies on jurors' judgments of auditor negligence. e.g., outcome effects (Kinney and Nelson 1996; Kadous (2000) and explore ways to mitigate (Kadous 2001); effect of precise vs. imprecise accounting standards and industry norms (Kadous and Mercer (2012)).

Reffett (2010) finds when the auditors investigated for the perpetrated fraud, jurors more likely to hold auditors liable for failing to detect the fraud.

Audit Environment

Regulation

Very little research

- Interesting qualitative study by Gendron and Spira (2009) of former AA partners indicates majority view that financial auditing can best be controlled by means of a network of bureaucratic and clan controls established within accounting firms, without direct involvement of regulators.
- Cohen et al. (2013) report auditors more likely to constrain aggressive reporting under principles-based accounting standards than under rules-based standards, under both stronger and weaker regulatory regimes.

Audit Environment

Standards

- Hackenbrack and Nelson (1996) report that imprecise accounting standards lead auditors to permit aggressive client reporting but only for moderate engagement-risk clients.
- Ng and Tan (2003) find that effective audit committees mitigate potential adverse effects of imprecise accounting rules by bolstering auditors' bargaining position during negotiations.
- A number of studies on the impact of IFRS vs. rules on auditor motivations and judgments (e.g., Nelson 2003 review; Peytcheva et al. 2014; Backof et al. 2014; Segovia et al. 2009): Findings mixed re. financial reporting quality but auditor motivations enhanced.

Audit Environment

Firm norms

Very little research in this area: “tone at the top”

Recent study by Gold et al. (2014) examines how firm’s treatment of audit staff who discover errors in audit files affects willingness to report errors. Find an “open” climate results in an increase in reporting of mechanical (but not conceptual) errors for supervisor errors and all peer errors versus a “blame” climate (errors not tolerated).

Promising Future Directions: Audit Environment

Relatively little research on impact of the regulatory environment and the “corporate culture”/climate of the audit firm

Also what’s the impact of demands by firms for long working hours over a sustained period?

What will the impact be of mandatory audit firm rotation?

Audit firm “reputation” often mentioned: What is it? How is it developed? What impact does it have on auditors and others?

The Auditor

The focus of earlier audit judgment research

- Importance of task specific experience, industry experience, and tacit managerial knowledge (Abdolmohammadi and Wright 1987; Bonner 1990; Wright and Wright 1997; Solomon et al. 1999; Owhoso et al. 2002; Low 2004; Tan and Libby 1997).
- Personality and/or cognitive characteristics:
 - Motivation and problem solving ability (Tan and Kao 1999), fit between locus of control and firm's structure (Hyatt and Prawitt 2001). More recently skepticism (e.g., Quadackers et al. 2014; Hurtt 2010)

The Auditor

Heuristics and biases:

Confirmation bias, anchoring and adjustment (e.g., recency), dilution effect

Glover (1997) finds deadline time pressure reduces dilution effect, while accountability has no effect. Shelton (1997) shows managers and partners less vulnerable to dilution effects than lower level staff.

The Auditor

Heuristics and biases:

Recent anchoring study (Pike et al. 2013) reports auditors without current-year figures more willing to evaluate competing alternatives, better identify the most pertinent information, and more likely to identify a material misstatement using an analytical procedure.

Bhattacharjee et al. (2012) auditors more sensitive to client source competence when client interpersonal affect is negative than positive.

Promising Future Directions: The Auditor

There's continuing work in this critical area and always need for more.

Despite some work on enhancing skepticism, there is a lot more research opportunities in this area.

Also, given the complexities and breadth of an audit (e.g., fraud risk assessment), how/when do auditors determine they need outside expertise? How do they work with experts? How do the firms encourage such consultation?

The Task

Prior research has only focused on a relatively limited number of tasks as to knowledge requirements, complexity, etc., most recently fraud brainstorming.

Are audit programs risk-adjusted? Experimental studies suggest yes (Dusenbury et al. 1996 and Messier and Austen 2000), although little tailoring of tests in response to fraud risks (Asare and Wright 2004; Hammersley et al. 2011).

The Task

Analytical procedures:

Qualitative studies on AP practices (Hirst and Koonce 1996 and Trompeter and Wright (2012). Show heavy reliance on mgmt. explanation; simple this year vs. last year.

Auditors recognize source credibility (Hirst 1994; Anderson et al. 1994) but fail to quantify management explanations (Anderson and Koonce 1995, 1998).

Hypotheses treated independently (Asare and Wright 1997) and once an incorrect hypothesis is identified have difficulties overcoming (Bierstaker et al. 1999)

The Task

Audit negotiations:

Field surveys (Beattie et al. 1999; Gibbins et al. 2001; Nelson et al. 2002, 2003) and experiments (Hackenbrack and Nelson 1996; Salterio and Koonce 1997; Nelson and Kinney 1997; Kaduous et al. 2003; Ng and Tan 2003; Trotman et al. 2005; Nelson et al. 2005).

General finding: auditors tend to favor client, when client has incentives, subjective issue, and engagement risk low/moderate.

The Task

Going concern:

Psychological phenomena: consistency effects (Tan 1995), justification effects (Cushing and Ahlawat 1996), pre-decisional distortion (Wilks 2002).

Understanding the task: Rosman et al. (1999) computer process tracing (info acquisition and judgments). Joe (2003) press coverage of defaults leads to more GC opinions (repeated/redundant cues).

The Task

Fraud Brainstorming:

Qualitative study (Bellovary and Johnstone 2007) indicates wide variation in format, guidance; Brazel et al. (2010) field survey showing quality of brainstorming enhances identification of risks and risk assessment.

Experimental studies show partner focus is important (Carpenter 2004) while findings mixed on whether nominal groups outperform interacting groups (Carpenter 2007). Electronic interaction found more effective than face-to-face (Lynch et al. 2009).

Promising Future Directions: The Task

Despite some work in this area, there's still relatively small number of tasks that have been examined in depth.

Assurance on fair values is an expanding, important area.

Also little known about auditor i.d. of control deficiencies and severity judgments (“imaginative reasoning”)

What are the demands/challenges posed by changes to the audit report as well as emerging, non-traditional assurances such as sustainability reporting and non-financial measures?

Interpersonal Interactions

Interactions Between Members of the Audit Team/Firm:

Review process a major area of research.

Reviewers focus on evidence inconsistent with preparer's conclusions (Libby and Trotman 1993) and reviewers who are managers detect more conceptual errors (Ramsay 1994). However, Peecher (1996) and Wilks (2002) show preferences of reviewer can adversely affect the preparer's judgments. Also, reviews face-to-face stronger vs. computer mediated (Brazel et al. 2004).

Peecher et al. (2010) find supervisors with goals to reach a client-preferred conclusion when coaching influence subordinates' inputs, which, in turn, supervisors incorporate into final judgments.

Interpersonal Interactions

Also consultation very important (Salterio and Denham 1997). Gold et al. (2012) report consultation propensity with forensic specialists higher under a strict consultation requirement when underlying fraud risk is high.

Ng and Shankar (2010): examine value of a quality assessment standard requiring auditor assessment of quality, not just acceptability, of a client's accounting method.

Find in absence of advice from a technical department, the standard does not affect auditors' acceptance of client-preferred method.

However, in presence of advice, standard significantly reduces auditors' propensity to accept client-preferred method when advice explicitly recommends use of most appropriate method and the client's justification is strong.

Interpersonal Interactions

Auditor-Client interactions/negotiations:

Sanchez et al. (2004) focus on client side: reciprocity. Tan and Trotman (2010) CFOs interact with a hypothetical auditor (auditor gradual concession better than delayed). Brown and Johnstone (2004) auditor interacts with programmed client; more experienced auditors more contentious. Trotman et al. (2005) use a client confederate and find auditor role-playing results in better outcomes.

Wolfe et al. (2009) find that for IT control deficiencies, management concessions lead to lower auditor assessments of the significance of deficiency than denials. For manual control deviations, no differences between concessions and denials.

Interpersonal Interactions

Bennett and Hatfield (2013) survey: staff auditors often feel “mismatched” with client management, in terms of experience, age, and accounting knowledge.

Experimental results indicate staff-level auditors reduce extent to which they collect evidence to avoid these interactions. Email communications with client management helps to mitigate.

King (2002) examines role of group affiliation as a disincentive to offset auditors' tendency to trust their clients (lack of skepticism).

Interpersonal Interactions

Auditor-Audit Committee interactions:

Audit committees now playing bigger role. Interview study (Cohen et al. 2010) audit partners indicate audit committees substantially more active and diligent and possess greater expertise and power. However, many indicate management still seen as key driver in determining auditor appointments and terminations. Also often audit committees play a passive role in helping to resolve contentious reporting issues.

Fiolleau et al. (2013) conduct field study of tendering process triggered by audit partner rotation. Process resulted in a change in audit firm, with significant management control in selection of external auditor and auditors' repeated demonstrations of responsiveness and commitment to management, rather than to audit committee.

Interpersonal Interactions

Interactions with others:

Messier et al (2011) In an experiment, external auditors perceive internal auditors employed as a management training ground to be less objective but not less competent than internal auditors employed in an internal audit function.

Research on the impact on users of changes to the audit report (Mock et al. 2013) and other forms of assurance (e.g., sustainability reports).

Promising Future Directions: Interpersonal Interactions

Some work on concurring partner reviewers (Epps and Messier 2004; Schneider et al. 2003). Need for further work.

A promising area for auditor-client negotiations is increasingly important role of the audit committee. What is impact if the AC is actively involved in the ongoing resolution of contentious matters?

What impact do PCAOB or other regulator's inspections have on auditor motivations, affect, and judgments?

What will be impact of the increasing roles played by internal auditors on external auditor reliance/interactions?

Decision Tools

Asare and Wright (2004) find standard audit programs and risk checklists hinder fraud risk assessment and program planning.

Challenge is getting auditors to use aid (confidence in aid) vs. individual judgment (Eining et al. 1997). Aid can hinder novice knowledge acquisition (Glover et al. 1997) and problem of “working backward” to create desired judgments (Messier et al. 2001).

Decision Tools

Brewster (2011) finds auditors taking a holistic systems view of client develop more coherently organized mental models that increase likelihood of identifying inconsistent management representations vis-a-vis industry evidence.

(Bowlin 2011) Auditors asked to predict a client's expectations of, and responses to, audit resource allocations, devote additional resources to ostensibly low-risk accounts where misreporting may be placed.

Decision Tools

Hammersley et al. (2010) find priming auditors via documentation of client specific risks reduces fraud risk assessments and evidence requests because this makes the risks seem less typical. Thus, PCAOB's call for more documentation can have unintended consequences.

Hoffman and Zimbelman (2009) examine efficacy of two intervention methods in fraud risk response: strategic reasoning and brainstorming. Find in a high-fraud-risk setting both lead to more effective modifications to standard audit procedures.

Decision Tools

Lynch et al. (2009) report brainstorming effectiveness significantly higher for teams receiving content facilitation prompts, e.g., consider fraud triangle.

Trotman et al. (2009) find brainstorming guidelines and pre-mortem instructions lead to the generation of a larger number of potential frauds than interacting groups. Pre-mortem where participants use mental simulation to search for flaws in their plans.

Decision Tools

Eilifsen et al. (2011) show auditors' fraud risk judgments using a frequency response mode are closer to the Bayesian benchmark than a probability response mode.

Desai et al. (2010) develop an IA assessment model using belief function framework. Results demonstrate extent of external audit work depends on strength of IA function and amount of litigation and regulatory costs likely to be faced by the external auditor.

Promising Future Directions: Decision Tools

Continuing work in this area, particularly in enhancing fraud brainstorming.

Areas where auditors have considerable difficulties are good candidates for task assistance, e.g., planning effective fraud tests

How will technology (“Big Data”, XBRL, continuous auditing) effect the audit?

Final Thoughts

AUDIT JUDGMENT RESEARCH IS ALIVE & WELL!!!

Encouraging to see great breadth in research methods, including interviews, cases, field surveys, experiments, experimental markets.

Given the strengths/limitations of each method, this triangulation provides more reliable conclusions.

However, there's a continuing over focus on theory testing vs. theory building.

Thank you!