

Three new FAR research projects: what's going to happen?

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Received 20 July 2018 | Accepted 5 October 2018 | Published 18 October 2018

The 2017 call for research proposals resulted in twelve submitted proposals. Seven projects were eventually selected for a grant from the FAR.¹ During the conference, three of these seven FAR-studies were presented. The FAR-board aims at striking a balance in selecting research proposals, in order to optimize both practical and academic usefulness of the studies. Therefore, a multi-method, multi-theme mix also makes up the 2017 'cohort' of studies. The fourth plenary session of the conference is a sample of the broad set of studies that currently make up the FAR research portfolio, with projects grounded in, for example, economics, accounting and psychology and using archival and (field) experimental methods.

Mark Peecher, Joseph Gerakos, and Jeroen Suijs successively presented the research proposals of their projects. Below you will find a short summary of the accepted research proposals they presented during the conference, to provide insight into these planned studies, as well as a short summary of the discussion with the participants.

1. Auditors' detection of fraud cues and management deception

Mark E. Peecher is Professor of Accountancy at the Gies College of Business, University of Illinois at Urbana-Champaign. His co-researchers on this project are Jessen L. Hobson and Devin Wilson (both also at the Gies College, UIUC), and Sebastian Stirnkorb (Rotterdam School of Management).

Regulators and market participants increasingly express a desire to better understand auditors' capability to detect deception in management's representations and to identify new ways to enhance this capability. They also express a desire for auditors to be able to enhance their audit planning in light of indicators of potential deception. Therefore, this project deals with the fundamental issue of detecting indicators of possible fraud, both to enhance the detection of fraud, should any exist, and effective and to improve auditors' exercise of professional skepticism. The study builds on promising findings in Hobson et al. (2017) by examining the ability of auditors with ranks

lower than the audit partner level, as well as partners, to detect indicators of cognitive dissonance – which prior research shows is an indicator that heightens the risk deception – within public earnings calls.

Detecting deception in CEO narratives

Prior work finds that very experienced auditors can detect deception in CEO narratives from earnings conference calls, but only when they are instructed to attend to the negative affect in the CEO's voice. Without instruction, they overlook indicators of deception, such as cognitive dissonance cues, in the CEO's narratives. The existing work theorizes that auditors' experience of repeatedly interacting with managers gives them the rare ability to detect deception. However, these auditors subconsciously suppress this ability, due to learned disincentives for suspecting and finding fraud in management's financial reporting (Hobson et al. 2017). The current study proposes to systematically examine the theoretical and practical implications of these findings using audit professionals with a range of experience levels.

Experimental approach

A field experiment will be conducted that examines auditors' ability to detect indicators of heightened deception risk, as well as how this ability translates into differences in assessed audit risks and planned audit testing. The field experiment will ask auditors to listen and react to earnings conference calls of their own or others' clients by filling out a series of survey questions. Auditors from the rank of audit staff to that of audit partner will listen to earnings calls of their clients, and some auditors will listen to earnings calls of others' clients (as a control group).

By random assignment, half of these variously ranked auditors will be instructed to listen for negative affect and cognitive dissonance. Also, by random assignment, half of these auditor participants will be prompted specifically to watch for fraud. Auditors will then indicate whether or not fraud is likely present, assess fraud and audit risk overall and for individual parts of the audit, and make an abbreviated plan for the audit.

The expectation is that auditors receiving the instruction will be more attuned to client reporting that is later revealed to be problematic through internal quality inspection, peer review, negative audit report actions (e.g., modifications), and/or adverse market reactions. Because fraud is an aversive event, however, there is not an expectation that a specific prompt to look for fraud (as opposed to just looking for negative affect) will heighten the perceived risk of fraud or result in more aggressive audit plans. In fact, when dealing with their own audit clients, theory predicts the opposite could well occur: asking auditors, especially relatively more experienced auditors, to explicitly look for fraud on their own audit clients might reduce their willingness to view fraud as being likely.

Evidence needed

Overall, the examined question is whether a promising means of helping auditors increase skepticism and detect indicators of heightened risk of fraud will be useful in the field. Also, much-needed evidence on auditors' effectiveness in gathering diagnostic evidence from client narratives will be provided. Furthermore, this project highlights several important themes that can be adapted for the education of future and current auditors. Of perhaps primary importance, this research highlights concerns about auditors' learned and internalized incentives to avoid false positives concerning fraud. In their daily professional lives, auditors experience very few positive outcomes from suspecting and/or finding fraud. The idea is that these internalized incentives lead to psychological biases against finding fraud. This is directly counter to the wishes of audit regulators and the investing public. Thus, it is vital that audit students, professionals, and regulators are aware of and discuss these disincentives.

Key references/suggested readings

- Bennett GB, Hatfield RC (2013) The effect of the social mismatch between staff auditors and client management on the collection of audit evidence. *The Accounting Review* 88(1): 31–50. <https://doi.org/10.2308/accr-50286>
- Hobson JL, Mayew WJ, Venkatachalam M (2012) Analyzing speech to detect financial misreporting. *Journal of Accounting Research* 50(2): 349–392. <https://doi.org/10.1111/j.1475-679X.2011.00433.x>
- Hobson JL, Mayew WJ, Peecher ME, Venkatachalam M (2017) Improving experienced auditors' detection of deception in CEO narratives. Working Paper, University of Illinois. <https://dx.doi.org/10.2139/ssrn.2951973>

Summary of the discussion

From a general economic perspective, the optimal amount of fraud is probably not zero. However, if fraud is discovered after the auditor has provided a clean opinion, this could very well be a kiss of death for the career of the auditor involved. The situation doesn't become any better

by the fact that many US firms start to view litigation as just a normal cost of doing business. Interestingly, auditors seem to be better at discovering fraud, post-SOX.

However, only looking at what the auditor can do might not be fair. There needs to be a broader discussion on what companies themselves can do to prevent and discover fraud. For example, every company should appoint a fraud officer. Also, a suitably selected and incentivized audit committee can be an essential ally of the auditor.

2. Supply and demand in the audit market

Joseph Gerakos is an associate professor of Business Administration at Dartmouth University. His co-researchers on this project are Chad Syverson (University of Chicago Booth School of Business and NBER) and Ulrike Thürheimer (Maastricht University).

In this project, the researchers want to start with micro-economic first principles to estimate supply functions for the audit market. Doing so, would enable them to analyze the audit market and to assess its competitiveness and efficiency.

The audit demand function

In Gerakos and Syverson (2015), the authors estimate demand for each of the Big 4 audit firms using publicly available data on U.S. audit fees and client characteristics. These demand estimates allowed them to estimate changes in consumer surplus under two policy counterfactuals (i.e., what would happen under hypothetical scenarios): mandatory audit firm rotation and the disappearance of a Big 4 audit firm. Under these counterfactuals, changes in consumer surplus represent how much clients would be willing to pay in order to not rotate audit firms and not have their chosen audit firm disappear.

The audit production function

Because of a lack of supply side data (i.e., the inputs into the production of an audit), they could not estimate changes in producer surplus (i.e., what would be the gains or losses to the audit firms) under these policy counterfactuals. Including the supply side into these counterfactuals is relevant because doing so would allow regulators and audit firms to better and more fully evaluate potential changes to the structure of the audit market and changes in the nature of competition among audit firms. Moreover, there is little academic research on audit production.

Using Dutch data

With data made available by the Foundation for Auditing Research on audit production inputs (team inputs, generally, such as partner hours, associate hours, technology

systems, technology usage, and interaction time with the client) as well as expenditures on each of these inputs, the authors can estimate production functions that yield estimates of the inputs' marginal products (i.e., the change in audit output for an additional unit of input) as well as the audit firms' total factor productivity levels, which measure how effectively the firms use the inputs. In addition, data on the clients' characteristics as well as their expenditures on financial reporting would allow the authors estimate 'joint' production functions that take into account both the audit firms' and clients' inputs into the audit process.

Audit output data are necessary for production function estimation. For outputs, the authors plan to use publicly available data on going concern opinions, AFM inspection outcomes, and restatements as metrics of output and quality. In addition, information on outcomes that is not of public record (for example, 'cold call' internal reviews for a subsample of the data) would also be valuable for this purpose.

For the study, a representative sample of audit clients is required that includes public and private firms across the size distribution (preferably covering multiple audit firms and repeat observations for the same client).

Examples of possible investigations

Production function estimates would make it possible to characterize and model the supply side of the audit market, opening up a host of new analyses. Examples of such investigations include evaluating productivity growth in the audit industry, characterizing differences in productivity and learning across auditors, and examining the relationships between productivity growth and changes in technologies. Further examples include testing whether more efficient auditors are rewarded by the market, measuring to what extent fee variation reflects differences in costs, and estimation of the extent of positive or negative spillovers of non-audit services on the production of audit services. Many of these analyses would be novel in the accounting literature and would add depth to the broader productivity and industrial organization literatures, which historically focused on industrial rather than service sectors of the economy.

Additional ideas

In addition to the general project of estimating production functions for the audit firms, there are two follow-on projects that would be of interest to practice, regulators, and academics. First, currently in the Netherlands, public interest entities (PIEs) are required to rotate their key audit partners every seven years. If audit partner identifiers and characteristics can be merged with the aforementioned input and outcome data, it would be possible to estimate partner-level learning curves and characterize the extent to which audit failure rates and marginal products change with partner tenure. Such estimates would enable the comparison of the costs and benefits of mandatory audit

partner rotation and would likely provide insight into the costs and benefits of mandatory audit firm rotation.

Second, data on the bidding for audit engagements are not publicly available. Such data would facilitate the estimation of strategic interactions among audit firms. Such estimates would provide greater insight into the magnitude and nature of competitiveness in the industry. Bidding data would also enable estimating short- and long-run price effects of the implementation of mandatory audit firm rotation. For example, in the current market regime, audit fees drop in the first year of a switch to a new auditor but then increase to levels similar to prior to the switch after three or four years. Bidding data would allow for estimates of the parameters of strategic interactions, thereby allowing the researchers to forecast price trajectories under the potential change to an eight-year mandatory rotation regime for PIEs. For example, it would be possible to estimate how changing the length of the cooling off period would affect audit fees.

Relevance for audit practice

Several aspects of the study would be directly relevant to audit practice. First, estimates of the relation between the client's financial reporting processes and audit outcomes would allow audit firms to better plan their audit engagements and determine the optimal ratio of client preparation to auditor work. Second, estimates of learning curves for audit personnel would allow audit firms to estimate optimal tenures of their personnel at job levels and client engagements. Third, estimates of returns to technology would assist audit firms in implementing optimal ratios of technology to labor. Importantly, the first three aspects directly allow audit firms to increase their production efficiency. With bidding data, the authors could estimate optimal bidding strategies, which would take into account interactions among clients and the audit firms.

Key references/suggested readings

Gerakos J, Syverson C (2015) Competition in the audit market: Policy implications. *Journal of Accounting Research* 53(4): 725–775. <https://doi.org/10.1111/1475-679X.12087>

Summary of the discussion

What percentage of clients will be lost if fees are increased by one percentage point? Probably near zero percent. So where does this start to change? Responses from practitioners in the audience are: the real problem isn't customer retention but how to get rid of customers that are performing badly; and: audit committees mainly want an auditor who is capable of performing effective audits with a consistent high quality. Concerning efficiency, remarks point in the same direction. For example: 'we're not so much engaged in reducing capacity as in attracting it'. The audience seems to mainly focus on increasing quality and is not looking to find an optimal point, per se.

3. Does the private owner-managed firm audit market serve a different purpose?

Jeroen Suijs is professor of Financial Accounting at Erasmus University in Rotterdam. His co-researchers on this project are Mahmoud Gad (Lancaster University) and Robin Litjens (Tilburg University).

An important focal area of FAR is auditing in the owner-managed-business segment. A large part of all auditors is working in this segment, for example the auditors working for the 'Middle 5' audit firms that are FAR affiliated firms. The project presented by Jeroen Suijs is directly related to this segment and tries to answer the following question: "does the owner-managed firm audit market serve a different purpose than, for example, the PIE audit market?"

PIEs, POBs and OMBs

The Dutch audit market, like many audit markets in Europe, is a heterogeneous market ranging from small privately-owned businesses (POB) to large public interest entities (PIEs). Current audit regulations and standards do not take into account this heterogeneity. They seem to be largely driven by the auditing needs of public interest entities. A large part of the audit engagements, however, resides in the sector of privately owned businesses of which the owner-managed businesses (OMB) form a substantial subset. This raises the question whether the current uniformity in auditing regulations and standards is desirable, or whether one should take into account this heterogeneity and design different audits (and thus different audit regulations and standards) for different subsets of organizations, in particular the POBs and OMBs. The objective of this research project is to analyze the level of heterogeneity in current auditing practices. In particular, the research question that this project addresses is: "does audit pricing, audit effort, and audit quality vary predictably across PIEs, POBs and OMBs?"

Drivers of audit demand in private firms

Demand for independent audit effort in listed firms is generally simplified to reducing external agency costs, i.e. the external value of the audit. For listed firms, the group of stakeholders is usually large and diverse and these stakeholders do not have direct access to the firm to monitor its activities. In contrast, research has shown greater heterogeneity in reasons driving audit demand in private firms; it ranges from mitigating agency conflicts to seeking business advice, i.e. auditors likely provide benefits to private firms beyond financial reporting. For an overview of private firm audit research, see, e.g., Minnis

and Shroff (2017). In line with the possibly lower external value of the audit, Esplin et al. (2016) suggests quality considerations in auditor selection in the private firm audit market is amongst other related to the ability to deliver additional non-audit services. Other arguments, related to internal characteristics, are put forward in Knechel et al. (2008). Private firms may demand external audits to compensate for organizational loss of control (Abdel-Khalik, 1993), as a remedy for weaknesses in internal controls (Carey et al. 2000), to improve operational efficiency and effectiveness (Svanström and Sundgren 2012) and outsourcing of financial accounting tasks (Gooderham et al. 2004). All these arguments relate to the internal value of the audit.

Modeling audit outcomes

Prior research has essentially focused on the internal value or the external value of the audit of public firms in isolation, relying on publicly available data to proxy for the internal value of the audit (e.g. Abdel-Khalik 1993; Knechel et al. 2008). This project adds to this literature by creating a comprehensive empirical test for private firms using proprietary audit firm data to capture the internal value of the audit and by using public firms as a benchmark. More specifically, audit outcomes will be modelled as a function of the internal value of the audit, the external value and control factors and test whether the effect of internal and external value differs systematically across PIEs, OMBs and POBs. Audit outcomes include audit pricing, audit labor mix and audit quality measures. The main challenge is designing proper proxies for audit demand for internal value and for external value. These proxies are necessary to distinguish between possible audit demand differences across PIEs, OMBs and POBs and their effect on the external audit.

Contributions

This research contributes to policy debates on differentiating audit regulations like lowering the levels of audit assurance or abolishing the mandatory audit for small(er) private firms (Knoop and Piersma 2017). Any changes in these regulations also have consequences for the minimum qualifications for certified auditors.

Key references/suggested readings

- Abdel-Khalik A (1993) Why do private companies demand auditing? A case for organizational loss of control. *Journal of Accounting, Auditing and Finance* 8(1): 31–52. <https://doi.org/10.1177/0148558X9300800103>
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Svanström T, Sundgren S (2012) The demand for non-audit services and auditor-client relationships: Evidence from Swedish small and medium-sized enterprises. *International Journal of Auditing* 16(1): 54–78. <https://doi.org/10.1111/j.1099-1123.2011.00441.x>

Summary of the discussion

Is the difference in audit demand based on internal and external value really that big between SMEs and listed companies? The external value of, for example, compliance with tax rules, might just be as significant as the internal value. Even in SMEs, of course, the reliability of information is key. One specific suggestion for studying the question, is to distinguish between SMEs with and without an unqualified auditor's opinion, since many SMEs don't receive an unqualified auditor's opinion because of insufficient internal controls. Also, examining SMEs with voluntary audits can shed more light on this interesting question.

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Notes

1. An overview of the FAR research projects can be found at: <http://foundationforauditingresearch.org/far-research-projects/>