Labor Supply and Accounting Firm Mergers

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ABSTRACT

In this paper, I study how regulation-induced accounting labor supply shocks affect the audit market. Using a novel dataset that includes both large and small accounting firms, I identify labor supply shocks using the 150-Hour Rule and the Mobility Provision and investigate the resulting incidence of mergers and acquisitions (M&A). I find that a reduction in labor supply increases accounting firms' M&A activity and leads to a higher audit market concentration. My results suggest that accounting firm growth decisions and audit market structure depend on the supply of labor.

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1. Introduction

In this paper, I study whether regulation-induced shifts in the accounting labor supply result in accounting firms merging and a more concentrated market. Labor is the key input for accounting firms, making changes in labor supply especially impactful in the audit profession. Understanding whether accounting firms respond to a decrease in labor supply by merging is increasingly important given the recent growth in the number of M&A transactions and the evidence that practitioners place labor considerations among the top M&A drivers (Putney and Sinkin, 2017; CPAJ Staff, 2018; Hood, 2019).[1] In addition, M&A is an important growth strategy for small CPA firms that serve a large part of the economy comprised of private companies (Forbes, 2012; Asker et al., 2015; Doidge et al., 2017; Stulz, 2019; The Office of Advocacy of the SBA, 2019; Gillette, 2020). Thus, it is important to understand the drivers of non-organic growth and any resulting effects on the audit market structure. Furthermore, M&A is naturally linked to audit market concentration, which attracts significant attention from both academics and regulators for its implications for audit quality and fees (GAO, 2003, 2008; DeFond and Zhang, 2014; Harris, 2017; PCAOB, 2017).

Despite the importance of M&A, there is limited research into the drivers of M&A or the consequences of M&A for the audit market structure, and most of this research focuses on small samples of M&A or foreign markets (Sullivan, 2002; Chan and Wu, 2011; Ding and Jia, 2012; Gong et al., 2016; Choi et al., 2017; Christensen et al., 2018; Sellers et al., 2018; Jiang et al., 2019; Kitto, 2019). The main obstacle has been the lack of data covering small accounting firms that are involved in the majority of M&A transactions, as well as difficulties associated with isolating

[1] For example, M&A accounted for 39% of revenue growth by accounting firms in 2018 (CPAJ Staff, 2018). In addition, my sample shows a sevenfold growth in the number of M&A per year over the last two decades.

motives for M&A from other factors. My paper helps to fill this gap by studying M&A activity in a broad sample of large and small accounting firms in combination with state-level staggered adoptions of regulations that change accounting labor supply.

I hypothesize that as states adopt regulations that cause labor shortages, accounting firms respond by increasing their M&A activity. The existing literature suggests that regulation of accounting labor can create a sizeable change in the accountant supply that lasts over multiple years, and that a shortage of qualified accountants impedes accounting firm growth.[2] I argue that mergers become more attractive when accountant supply decreases due to a combination of two factors: a reduction in labor supply increases equilibrium accountant wages, raising input costs for accounting firms; and these higher input costs increase economies of scale achieved through M&A.

When labor supply decreases, accounting firms face higher equilibrium input costs in the form of accountant wages (Barrios, 2019). To limit these costs, firms can use economies of scale resulting from M&A. The literature suggests that there are economies of scale in the public accounting industry (Banker et al., 2003). In line with this, practitioner journals provide evidence that accounting firms rely on M&A as an effective way to develop economies of scale (Hood, 2019). In addition, theoretical literature predicts more M&A when firms can economize on their costs (Perry and Porter, 1985; Rodrigues, 2001). Finally, empirical evidence shows cost reductions achieved through M&A for accounting firm megamergers and for mergers of public firms in

[2] Barrios (2019) finds a 15% reduction in the number of CPA candidates taking the exam for the first time after the 150-Hour Rule. In addition, for states that adopted the 150-Hour Rule early, Franz and Schroeder (2004) suggest a large decrease in the number of first-time CPA exam candidates in the regulation's first year. Over the next few years, the number of candidates recovers gradually to approximately 50%-60% of the baseline period. Further, Cascino et al. (2018) find that the decrease in accountant wages in the wake of the Mobility Provision starts in the year the regulation became effective and lasts for at least two years. See GAO (2008), Putney and Sinkin (2015), Rosenberg (2015), May (2015), May (2017), Telberg (2017), and Hood (2019) for examples of the effects of labor shortages on firm growth.

industries experiencing economic shocks to input costs (Mitchell and Mulherin, 1996; Ivancevich and Zardkoohi, 2000).

Combining the above arguments, I suggest that when accounting firms face a decrease in labor supply and the resulting increase in input costs, the benefit of engaging in M&A increases. By merging, firms can share the labor costs and use the combined workforce more efficiently through (1) dividing the combined workforce into more specialized accountant teams that experience lower task variability, and thus can spend less time per task; and (2) staggering the merging firms' peak workloads over time, thus reducing the total number of accountants the two firms need to employ. It is important to emphasize that these incremental M&A incentives arise from the higher accountant wages the firms pay when labor supply decreases. Thus, for firms that would not engage in M&A in the absence of a labor supply reduction, the opportunity to curb their elevated input costs increases the benefits of M&A.

However, these benefits of M&A can be offset by a number of costs, in which case firms might prefer not to merge. It is difficult to evaluate the synergies and integration challenges during a merger negotiation (Chatterjee, 2007). As a result, M&A can create lower than expected growth and profits. Moreover, disagreements between partners on the way in which losses and gains should be shared and the failure to integrate disparate corporate cultures within the merging firms can lead to partners leaving for other companies (Esposito, 2018; Gow and Kells, 2018).

Altogether, a decrease in labor supply and the resulting growth in input costs likely lead to greater economies of scale achievable through M&A while having little impact on M&A costs, if any. Thus, if M&A costs are not prohibitively high, then some accounting firms will decide in favor of M&A after the labor supply shock, even if they did not plan a merger before the shock.

To study the effect of labor supply changes on accounting firm M&A, I analyze two

accounting labor regulations: the 150-Hour Rule and the Mobility Provision in the Uniform Accountancy Act. Prior research shows that these regulations affect the local supply of certified public accountants (CPAs) (Barrios, 2019; Cascino et al., 2018). The 150-Hour Rule increased the educational requirement for CPA candidates by 30 credit hours, and thus decreased the supply of new CPAs within the adopting states and affected accounting firms' ability to hire local certified labor (Lee et al., 1999; Barrios, 2019). I hypothesize that firms exposed to this regulation are more likely to merge to address the supply decrease, thereby increasing local audit market concentration.

In contrast, the Mobility Provision decreased the barriers for out-of-state CPAs to work for local accounting firms and has two potential effects. First, the Mobility Provision can decrease accounting firms' M&A incentives due to an increase in local labor supply that lowers accountant wages, and thus makes labor-driven M&A less attractive. Second, the Mobility Provision can increase accounting firms' M&A incentives because of the improved ability to deploy workforce across the states and bring the merged team of accountants to offices in states that allow mobility. Therefore, the Mobility Provision effect on M&A activity is unclear ex-ante.

These two regulations can also have an interactive effect. While workforce mobility across states created by the Mobility Provision likely stays unaffected by the 150-Hour Rule, the increase in local labor supply induced by the Mobility Provision works against the decrease in local labor supply created by the 150-Hour Rule. Further, by expanding the boundaries of the local labor market to include out-of-state CPAs, the Mobility Provision reduces the impact of the 150-Hour Rule on local labor supply because the 150-Hour Rule affects only the within-state part of the expanded local labor market rather than its out-of-state part. Overall, I predict a negative incremental effect from the combination of the two regulations on firm M&A incentives, as compared to the effect of the 150-Hour Rule or the Mobility Provision separately.

The 150-Hour Rule and the Mobility Provision provide a useful setting for testing the effect of labor supply changes on accounting firm M&A and audit market concentration. Both of these regulations were put into effect in a staggered pattern at the state level, leading to time-series and cross-sectional variation in firms' exposure to changes in accounting labor supply. This reduces concerns that factors endogenous to firm growth contributed to the adoption schedules.

I use a combination of firm-level logistic analyses and state-level OLS regressions to test my hypotheses. For each year, I measure an accounting firm's exposure to the 150-Hour Rule (the Mobility Provision) by the number of states that adopted the 150-Hour Rule (the Mobility Provision) among the states where the firm has clients. I then create an interaction between these two regulation exposures. I model the M&A activity with the firm's or the state's exposure to the 150-Hour Rule, the Mobility Provision, the interaction between these two regulations, the firms' geographic reach and size, a set of time-varying controls for local economic growth and competitive environment, year fixed effects, and state or accounting firm fixed effects (depending on the level of analysis). The combination of this set of controls and the staggered adoption of the labor regulations decreases the concern that the results in this paper can be explained by other drivers of M&A.

One empirical challenge limiting prior research on accounting firm M&A is the difficulty to observe data on the population of firms that includes both large and small accounting firms engaging in M&A. To overcome this challenge, I use data provided by the U.S. Department of Labor, which discloses the auditors of employee benefit plans and includes over 14,000 accounting firms. I combine these data with the list of accounting firm M&A in Audit Analytics and construct a sample of 117,491 firm-year observations with 1,528 M&A deals from 2000 to 2017.

The results of the firm-level analysis suggest that as firm exposure to the 150-Hour Rule

(the Mobility Provision) increases from no state to one state, the M&A probability increases by 16% (13%) of the sample mean M&A probability. When a firm's exposure to *both* the 150-Hour Rule and the Mobility Provision increases from no state to one state, the M&A probability increases by 19% of the sample mean M&A probability, which is lower than it would be without a negative interactive effect between the two regulations.

To confirm that my results do not capture pre-existing trends, I test whether states differ in their M&A activity before these regulations become effective by conducting a state-level lead-lag analysis. I find no significant difference in the pre-treatment trends for either the 150-Hour Rule or the Mobility Provision, suggesting that the timing of their respective adoptions by states is likely unrelated to firm M&A activity. In addition, the results of my state-level difference-in-difference analysis of M&A activity in response to labor supply changes are consistent with the results of the firm-level analysis, although the interaction between the two regulations is insignificant.

Overall, I find robust evidence that the 150-Hour Rule and the Mobility Provision increase accounting firm M&A, and some evidence that the interaction between these two regulations decreases it. I interpret the results for the 150-Hour Rule and its interaction with the Mobility Provision as consistent with my hypothesis that M&A becomes more beneficial when labor supply decreases. In addition, the positive main effect of the Mobility Provision suggests that the impact of improvement in workforce mobility across the states dominates the impact of larger labor supply due to the Mobility Provision, leading to more M&A.

I find that both small and large accounting firms increase their merger activity in response to a reduction in labor supply. A reduction in labor supply leads to both M&A between small firms and M&A between a small and a large firm, with some evidence of the latter being a more popular strategy. This is accordant with the idea that in addition to billable hours, accountants in

small firms usually perform tasks that a designated firm administrator would perform in a larger firm (Rosenberg, 2012). An increase in accountant wages stemming from a reduction in labor supply makes non-billable hours more costly for firms. In turn, M&A allows a small firm to increase its billable utilization through allocating the non-billable hours to the large firm's administrative staff or to the newly hired administrators in the combination of two small firms. In a similar vein, M&A allows small firms to reduce their reliance on experienced staff and allocate experienced specialists to more complex tasks through getting access to specialized software that standardizes common tasks performed by accountants (Libby and Luft, 1993; Prawitt, 1995). Therefore, the benefits of M&A as a way to limit the increase in input costs are likely large for small firms. I also find an improvement in workforce mobility across the states to increase M&A between large firms and marginally increase M&A between a small and a large firm. I interpret these results as evident of large firms having more resources to take advantage of cross-state mobility of workforce.

Moreover, consistent with the idea that accountants with similar expertise can more readily share the combined workload of the merging firms, I find M&A driven by labor supply reductions to connect firms serving clients in same industries. Therefore, regulations reducing labor supply can result in higher industry specialization of the affected CPA firms. I also find that M&A driven by a reduction in labor supply connect firms serving clients in same states. Thus, combining locally-certified labor is inherent to achieve the benefits from M&A. At the same time, the effect of the Mobility Provision is strongest for M&A increasing geographic expansion through connecting firms serving clients in different states.

Finally, I examine the effect of changes in labor supply on accounting market concentration. Using a difference-in-difference analysis, I find that the 150-Hour Rule leads to

90% of a standard deviation higher state-level concentration and 20% of a standard deviation higher state-industry-level concentration. In addition, adoption of the Mobility Provision partially mitigates the effect of the 150-Hour Rule.

The literature on CPA firm growth is in the emerging state (Banker et al., 2003; Gong et al., 2016; Christensen et al., 2018; Kitto, 2019). I add to this literature by providing evidence that firm growth decisions depend on the supply of labor. In addition, this paper is one of a few analyses studying M&A for a large population of CPA firms. With private companies being a growing majority of firms in the U.S., small CPA firms serving private clients play an important role in the economy. However, we have a limited understanding of the small firms' production function which can differ from that of large firms'. The dataset I construct for this paper allows me to study the structural shifts in the whole audit market without limiting my analysis solely to the largest firms. Further, this paper adds to the literature on the impact of regulation on the labor market for accounting professionals (Lee et al., 1999; Bloomfield et al., 2017; Barrios, 2019; Cascino et al., 2018), and the drivers of audit market concentration (Doogar and Easley, 1998; Duguay et al., 2019).

2. Related literature

There is a growing body of research on the relation between labor characteristics and merger activity by public companies. Alimov (2015) finds that countries that tighten employment protection regulations attract more foreign acquirers. Chen et al. (2018) suggest that trade secret protection by U.S. courts, preventing firm's employees from working for competitors, increases the likelihood of acquisition. Tian and Wang (2016) find that firms with higher labor power due to being unionized have a lower takeover bid probability, and that buyers of unionized targets have, in themselves, less of a union threat. Beaumont et al. (2018) find that firms entering a new

market segment are more likely to acquire another firm when their existing workforce is less adapted to operate in the sector of entry. In addition, Tate and Yang (2016) and Lee et al. (2018) each construct a measure of human capital relatedness for the target and acquirer firms and find diversifying mergers to be more frequent among firms with related human capital. Finally, Ouimet and Zarutskie (2012) show that, within a sample of target firms, there is a positive relation between ex ante employment at the target and the post-merger employment change, suggesting that labor might be the goal of an acquisition.

In this paper, I study mergers among accounting firms. The accounting literature on merger drivers is rather limited. Banker et al. (2003) model the relation between revenue and human resource inputs in public accounting firms and find increasing returns to scale in the public accounting industry, making M&A activity an attractive business strategy. Christensen et al. (2018) find an increase in merger frequency among accounting firms after the Sarbanes-Oxley Act. Gong et al. (2016) find a reduction in audit hours after mergers and use economies of scale as a mechanism for interpreting their results. Ding and Jia (2012) focus on the 1998 merger of Price Waterhouse and Coopers & Lybrand and suggest that enhanced market power dominated the effect of cost savings.

Most of the existing literature on accounting firm M&A focuses on the resulting audit quality effects for firms that have public clients and finds an increase in post-merger audit quality (Chan and Wu, 2011; Ding and Jia, 2012; Gong et al., 2016; Choi et al., 2017; Jiang et al., 2019; Sellers et al., 2018). In contrast, Christensen et al. (2018) find a decrease in the audit quality of public clients after the auditor's M&A. Accounting firm mergers can also affect audit fees, increasing them in cases where the market power effect dominates (Ding and Jia, 2012), or decreasing them if the cost reduction channel dominates (Sullivan, 2002).

The effects of accounting regulation on accounting labor market and concentration in the auditing profession are studied in Bloomfield et al. (2017) and Duguay et al. (2019). Bloomfield et al. (2017) show that international regulatory harmonization, with respect to accounting and auditing standards in the E.U., increased the cross-border migration of accountants. Similar to the Mobility Provision in the Uniform Accountancy Act (UAA), harmonization reduced the mobility barriers for accounting professionals caused by regulation. Duguay et al. (2019) investigate how an increase in public companies' audit demand, resulting from the Sarbanes-Oxley Act, decreased the use of attestation services by private companies, shifted client allocation across accounting firms, and increased office specialization within accounting firms by the type of client.

I contribute to this literature by shedding light on the role changes in the accounting labor supply play in terms of the audit market's merger activity and concentration.

3. Hypotheses Development

3.1. Labor supply and M&A

My first hypothesis connects changes in local labor supply to M&A activity among accounting firms. Accounting firms are knowledge-intensive organizations that require an extensive commitment of human resources (Prawitt, 1995). Therefore, labor is the key input into the audit production function. This dependence of accounting firms on their ability to recruit and retain a professional workforce is evident in practitioner journals that place adding depth of staff among the top drivers of M&A (Putney and Sinkin, 2017; Hood, 2019).

When labor supply decreases, the equilibrium accountant wages increase, enlarging the input costs that accounting firms face. In turn, higher input costs increase economies of scale that can be achieved through M&A. First, anecdotal evidence suggests that a growing number of firms "view M&A as a realistic way to enhance staff recruiting, staff retention and to develop economies

of scale" (Hood, 2019). Second, consistent with this anecdotal evidence, accounting literature suggests that there are economies of scale in the public accounting industry (Banker et al., 2003). Third, theoretical literature predicts more M&A when firms can economize on their costs, as well as lower costs for merging firms when a crucial input factor, such as human capital, is in total fixed supply (Perry and Porter, 1985; Rodrigues, 2001). Empirical literature also finds evidence on cost reductions achieved through M&A for the 1989 accounting firm megamergers, as well as when public firms' industries experience economic shocks related to their input costs (Mitchell and Mulherin, 1996; Ivancevich and Zardkoohi, 2000).

Combining the above arguments, I suggest that accounting firms facing higher input costs due to a decrease in local labor supply can reduce these costs by sharing labor through M&A. Specifically, the merging firms can increase specialization of accountants within the combined workforce. This reduces the variability of tasks performed by these accountants, therefore potentially decreasing the amount of time spent per task.[3] In addition, use the combined workforce more efficiently by staggering their peak workloads over time, thus reducing the total number of accountants the two firms need to employ.

However, these benefits of M&A come with a number of risks and costs, and to the extent that the costs outweigh the benefits, firms might prefer not to engage in mergers. The difficulty in evaluating the synergies and integration challenges associated with a merger can result in lower than expected growth and profits (Chatterjee, 2007). In addition, accounting firms' ownership structure can further complicate mergers. Accounting firms are partnerships with semi-autonomous practice offices, and in order to combine two firms, partners across multiple offices have to agree on their obligations and entitlements, as well as how losses and gains should be

[3] Highly-specialized staff can also allow the firm to charge higher rates for specialized staff.

shared. Disagreement between the merging partners with regard to these issues can lead to partners moving to other companies (Esposito, 2018; Gow and Kells, 2018).[4]

I summarize the above arguments in the hypothesis below:

H1: *A reduction in local labor supply increases M&A activity among accounting firms.*

3.2. Labor supply and the audit market concentration

My second hypothesis takes the above arguments one step further and suggests that in addition to changes in firm M&A activity, a decrease in local labor supply might affect concentration of the audit market. First, higher M&A activity among accounting firms resulting from a reduction in local labor supply leads to a consolidation of the clients served by the merging firms. This increases the market share served by the combined firm, adding to the local market concentration. Second, higher equilibrium accountant wages, resulting from lower local supply of labor, can become prohibitively costly for some accounting firms, leading to their exit from the market. This adds to the increase in local concentration stemming from higher M&A activity. Third, local industry concentration can increase if economies of scale are stronger for mergers increasing industry specialization due to similarities in the expertise of the merging workforces.

However, transitions taking place during a merger can lead to a loss of clients, thus thinning out the combined market share of the merging firms and increasing the market shares of non-merging firms. Moreover, firms facing a reduction in labor supply can deliberately discontinue

[4] A firm facing labor shortage could also join an association of accounting firms (Bills et al., 2016; Ahn et al., 2018). Though referring engagements to member firms or a joint engagement between firms that combines labor and knowledge in a single undertaking can reduce understaffing, professional standards do not allow the responsibility for an audit of financial statements to be shared. Moreover, it is difficult for member firms to standardize their audit methodologies or their internal accounting and quality control systems, making the procedures necessary to achieve the level of assurance needed for a firm to sign off on the report much greater than those needed in a principal auditor situation. Consequently, a joint engagement or a referral might be a one-time solution to a staff shortage, but it is unlikely to resolve a systematic labor supply decrease.

their relationship with some of their clients to address the shortage. To the extent that these changes in client-accounting firm matching are significant, the positive effect of a reduction in labor supply on local concentration can be diminished.

I combine the above arguments in the hypothesis below:

H2: *A reduction in local labor supply increases audit market concentration.*

4. Setting

To study the effect of labor supply changes on accounting firms' propensity to merge, I focus on certified public accountants (CPAs). CPAs holding a license in a state where a firm serves clients are an important part of the firm's workforce because only a CPA can sign audited or reviewed financial statements. Moreover, CPAs are potentially of higher quality than non-certified accountants are, due to their training and continuing education requirements. Regulators argue that the large number of individuals affected by the quality of the attestation services (e.g., shareholders, financial institutions, and other interested parties) creates a need to protect the public interest by limiting the provision of attestation services solely to CPAs.[5] Regardless of whether the resulting labor regulations are aimed at improving attestation services or whether they have a rent seeking nature, in this paper I study how accounting firms respond to labor regulations affecting the supply of CPAs.

I use two CPA-related regulations by the National Association of State Boards of Accountancy (NASBA) and the American Institute of Certified Public Accountants (AICPA): the 150-Hour Rule and the Mobility Provision of the UAA. Because in the U.S., the title of CPA is granted by 55 separate U.S. jurisdictions instead of a single, centralized, federal agency, each State

[5] These attestation services include audits, reviews, engagements performed under the Statements on Standards for Attestation Engagements (SSAEs), and engagements required by the Public Company Accounting Oversight Board (PCAOB).

Board of Accountancy made an independent decision about whether and when to adopt the 150-Hour Rule and the Mobility Provision. The staggered adoption of these requirements across states creates variation in firm exposure to the labor supply changes, allowing me to examine them over time as well as cross-sectionally. Below, I describe each of these two regulations in more detail and argue that in adopting states, the rules shifted the local supply of CPAs.

4.1. The 150-Hour Rule

Because each state has its own State Board of Accountancy responsible for the rules and regulation of the accounting industry in that state, the exam requirements for CPA candidates were once different across states. To standardize these requirements, AICPA and NASBA created a general rule known as "3E": education, exam and experience. The education criteria are a four-year bachelor's degree and a total of 150 credit hours of coursework from an accredited educational institution.

Compared to the previous education criteria, this rule increased the number of credit hours from 120 (the standard bachelor's degree in the U.S.) by 30 credit hours (an incremental year at a standard full-time study load). These 30 incremental hours can be accumulated through a master's degree, 30 more credit hours through an accelerated bachelor's degree program, or 30 hours of non-degree courses. The timing of the adoption of the 150-Hour Rule by state is shown in Figure 3, Panel A.

4.2. The Individual CPA Mobility Provision of the Uniform Accountancy Act

Individual CPA mobility was introduced using the concept of substantial equivalency, which was added to the UAA by AICPA and NASBA. The UAA outlines the CPA certification criteria considered as the basis for comparison across states: 150 hours of education, the Uniform CPA Examination, and at least one year of experience. Under Section 23 of the UAA, if a CPA

has a license in good standing from a state that has CPA certification criteria equivalent to those outlined in the UAA, then the CPA can practice in a state other than his or her principal place of business.

The initial attempt to allow CPA mobility across states took place in 1997. However, while the UAA is the profession's model state accountancy statute, each state needs to enact and implement the Mobility Provision. As a result, many states enacted the Mobility Provision together with varying notification requirements (including various filings, forms, and fees), effectively imposing high barriers to cross-state mobility. In 2006, AICPA and NASBA amended the UAA, allowing a CPA with a license from an equivalent state, or with individual qualifications substantially equivalent to those in the UAA, to practice out-of-state without obtaining another license, making a formal notification, or paying fees. In addition, out-of-state CPAs become subject to the automatic jurisdiction of the corresponding board of accountancy. The ability of CPAs to work for an employer outside their licensure state without getting an additional license facilitated their mobility across states.

The adoption of the Mobility Provision was encouraged by the U.S. Department of Treasury's Advisory Committee on the Auditing Profession, which suggested to Congress that it pass a federal provision if State Boards of Accountancy fail to voluntarily do so (the Advisory Committee on the Auditing Profession, 2008). The timing of the Mobility Provision's adoption by individual states is shown in Figure 3, Panel B.

4.3. The resulting shifts in local CPA supply

Accounting firms exposed to the 150-Hour Rule face a decrease in labor supply. First, Barrios (2018) shows that the 150-Hour Rule decreased the local supply of new CPAs, likely because candidates chose to abstain from a CPA career in favor of beginning work sooner. Barrios

shows a decrease of 15% for first-time CPA candidates in the years after the regulation adoption. In addition, for states that adopted the 150-Hour Rule early, Franz and Schroeder (2004) suggest that the decrease in CPA candidates takes place in the regulation's first year and, over the next few years, the number of CPA candidates gradually recovers to 50%-60% of the baseline period. Therefore, within a short period of time, the 150-Hour Rule likely created a sizeable decrease in the local supply of CPAs that lasted multiple years.[6]

Accounting firms exposed to the Mobility Provision experience two potential effects. First, the Mobility Provision expanded the local labor market through the inclusion of out-of-state CPAs, thus increasing local labor supply and mitigating the effect of the 150-Hour Rule. Cascino et al. (2018) show that the Mobility Provision decreased the wages of accounting professionals without affecting the quality of the audit services produced. This reduction in the cost of employing accountants counteracts the wage increases following the 150-Hour Rule adoption. Second, the Mobility Provision increased the attractiveness of cross-state consolidation of accounting firms due to the ability of merging firms to bring the merged team of accountants to their offices where mobility is allowed.

The shifts in the CPA labor supply fostered by these two regulations provide a useful setting for testing the effect of changes in labor supply on accounting firm M&A activity because of the state-level staggered adoptions that create variation at both the time-series and cross-sectional levels.

[6] I assume that any effect of the 150-Hour Rule on the demand for accountants is not of first order importance because Barrios (2019) does not find that CPAs who qualified after the regulation are of higher quality. If the quality of new CPAs does increase, then the demand can potentially increase as well, leading to a further raise wages of new CPAs.

5. Data and Research Design

For my analysis, I combine two datasets: Audit Analytics and auditor-client links from the employee benefit plan data (Form 5500) disclosed by the Department of Labor (DOL). By using the employee benefit plan (EBP) data to proxy for auditor-client connections, I assume that locations of accounting firm's EBP clients across the U.S. states are representative of where these firms operate. Based on the Fees database in Audit Analytics that includes firms with public clients, over 92% of the public client sample is located in states where the CPA firm serves its EBP clients. Moreover, based on the Opinion database in Audit Analytics, more than 96% of the states where CPA firms have offices are among the locations where these firms serve their EBP clients. Therefore, EBP client locations provide a useful proxy for where more general types of services are provided by the CPA firm.

5.1. Form 5500 data

Under the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code, the EBP sponsor is required to file an annual report about the plan's financial condition, investments, and operations.[7] ERISA requires sponsors of employee plans that cover 100 or more plan participants at the beginning of the plan year to file Form 5500 annually; and sponsors of "funded" employee plans are required to file Form 5500 annually, regardless of the number of participants.[8] Generally speaking, for any employee plan that has more than 100 participants at the beginning of the plan year, ERISA requires the sponsor to attach separate audited financial statements to Form 5500. Moreover, under certain conditions related to plan investment

[7] The deadline for filing an annual report is 7 months after the plan year end.

[8] A "funded" plan is one where funds are set aside in a custodial account or trust fund for the exclusive benefit of the plan participants. Most welfare plans covered under ERISA, however, are not funded. If the plan sponsor of a self-insured welfare plan simply funds the plan out of its general assets and covers less than 100 participants, then no Form 5500 filing is required.

and bonding, a plan with fewer than 100 participants may still require an audit. This audit is conducted by an independent CPA with the goal of obtaining an assurance that the financial statements prepared by plan management are presented fairly using generally accepted auditing standards (AICPA, 2018).

The annual report consists of Form 5500, schedules, financial statements, and the auditor's report in accordance with U.S. generally accepted auditing standards, if applicable. Form 5500 includes (and is not limited to) the sponsor's address, NAICS industry, the number of plan participants, and the plan's auditor. EBP types subject to ERISA include (and are not limited to) profit sharing plans; 401(k) plans; money purchase plans; stock bonus plans; certain annuity arrangements; individual retirement arrangements established by employers; church pension plans that elect to be covered by ERISA; and certain welfare benefit plans that provide benefits, including medical, dental, life insurance, and severance pay.

The DOL uses a computerized line-by-line check to identify errors and omissions in Forms 5500. Furthermore, the Employee Benefits Security Administration reviews the audit reports of selected plans during the quality review program designed to ensure the quality of ERISA audits. In the case of deficiencies, the DOL can reject the filing. To enforce the filings' timeliness, the maximum penalty on plan sponsors for a missing or deficient auditor report can reach $1,100 a day (with an overall maximum per filing of $50,000).

5.2. Sample construction

I summarize the sample construction steps in Table 1. To construct a sample of auditor-clients links, I start with the data on Form 5500 filings at the employee plan level and match the auditor name from Form 5500 to the names of auditors in Audit Analytics. I then use the *auditor_fkey* identifier provided in Audit Analytics and adjust it for name changes and

registration/de-registration with PCAOB to construct a list of auditor-client links at the annual level.[9] I then merge these data with the list of accounting firm M&A provided in Audit Analytics' Auditor Event database.

The advantage of constructing the sample based on Form 5500 filings, rather than Audit Analytics' Audit Fees or Audit Opinions datasets, is better coverage of the accounting firm population. To the best of my knowledge, accounting firms with no public clients are rarely studied in the literature due to lack of data. Therefore, larger accounting firms comprise most of the samples analyzed in the literature. Form 5500 filings include data on both firms with no public clients and private clients of accounting firms included in other datasets due to their public clients. The final sample has 117,491 firm-year observations over 2000-2017 for more than 14,000 accounting firms, and, compared to Audit Analytics databases with client-auditor relationship data, it includes more than three times as many firms with M&A deals. Figure 1 shows the distribution of mergers over the sample period, and figure 2 shows the distribution of clients' industries defined by 2-digit NAICS code.

5.3. Measures of firm exposure to changes in labor supply

For each firm-year, I create a list of states where the firm had served clients during the previous two years. I then calculate the total number of these states that adopted the 150-Hour Rule and the Mobility Provision, respectively. As a result, the first measure, the total number of states subject to the 150-Hour Rule, measures the exposure of the firm to a reduction in CPA labor supply within the states where it produces attestation services. The second measure, the total number of states subject to the Mobility Provision, measures the firm's ability to more easily

[9] I adjust *auditor_fkey* to prevent firm identifier from changing after a name change or registration/de-registration with PCAOB. I use event types 1 and 4 from Auditor Event data provided by Audit Analytics to keep track of name changes and registration/de-registration events, respectively.

employ out-of-state CPAs within the states where it produces attestation services. I then interact these two regulation exposures to measure any amplification or counteraction between the 150-Hour Rule and the Mobility Provision.

Note that measuring exposure to a regulation with the count of states, as opposed to the proportion of states, where an accounting firm has clients is more suitable for my research question. A firm experiencing an accounting labor shortage in two out of four states where it has clients likely faces greater incentives to mitigate the increase in input costs than a firm with a labor shortage in one of two such states.

5.4. Research design

5.4.1. Firm-level analysis

My first set of tests uses the firm-year sample to study whether labor supply changes affect accounting firm merger decisions. I start with modeling the M&A probability using a logistic approach:

$$Log\left(\frac{P\{M\&A_{it}\}}{1-P\{M\&A_{it}\}}\right) = \alpha + \beta_1 R150Score_{it} + \beta_2 MobilityScore_{it} + \beta_3 R150Score_{it} \times MobilityScore_{it} + \beta_4 \#Clients_{it-1} + \beta_5 \#ClientStates_{it-1} + \beta_6 GDPGrowth_{it-1} + \beta_7 OtherAuditors_{it-1} + \gamma_t [+\theta_i], \quad (1)$$

where $P\{M\&A_{it}\}$ is the probability of an M&A; $R150Score$ is the logarithm of one plus the number of states that adopted the 150-Hour Rule and where the firm also has clients; $MobilityScore$ is the logarithm of one plus the number of states that adopted the Mobility Provision and where the firm also has clients; $R150Score \times MobilityScore$ is the interaction between $R150Score$ and $MobilityScore$; $\#Clients$ is the number of clients firm *i* serves in a given year; $\#ClientStates$ is the number of states where the firm has clients; $GDPGrowth$ is the average real GDP growth across all the states where the firm has clients; $OtherAuditors$ is the average number of other accounting

firms serving clients in the same states as the firm does (the average is the average across all states where the firm has clients); and γ_t is a set of year fixed effects. I also include accounting firm fixed effects in my conditional logit regressions. Appendix A provides variable definitions.

The staggered adoption of the regulations, combined with controls for local economic growth and the competitive environment; firms' geographic reach and size; and year, firm, and state fixed effects (depending on the specification) decrease concerns that the results of my research can be explained by other merger drivers. By including year dummies into my specifications, I control for effects that are common within each year. Moreover, by including accounting firm fixed effects in conditional logit specifications, I hold fixed time-invariant firm characteristics that could explain some of the merger variation.

My first hypothesis predicts a positive β_1 because the 150-Hour Rule leads to a decrease in labor supply; and a negative β_3 because the increase in local labor supply created by the Mobility Provision counters the decrease in local labor supply caused by the 150-Hour Rule, while the improvement in workforce mobility across states remains unaffected by the 150-Hour Rule. The sign of β_2, the main effect of the Mobility Provision, could be negative or positive because the Mobility Provision decreases M&A incentives due to labor supply expansion and increases them due to opportunity to bring the merged team of accountants to offices in states that allow mobility.

5.4.2. State-level analysis

I start with repeating the analysis of the relation between labor supply changes and firm M&A activity at the state level. Specifically, I use the following specification:

$$M\&A\ Share_{st} = \alpha + \beta_1 R150_{st} + \beta_2 Mobility_{st} + \beta_3 R150_{st} \times Mobility_{st} + \beta_4 GDPGrowth_{st-1} + \beta_5 \#Auditors_{st-1} + \beta_6 Acct.Employment_{st-1} + \beta_7 R150_{st} \times Acct.Employment_{st-1} + \beta_{18} Mobility_{st} \times Acct.Employment_{st-1} + \gamma_t + \delta_s + \varepsilon_{st}, \quad (2)$$

where $M\&A\ Share_{st}$ is the share of accounting firms serving clients in state *s* that engaged in M&A activity in year *t*; $R150$ is an indicator that equals 1 if the state has adopted the 150-Hour Rule; $Mobility$ is an indicator that equals 1 if the state has adopted the Mobility Provision; $R150 \times Mobility$ is an indicator that equals 1 if the state has adopted both regulations; $\#Auditors$ is the number of accounting firms serving clients in the state; $Acct.Employment$ is the number of accountants employed in the state scaled by the number of firms serving clients in the state; $R150 \times Acct.Employment$ and $Mobility \times Acct.Employment$ control for the interaction between each of the two regulations with the scaled employment of accountants; and γ_t and δ_s are year and state fixed effects, respectively. Similar to the firm-level analysis, I predict a positive β_1, a negative β_3, and I make no prediction about β_2.

To study the consequences of the M&A activity resulting from the labor supply changes, I repeat the above analysis with state concentration as the dependent variable:

$$Concentration_{st} = \alpha + \beta_1 R150_{st} + \beta_2 Mobility_{st} + \beta_3 R150_{st} \times Mobility_{st} + \beta_4 GDPGrowth_{st-1} + \beta_5 \#Auditors_{st-1} + \beta_6 Acct.Employment_{st-1} + \beta_7 R150_{st} \times Acct.Employment_{st-1} + \beta_{18} Mobility_{st} \times Acct.Employment_{st-1} + \gamma_t + \delta_s + \varepsilon_{st}. \quad (3)$$

For each year, I create two versions of the audit market concentration measure: the state level and the state-industry level. I measure the state-level audit market concentration using a Herfindahl-Hirschman Index (HHI) based on the share of the total number of clients in the state served by accounting firms. I measure the state-industry-level concentration using an HHI based on the share

of the total number of state-industry clients served by accounting firms, where industries are defined by the 2-digit NAICS code.[10] My second hypothesis predicts a positive β_1 and a negative β_3. I make no prediction about β_2.

5.4.3. Summary statistics

The first four columns in Table 2, Panel A present the descriptive statistics for my full firm-year sample. The sample average for the M&A indicator is 1.6%. The mean and median values for firm exposure to the 150-Hour Rule are 0.723 and 0.693, respectively. Therefore, the median firm serves clients in one state with the 150-Hour Rule, which, after adding 1 and taking the logarithm, becomes 0.693. The mean and median exposures to the Mobility Provision are 0.463 and 0.692, respectively. Similar to the 150-Hour Rule, the median value of 0.693 corresponds to a firm serving clients in one state that has adopted the Mobility Provision. The mean and median values for the number of EBP clients is 6.3 and 2, respectively.[11] The mean and median number of states where a firm serves clients is 1.76 and 1, respectively. The mean and median average real GDP growth across all states where a firm has clients are just below 2%. Finally, the mean and median values for the average number of other accounting firms serving clients in the same states as the firm does are 471 and 402, respectively.

The last four columns in Table 2, Panel A show the descriptive statistics for my conditional firm-year sample (restricted to only firms with variation in their M&A activity over the sample period). Exposure to the two regulations is slightly higher for this subsample. Firms that engage in M&A over the sample period are on average larger than firms in the full sample, and there are

[10] When calculating the total number of clients in the state and the share of that number that is served by an accounting firm, I weight each client by the number of client employees.
[11] The Big Six firms represent a small portion of the sample, and the mean and maximum number of clients per year for these firms are 1,300 and 3,664, respectively.

no drastic differences between the full and conditional samples in terms of the real GDP growth and the number of other accounting firms that serve clients in the same locations. Panels B and C show correlation matrices for the full and conditional samples.

6. Results

6.1. Firm-year analysis

Table 3 reports the results for the firm-year analysis of the regulation-induced labor supply changes on accounting firm M&A activity. Columns 1-3 present the results for the logit regression in equation (1), and Columns 4-6 show the results for the conditional logit regression with accounting firm fixed effects in equation (1) estimated on the sample of firms with variation in M&A activity over the sample period (at least one M&A and at least one year without an M&A).[12] Columns 2 and 5 (Columns 3 and 6) show the change in the M&A probability when firm exposure to the corresponding regulation increases from no state to one state (from the sample minimum to the sample maximum of firm exposure to the corresponding regulation).

Based on the results of the conditional logit regression, Column 5 suggests that as firm exposure to the 150-Hour Rule (the Mobility Provision) increases from no state to one state, the M&A probability increases by 16% (13%) of the sample mean M&A probability.[13] However, when a firm's exposure to *both* the 150-Hour Rule and the Mobility Provision increases from no state to one state, the M&A probability increases by 19% of the sample mean M&A probability,

[12] To get consistent estimates of the coefficients in the specification with accounting firm fixed effects, I run a conditional logit analysis. Conditional logit studies the distribution of merger activity conditional on the total number of M&A per firm. While this conditioning allows me to estimate the coefficients consistently, it does not use the observations of firms with no variation in merger activity.

[13] The 16% change in the M&A probability in response to an increase in firm exposure to the 150-Hour Rule is calculated by dividing the estimate of 0.019, reported in Column 5, by the sample mean M&A probability of 0.12, reported in Panel A of Table 2, and multiplying by 100. The control variables are held at their mean values.

which is lower than it would be without a negative interactive effect between the two regulations.[14] Column 6 shows similar changes in the M&A probability as firm exposure to the regulations increases from the sample minimum to the sample maximum. Moreover, these findings are generally consistent with the results of the logit regression without accounting firm fixed effects in Columns 1-3, although there is no significant reduction in the total M&A probability when firm exposure to *both* the 150-Hour Rule and the Mobility Provision increases from no state to one state.

The general consistency of the results in Columns 1 and 4 suggests that a cross-sectional difference between accounting firms that have a combination of high exposure to the regulations and high M&A activity and accounting firms that have a combination of low exposure to the regulations and low M&A activity is not the sole driver of the results. In other words, the results in Columns 4-6 show that firms that ever use the M&A strategy change their reliance on this strategy over time as their exposure to the 150-Hour Rule and the Mobility Provision changes.[15]

I interpret the combination of the positive effect from the 150-Hour Rule and the negative effect from the interaction between the 150-Hour Rule and the Mobility Provision as consistent with my first hypothesis that a reduction in labor supply increases firm engagement in M&A. The decrease in the M&A likelihood in response to the combination of the two regulations suggests that by expanding the local labor market to include out-of-state CPAs, the Mobility Provision decreases the impact of the 150-Hour Rule to only the in-state of the expanded market, and thus the effect of the 150-Hour Rule is smaller. The positive main effect of the Mobility Provision likely reflects that the impact of improvement in workforce mobility across the states dominates

[14] The marginal effect for the interaction between firm exposures to the 150-Hour Rule and the Mobility Provision is calculated using the approach described in Ai and Norton (2004).

[15] I repeat the analysis of M&A activity in response to regulation-induced labor supply changes using a Cox hazard model and find similar results. Appendix B describes this analysis and presents the results.

the impact of fewer labor-related M&A incentives due to increased supply from the Mobility Provision. In other words, the ability to bring a merged team of accountants to offices where mobility is allowed incentives firms to engage in M&A.

6.2. Firm size and M&A

In this section, I separate the M&A deals into two categories: M&A between a large and a small firm, and M&A between similarly sized firms (two large or two small firms). M&A benefits in terms of curbing the higher input costs are likely more pronounced for small firms. Small firms usually do not have a designated firm administrator, thus administrative tasks are not separated from the accountants' daily duties and consequently contribute to their non-billable hours (Rosenberg, 2012). Non-billable hours become more costly for firms after a reduction in local labor supply because of an increase in accountant wages. To address this issue, a small firm can merge with a large firm and allocate these non-billable tasks to the large firm's administrative staff or merge with another small firm to reach the size necessary for practicality of administrative staff in the workforce. In addition, firms with large workforces are more likely to invest in specialized software and a detailed in-house guide that standardizes interpretation and implementation of accounting standards. By getting access to software after the merger, the small firm can rely less on experienced staff and allocate experienced specialists to more complex tasks (Libby and Luft, 1993; Prawitt, 1995).[16]

[16] In addition, on average, small firms pay lower entry salaries, as evidenced from the job placement data collected by the recruiting professionals at Robert Half in 2017 and Rosenberg Survey in 2016 (Rosenberg, 2016; Half, 2017, pp. 18-19). At the same time, higher salary and better career growth opportunities are the top priorities of young accounting professionals surveyed in the 2011 PCPS Top Talent Survey conducted by AICPA. Because small firms have to compete for labor with all the other firms that are simultaneously affected by local labor supply shocks, they might face prohibitively high costs of attracting labor. This makes mergers with larger firms an attractive solution that allows small firms to reduce the elevated input costs.

I classify firms as large or small based on their PCAOB registration. Accounting firms must register with PCAOB to prepare or play a substantial role in preparing an audit report for large companies (issuers, brokers, or dealers). I classify a firm as large if it is registered with PCAOB in any year of the sample period. Alternatively, firms that never get registered with PCAOB are classified as small firms. This classification of firms provides a reliable proxy of firm size and does not rely on the number of EBP clients.

Table 4 shows the results for a multinomial logit regression with the following outcomes for each year: no M&A, M&A between similarly sized firms (both small or both large), and M&A between a small and a large firm. For brevity, I report only the coefficients on the variables of interest, although all the control variables are included in the regression. Column 1 shows the coefficients comparing M&A between similarly sized firms to the no-M&A outcome, and Column 2 shows the coefficients comparing M&A between small and large firms to the no-M&A outcome. For each regulation, Column 3 reports the statistical difference between the coefficient for similarly sized firm mergers and the coefficient for mergers joining a small and a large firm, with p-values reported below the differences. The combination of the results for the 150-Hour Rule and its interaction with the Mobility Provision suggest that a reduction in labor supply increases M&A activity between both similarly sized firms and small and large firms, with a marginally stronger effect for the latter. In addition, the Mobility Provision results show that an improvement in workforce mobility increases both M&A between similarly sized firms and between a small and a large firm.

6.3. Client industry and M&A

I then separate M&A into two categories: M&A between firms that have clients in the same industries (industry specialization), and M&A between firms with no overlap in their clients'

industries (industry diversification). I classify an M&A as increasing in industry specialization if at least one client industry is served by both merging firms. Alternatively, if there is no common client industry for the merging firms, I classify the M&A as increasing industry diversification. I measure accounting firms' clients' industries based on 3-digit NAICS industry code reported by the clients. I predict that most M&A that occur due to a reduction in labor supply increase industry specialization because similar expertise of the merging teams of accountants help to more readily share the combined workload of the firms.

Table 5 shows the results for a multinomial logit regression with the following outcomes for each year: no M&A, M&A increasing industry specialization, and M&A increasing industry diversification. Column 1 shows the coefficients that compare M&A that increase industry diversification to a no-M&A outcome, and Column 2 shows the coefficients comparing M&A that increase industry specialization to the no-M&A outcome. For each regulation, Column 3 reports the statistical difference between the coefficient for M&A that increase industry specialization and the coefficient for M&A that increase industry diversification, with p-values reported below the differences. The combination of the results for the 150-Hour Rule and its interaction with the Mobility Provision suggest that a reduction in labor supply increases both types of M&A, with a stronger effect for M&A that increase industry specialization. Finally, the results for the main Mobility Provision effect suggest that after the local labor market expands to include out-of-state CPAs, firms increase M&A that lead to their greater industry specialization.

6.4. Client location and M&A

Further, I separate M&A into two categories: M&A between firms that serve clients in the same states (geographic concentration), and M&A between firms with no overlap in their clients' state location (geographic expansion). I classify an M&A as increasing geographic concentration

if at least one state is served by both merging firms. Alternatively, if there is no common state in terms of clients' locations for the merging firms, I classify the M&A as increasing geographic expansion. I predict that most M&A that occur due to a reduction in labor supply increase geographic concentration because to readily share the combined workload among the merging accountants, the merging firms need labor certified to produce attestation services locally.

Table 6 shows the results for a multinomial logit regression with the following outcomes for each year: no M&A, M&A increasing geographic concentration, and M&A increasing geographic expansion. Column 1 compares M&A increasing geographic expansion to the no-M&A outcome, and Column 2 compares M&A increasing geographic concentration to a no-M&A outcome. Column 3 reports the statistical differences between the effects of the two regulations on M&A increasing geographic concentration and expansion, with p-values reported below the differences. I find that M&A driven by a reduction in labor supply increase geographic concentration, suggesting that locally-certified labor is required to achieve the benefits from M&A. In addition, the effect of the Mobility Provision is strongest for M&A increasing geographic expansion, in line with improvement in workforce mobility across the states making out-of-state mergers more attractive.

6.5. State-year analysis

6.5.1. M&A activity

Table 7 presents the results for the state-level analysis of the labor supply changes and firm M&A activity using equation (2). Column 1 shows an increase in the share of firms that serve clients in a state and engage in M&A after either the 150-Hour Rule or the Mobility Provision adoption. I do not find a significant effect for the interaction between the two regulations in the state-level analysis. However, I note that the smaller variation and sample size in the state-level

data compared to those in the firm analysis likely reduce the power of this test.

Figure 4 shows the state-level trends in M&A activity, measured as the share of firms in a state that engage in M&A, around the regulation adoption years for the 150-Hour Rule and the Mobility Provision. I find no significant difference in the pre-regulation trends for each regulation. At the same time, after the respective adoptions of the 150-Hour Rule and the Mobility Provision, the share of firms that have clients in that state and that engage in M&A increases significantly at the 5% confidence level.

In this analysis, I also conduct a cross-sectional test for heterogeneity in the effects of the two regulations with respect to the number of employed accountants in a state scaled by the number of firms serving clients in that state. The last 3 variables in Column 1 of Table 6 suggest that the effect of each regulation is smaller in states with a large number of locally employed accountants relative to the number of firms serving clients in that state. Consistent with the labor supply channel that I suggest in this paper, a larger accounting labor market mitigates the labor supply fluctuations caused by the 150-Hour Rule and the Mobility Provision.

6.5.2. Firm size and M&A

Columns 2, 3, and 4 in Table 6 analyze the share of firms that serve clients in a state and engage in M&A connecting two small firms, a small firm and a large firm, and two large firms, respectively. I find that a reduction in labor supply leads to both M&A between small firms and M&A connecting a small firm to a large firm. One way to explain this result is that by merging with a large firm or by scaling up through a merger with another small firm, small firms can increase their billable hours via allocating non-billable hours to administrative staff. This administrative staff can be the large firm's administrative staff or newly hired administrators in a combined firms that reached the size necessary for practicality of administrative staff in the

workforce. In addition, I find an improvement in workforce mobility across the states to increase M&A between large firms and marginally increase M&A between a small and a large firm.[17] This is consistent with large firms having more resources to take advantage of cross-state mobility of workforce.[18]

6.5.3. Audit market concentration

Table 8 shows the results for the audit market concentration as an outcome. Column 1 presents the results for the state-level concentration, while Column 2 presents the results for the state-industry concentration. I find states with the 150-Hour Rule to have higher concentration, while the Mobility Provision and the interaction of the two regulations are not significant predictors of state-level concentration. To interpret these Herfindahl-Hirschman Index results economically, assume for simplicity that all firms in a state serve an equal share of the market. Based on my sample, there are, on average, 7.3 firms serving clients in a state. After the 150-Hour Rule adoption, the number of firms in the state drops to 4.7, increasing state concentration by 0.9 of a standard deviation of state-level concentration. Column 2 suggests that when focusing on state-industry market concentration, and assuming that firms serve equal shares of the market, the 150-Hour Rule decreases the number of firms in the market from 4 to 3.6 and increases state-industry concentration by 0.2 of a standard deviation of state-industry concentration. However, the adoption of the Mobility Provision in addition to the 150-Hour Rule mitigates part of this effect

[17] The results in Columns 2 and 4 are similar if instead of scaling the number of the corresponding M&A in a state with the total number of firms providing services in a state, I use the total number of small firms or the total number of large firms correspondingly.

[18] Even though the number of large firms in the sample exceed a thousand, it is smaller than the number of small firms, potentially leading to fewer opportunities for large firms to connect with another large firm. However, the significant results for the Mobility Provision reduce these concerns. Moreover, the analysis compares the share of large firms in a state that merge with another large firm to its previous values, as opposed to comparison with small firms. Thus, even a few more M&A between large firms should be detectable. In addition, antitrust authorities are unlikely to block M&A between two large firms because this can boost the competition among Big N, unless one of the merging firms is Big N.

and increases the number of firms in the state-industry market to 3.8. Finally, the Mobility Provision adoption alone decreases the number of firms in the state-industry market to 3.7, increasing state-industry concentration by 0.14 of a standard deviation of state-industry concentration.

7. Conclusion

I study the effect of labor supply shocks on accounting firm M&A and the audit market concentration. I use the changes in labor supply created by the 150-Hour Rule and the Mobility Provision and data on the auditors of employee benefit plans in combination with the list of accounting firm M&A. The results show firms facing a greater reduction in labor supply to increase their M&A activity, and states with a greater reduction in labor supply to increase their audit market concentration.

I find that both large and small firms increase their M&A activity in response to a labor supply reduction. This manifests in M&A between two small firms as well as M&A connecting a large and a small firm, with a stronger effect on M&A between a small and a large firm. In addition, I find that M&A driven by a reduction in labor supply are more likely to increase the combined firms' industry specialization and geographic concentration.

This paper contributes to the emerging literature on CPA firm growth by showing that accounting firm growth decisions depend significantly on the supply of labor. Therefore, labor supply is one of the factors contributing to the recent growth in M&A activity that reached 39% in 2018 (CPAJ Staff, 2018). Moreover, the large sample of accounting firms allows me to study the structural shifts in the whole audit market, thus adding to the analysis small CPA firms that serve a large part of the economy comprised of private companies.

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Appendix A. Variable Definitions

Variable	Definition
	Firm-level analyses
$M\&A_{it}$	An indicator equal to 1 if accounting firm *i* engaged in a merger in year *t*, 0 otherwise.
$R150\ Score_{it}$	Logarithm of 1 plus the number of states that adopted the 150-Hour Rule by year *t* and where firm *i* has clients in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$Mobility\ Score_{it}$	Logarithm of 1 plus the number of states that adopted the Mobility Provision by year *t* and where firm *i* has clients in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$R150\ \&\ Mobility_{it}$	The product of *R-150 Score* and *Mobility Score*.
$\#\ Clients_{it-1}$	Total number of clients served by firm *i* in year *t-1*.
$\#\ Client\ States_{it-1}$	Total number of states where firm *i* served clients in years *t-1* and *t-2* (based on the states reported by the firm's clients in their Forms 5500).
$GDP\ Growth_{it-1}$	Lagged average real GDP growth (%) across the states where firm *i* served clients in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years. The real GDP is measured in millions of chained 2012 dollars. The data on Real Total Gross Domestic Product, by state, is collected by the U.S. Bureau of Economic Analysis and retrieved from FRED, Federal Reserve Bank of St. Louis.
$OtherAuditors_{it-1}$	Average number of other accounting firms serving clients in the same states as firm *i* in year *t-1* (across the set of states where firm *i* served clients). For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years. I scale this average by 100.
$Small$	An indicator variable equal to 1 for firms that are not registered with PCAOB in any year of the sample period, 0 otherwise.
$Large$	An indicator variable equal to 1 for firms registered with PCAOB for some portion of the sample period, 0 otherwise.

	State-level analyses
$M\&A\ Share_{st}$	Share of firms serving clients in state *s* that engaged in an M&A in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$M\&A\ Share_{st}$	Share of firms serving clients in state *s* that engaged in an M&A connecting two small firms in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$M\&A\ Share_{st}$	Share of firms serving clients in state *s* that engaged in an M&A connecting a small firm and a large firm in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$M\&A\ Share_{st}$	Share of firms serving clients in state *s* that engaged in an M&A connecting two large firms in year *t*. For each firm-year, the list of states where a firm has clients is based on the states reported by the firm's clients in their Forms 5500 for the two previous years.
$Concentration_{st}$	I use two concentration measures: state-year concentration and state-industry-year concentration. State-year audit market concentration is a Herfindahl-Hirschman Index (HHI) based on the share of the total number of clients in the state that are served by accounting firms. State-industry concentration is an HHI based on the share of the total number of clients in the state-industry served by accounting firms, where industries are defined by the 2-digit NAICS code. I weight each client with the number of its employees when calculating the total number of clients in a state-year or state-industry-year, as well as the share of the total number of clients served by an accounting firm.
$R150_{st}$	An indicator equal to 1 if state *s* adopted the 150-Hour Rule by year *t*.
$Mobility_{st}$	An indicator equal to 1 if state *s* adopted the Mobility Provision by year *t*.
$R150\ \&\ Mobility_{st}$	An indicator equal to 1 if state *s* adopted both the 150-Hour Rule and the Mobility Provision by year *t*.
$GDP\ Growth_{st-1}$	Percent real GDP growth in state *s* and year *t-1*. The real GDP is measured in millions of chained 2012 dollars. The data on Real Total Gross Domestic Product, by state, is collected by the U.S. Bureau of Economic Analysis and retrieved from FRED, Federal Reserve Bank of St. Louis.
$\#Auditors_{st-1}$	Number of accounting firms serving clients in state *s* and year *t-1*.

$Acct.Employment_{st-1}$	Number of accountants employed in state *s* in year *t-1*, scaled by the number of firms serving clients in state *s* in year *t-1*.

Appendix B. Hazard Analysis

I investigate the effect of regulation-induced labor supply changes on firm M&A activity using a Cox hazard model. A hazard analysis allows me to simultaneously investigate factors affecting both M&A occurrences and their timing as an outcome of interest. My Cox hazard model takes the following form:

$$Log\left(\frac{H\{t|X_{it}\}}{H_0\{t\}}\right) = \alpha + \beta_1 R150Score_{it} + \beta_2 MobilityScore_{it} + \beta_3 R150Score \times MobilityScore_{it} + \beta_4 \#Clients_{it-1} + \beta_5 \#ClientStates_{it-1} + \beta_6 GDPGrowth_{it-1} + \beta_7 OtherAuditors_{it-1} + \gamma_t, \quad (4)$$

where $H_0\{t\}$ is the baseline hazard describing how the risk of an M&A changes over time at the baseline level of covariates (each covariate = 0), and $H\{t|X_{it}\}$ is the hazard function in year *t* for firm *i* with the set of covariates from the main analysis described above for the logistic regression.[19] Appendix A provides variable definitions.

Because the baseline hazard is estimated non-parametrically in Cox hazard models, I do not estimate marginal effects and interpret the results in terms of hazard ratios. The results suggest that an increase in firm exposure to the 150-Hour Rule (the Mobility Provision) from no state to one state increases the M&A hazard by 31.2% (7.9%).[20] When firm exposure to both regulations increases from no state to one state, the M&A hazard increase is lower than it would be without a negative interactive effect between the two regulations.

[19] To factor in potential heterogeneity in the baseline hazard with respect to firm size, I estimate a stratified Cox Hazard model by allowing the baseline hazard to vary depending on the number of other accounting firms serving clients in the same states where the firm has clients (the number of competitors). The key assumption in Cox models is the proportional-hazards assumption that requires the hazard ratios for different values of covariates to be constant within strata over time. I test the validity of this assumption using the Schoenfeld residuals and find that the proportionality assumption cannot be rejected at the 5% confidence level.

[20] To calculate these numbers, I multiply the estimated coefficients by ln(2) (which corresponds to a change in exposure from ln(1+0) = 0 to ln(1+1) = ln(2)), and then exponentiate the resulting value to get the change in the hazard ratio.

Table B1. Cox hazard analysis

R-150 Score	0.868***
	(7.87)
Mobility Score	0.281**
	(2.23)
R-150 & Mobility	-0.219***
	(-5.10)
# Clients	0.022***
	(11.24)
# Client States	0.021***
	(3.37)
GDP Growth	-0.005
	(-0.26)
Other Auditors	0.001***
	(3.44)
N	101,128
Wald χ^2	1,015.4
P-value	0.000
Auditor FE	No
Year FE	Yes

Figure 1. Trend in M&A over the sample period

This figure shows the trend in M&A from 2000 to 2017. The numbers reported on the blue part of the bars reflect the number of M&A deals between similarly sized firms (two small firms or two large firms). The numbers reported on the red part of the bars reflect the number of M&A deals connecting a small and a large firm. Firm size is determined based on its registration with PCAOB: firms registered with PCAOB in any year of the sample period are considered large, and firms that do not have a PCAOB registration over the sample period are considered small.

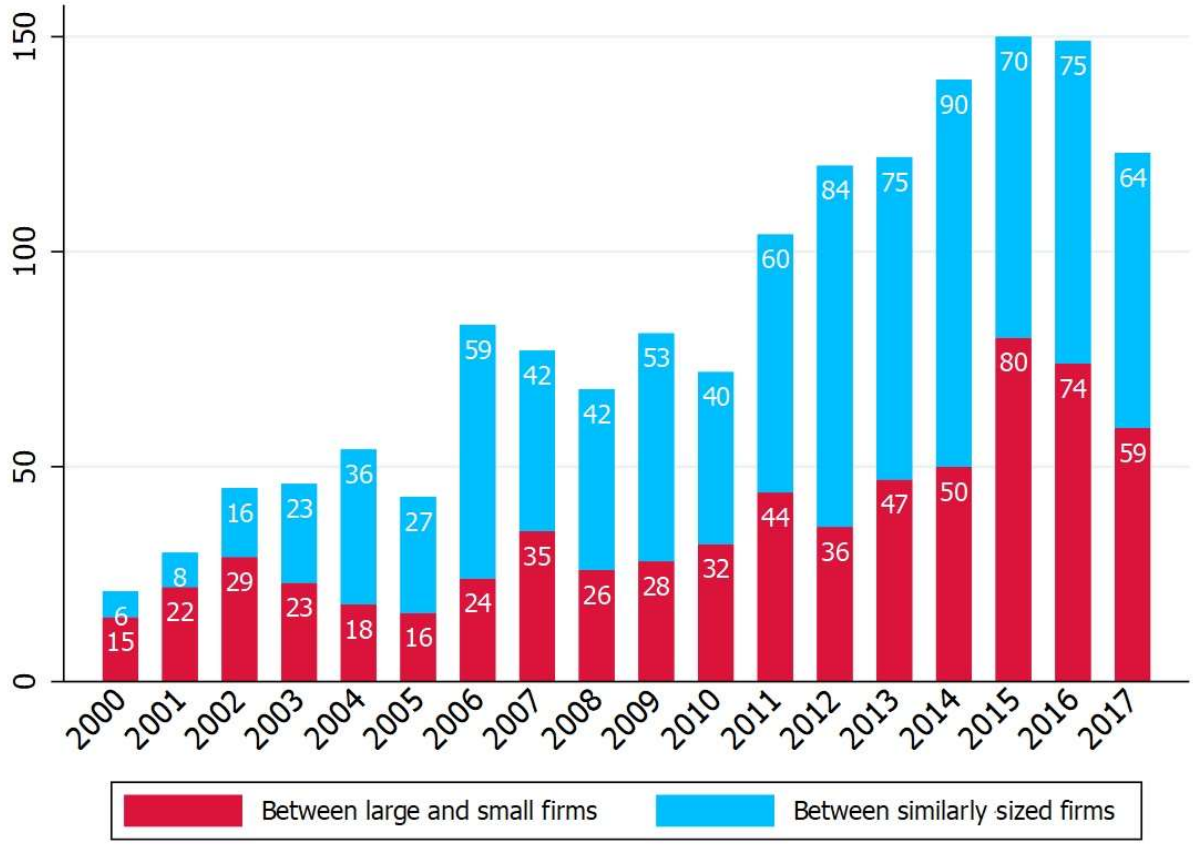


Figure 2. The distribution of clients' industries for the final sample

This figure shows the distribution of clients' industries for the full final sample. Client industries are defined using the 2-digit NAICS sector reported in their Forms 5500. For each of the twenty industries, the numbers reported on the bars reflect the percent of the total number of accounting firm-year-industry observations that correspond to this industry.

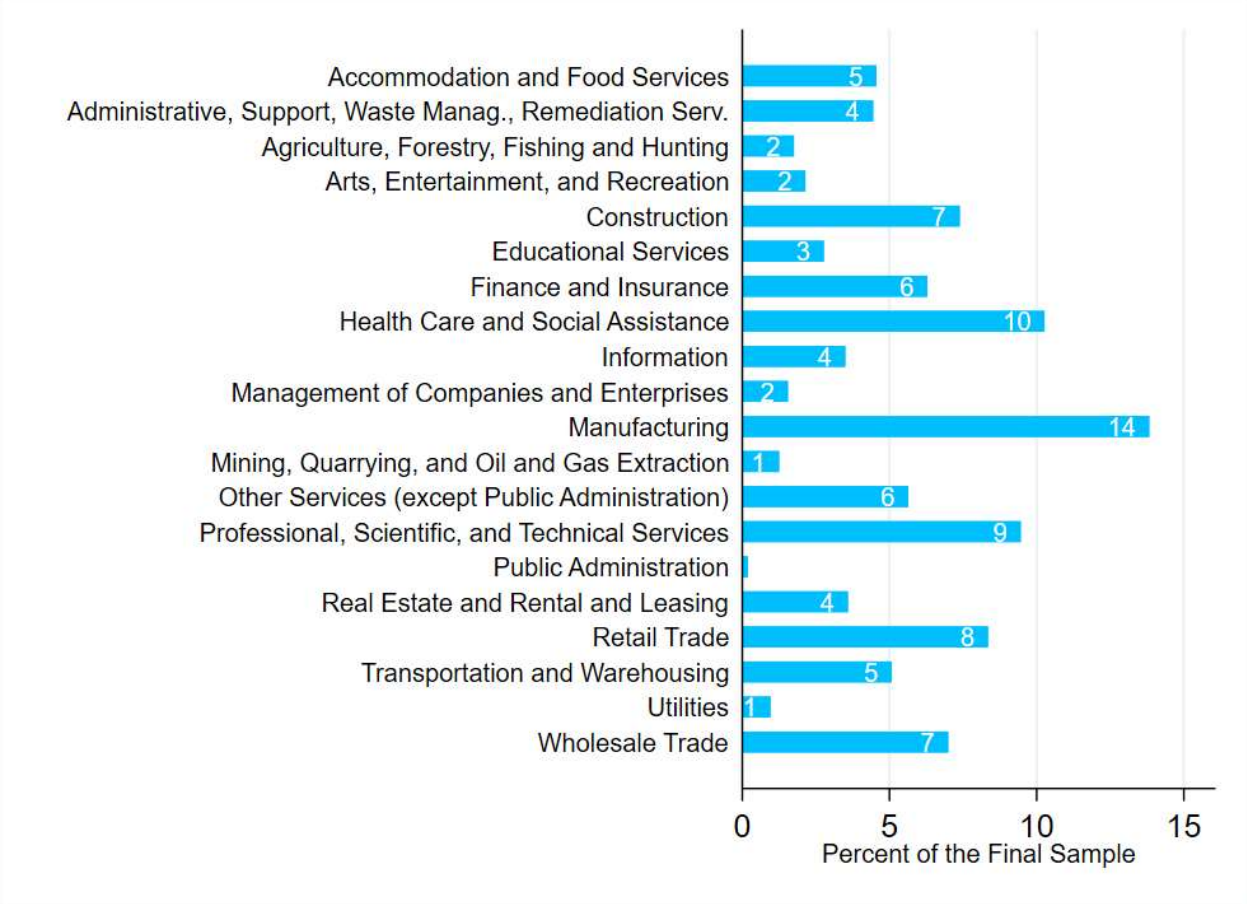
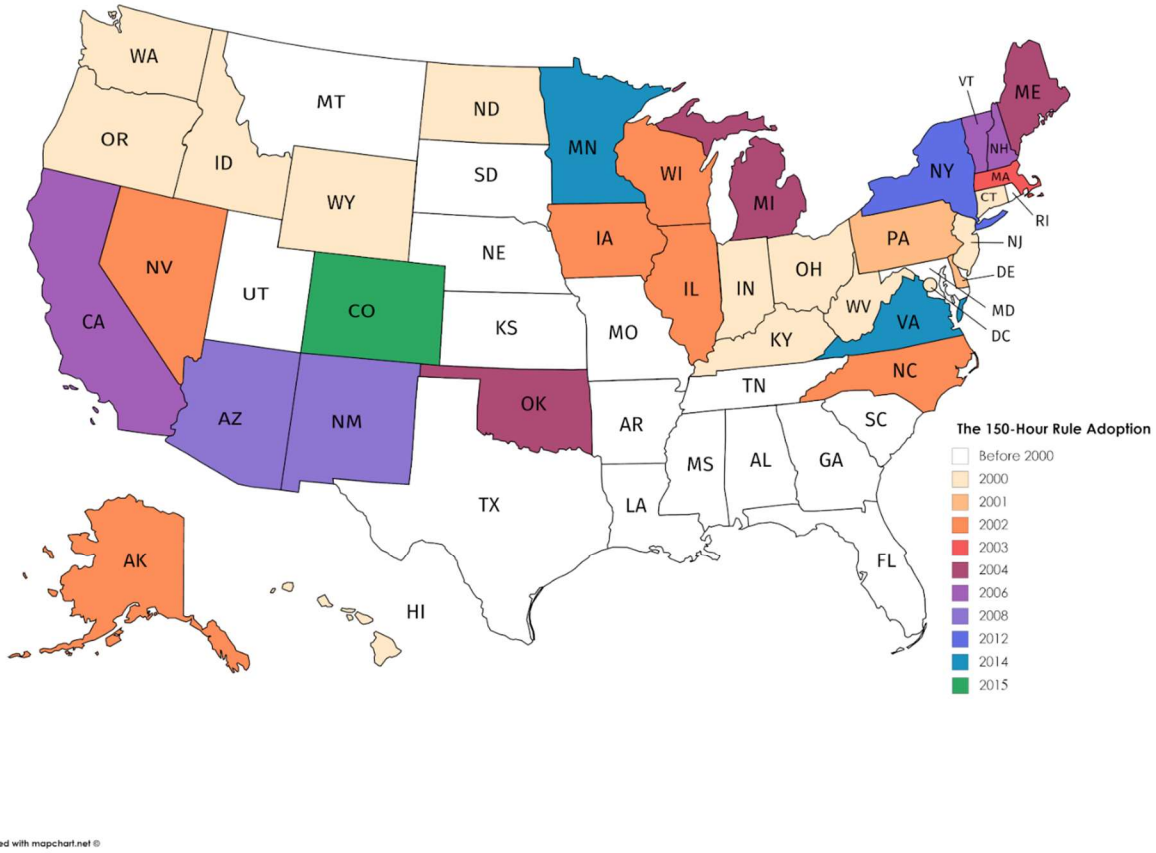


Figure 3. Adoption years for the 150-Hour Rule and the Mobility Provision

This figure shows the timing of regulation adoptions by state. Panel A shows the distribution of adoption years for the 150-Hour Rule, and Panel B shows the distribution of adoption years for the Mobility Provision.

Panel A: The 150-Hour Rule



Panel B: The Mobility Provision

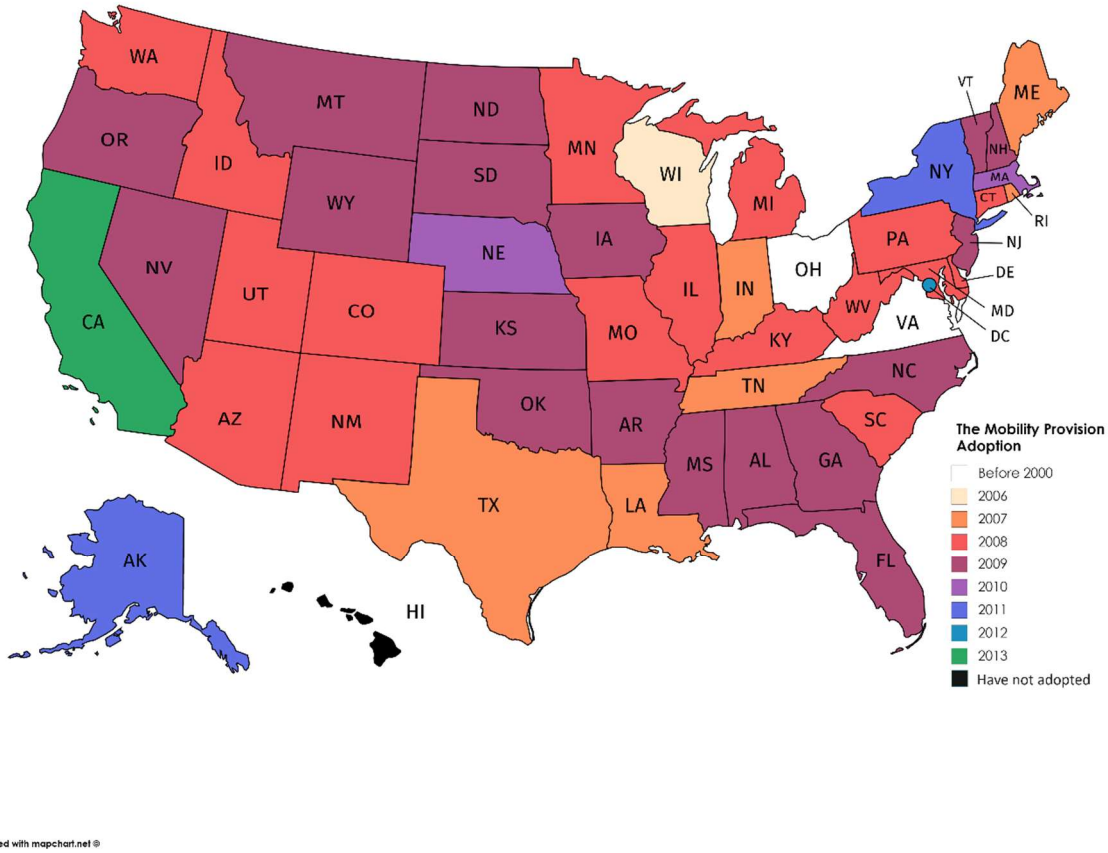


Figure 4. Parallel trend analysis.

This figure shows the coefficients on the 150-Hour Rule and the Mobility Provision dummies in the state-level lead-lag analysis. The red circular marker reflects the coefficients on the 150-Hour Rule leads and lags, and the blue diamond marker shows the coefficients on the Mobility Provision leads and lags. The bands extending from the markers reflect the 95% confidence intervals. The lack of significance of the coefficients on each regulation in the pre-adoption periods suggests that adopting states and non-adopting states appear to have a similar M&A activity trends, mitigating concerns about endogenous factors affecting the adoption timing.

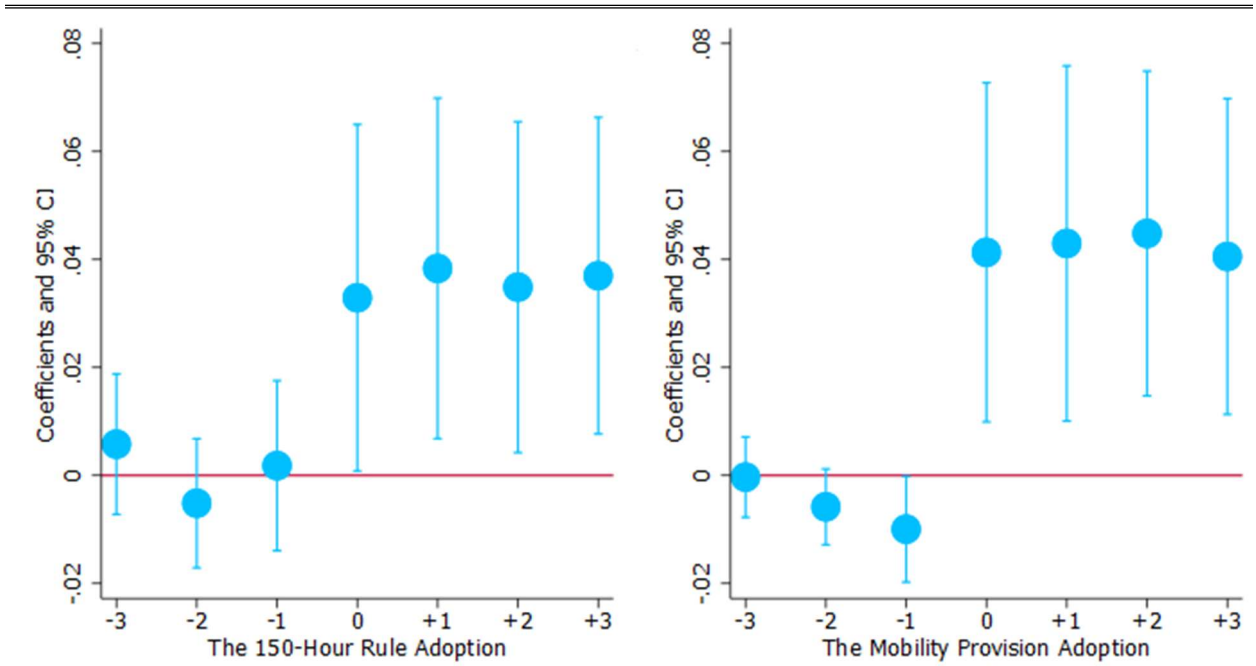


Table 1. Sample selection

This table presents the sample selection steps used to construct the final sample of 117,491 firm-year observations from 2000 – 2017; the conditional sample of 15,433 observations from 2000 – 2017, which consists of firms with variation in their M&A activity (at least one year with M&A and at least one year without M&A); and the state-year sample of 918 observations from 2000 – 2017, which consists of 50 U.S. states and Washington D.C.

Panel A: *Firm-year sample*	*N obs.*
Firm-years from annual F5500 forms matched to Audit Analytics by auditor name	142,512
Observations with a single record of a client-auditor relationship	- 2,546
Observations with missing controls	-24,987
Full sample:	*117,491*
Number of accounting firms:	*14,657*
Number of firm-years with an M&A deal:	*1,878*
Observations for firms without variation in M&A activity over the sample period	-102,058
Conditional Sample (firms with variation in M&A activity):	*15,433*
Number of accounting firms:	*1,360*
Number of firm-years with an M&A deal:	*1,855*
Panel B: *State-year sample*	
Full firm-year sample collapsed to state-years	*918*

Table 2. Summary statistics and correlation matrices

This table provides summary statistics for the variables used in the analysis. The full accounting firm-year sample consists of 117,491 observations from 2000-2017. The conditional sample consists of 15,433 firm-year observations from 2000-2017 for 1,360 firms with variation in their M&A activity (at least one year with M&A and at least one year without M&A). Panel A presents the summary statistics for these two samples. Panel B presents the correlation matrix for the full firm-year sample, with Pearson correlations below the diagonal and Spearman correlations above it. Panel C presents the correlation matrix for the conditional firm-year sample, with Pearson correlations below the diagonal and Spearman correlations above it. See Appendix A for variable definitions.

Panel A: *Summary statistics*

	Full sample				Conditional sample			
	N	*Mean*	*Median*	*S.D.*	*N*	*Mean*	*Median*	*S.D.*
M&A	117,491	0.016	0	0.125	15,433	0.120	0	0.325
R-150 Score	117,491	0.723	0.693	0.464	15,433	1.004	0.693	0.613
Mobility Score	117,491	0.463	0.693	0.518	15,433	0.652	0.693	0.692
# Clients	117,491	6.285	2	12.329	15,433	17.23	7	23.22
# Client States	117,491	1.758	1	2.557	15,433	3.546	2	5.815
GDP Growth	117,491	1.943	1.99	2.373	15,433	1.913	1.963	2.195
Other Auditors	117,491	471.3	402	292.6	15,433	452.2	399.3	249.9

Panel B: *Correlation matrix for the full sample*

	M&A	*R-150 Score*	*Mobility Score*	*# Clients*	*# Client States*	*GDP Growth*	*Other Auditors*
M&A	1	0.11	0.10	0.10	0.12	-0.02	0.00
R-150 Score	0.14	1	0.54	0.48	0.77	-0.13	-0.28
Mobility Score	0.14	0.62	1	0.32	0.42	-0.28	-0.09
# Clients	0.20	0.57	0.45	1	0.60	-0.05	-0.04
# Client States	0.21	0.58	0.43	0.72	1	-0.06	-0.07
GDP Growth	-0.01	-0.12	-0.26	-0.04	-0.03	1	0.04
Other Auditors	-0.01	-0.37	-0.15	-0.07	-0.08	0.05	1

Panel C: *Correlation matrix for the conditional sample*

	M&A	*R-150 Score*	*Mobility Score*	*# Clients*	*# Client States*	*GDP Growth*	*Other Auditors*
M&A	1	0.13	0.19	0.06	0.10	-0.05	0.00
R-150 Score	0.15	1	0.64	0.66	0.90	-0.16	-0.20
Mobility Score	0.20	0.70	1	0.45	0.55	-0.34	-0.11
# Clients	0.14	0.71	0.56	1	0.73	-0.07	-0.04
# Client States	0.16	0.64	0.50	0.72	1	-0.09	-0.09
GDP Growth	-0.04	-0.15	-0.31	-0.07	-0.04	1	0.00
Other Auditors	-0.01	-0.31	-0.17	-0.11	-0.14	0.02	1

Table 3. M&A probability and labor supply.

This table presents the results of the logit (Columns 1-3) and conditional logit (Columns 4-6) regressions in eq. (1). The sample used in the conditional logit regression is restricted to firms with at least one year with M&A and at least one year without one. Columns 2 and 5 (Columns 3 and 6) show the change in the M&A probability when firm exposure to the corresponding regulation increases from no state to one state (from the sample minimum to the sample maximum of firm exposure to the corresponding regulation). For example, Column 5 suggests that as firm exposure to the 150-Hour Rule (the Mobility Provision) increases from no state to one state, the M&A probability increases by 16% (13%) of the sample mean M&A probability; however, when a firm's exposure to both the 150-Hour Rule and the Mobility Provision increases from no state to one state, the M&A probability increases by 19% of the sample mean M&A probability, which is lower than it would be without a negative interactive effect between the two regulations. See Appendix A for variable definitions. Reported below the M&A probability changes in Columns 2-3 and Columns 5-6 are z-statistics calculated using the delta method. Standard errors are clustered by firm. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	Logit			Conditional Logit		
		ΔPr{M&A}:			*ΔPr{M&A}:*	
	Coefficient	*no state to one state*	*sample Min to Max*	*Coefficient*	*no state to one state*	*sample Min to Max*
R-150 Score	0.970***	0.004***	0.036***	0.836***	0.019**	0.038***
	(9.01)	(9.30)	(4.66)	(4.25)	(2.55)	(2.77)
Mobility Score	0.539***	0.002***	0.010**	0.595**	0.015*	0.033**
	(3.19)	(2.86)	(2.00)	(2.27)	(1.92)	(2.33)
R-150 & Mobility	-0.297***	0.000	-0.021***	-0.588***	-0.012**	-0.061**
	(-3.95)	(0.95)	(2.69)	(-4.16)	(2.38)	(-2.46)
# Clients	0.021***			0.003		
	(9.27)			(0.62)		
# Client States	0.032***			0.013		
	(3.88)			(0.45)		
GDP Growth	-0.006			0.021		
	(-0.36)			(1.01)		
Other Auditors	0.075***			0.012		
	(6.19)			(0.30)		
N		117,491			15,433	
Wald χ^2		1,876.80			458.7	
P-value		0.000			0.000	
Auditor FE		No			Yes	
Year FE		Yes			Yes	

Table 4. Firm size and M&A

This table presents the results for a multinomial logit regression with the following outcomes: no M&A, M&A between similarly sized firms (two large or two small firms), and M&A between a large firm and a small one. Column 1 shows the estimates for M&A between similarly sized firms where the base outcome is no M&A in that year; Column 2 shows the results for M&A between a large firm and a small one with the base outcome of no M&A in that year; and Column 3 shows the statistical difference between Columns 1 and 2 and reports the p-values below the differences. I do not report the coefficients on the control variables, although the regression includes them. Columns 1 and 2 report t-statistics below coefficients. See Appendix A for variable definitions. Standard errors are clustered by firm. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	Similar Size versus no M&A	*Large + Small versus no M&A*	*Statistical difference*
R-150 Score	0.811***	1.152***	-0.341*
	(6.00)	(7.04)	(0.093)
Mobility Score	0.412**	0.765***	-0.353
	(2.04)	(2.92)	(0.279)
R-150 & Mobility	-0.186**	-0.425***	0.239*
	(-1.99)	(-3.91)	(0.083)
N		117,400	
Wald χ^2		1,903.8	
P-value		0.000	
Auditor FE		No	
Year FE		Yes	

Table 5. Client industry and M&A

This table presents the results for a multinomial logit regression with the following outcomes: no M&A, M&A that joins firms with clients in the same industries (industry specialization); and M&A that joins firms with no overlap in their clients' industries (industry diversification). Industries are defined using the 3-digit NAICS sector. Column 1 shows the estimates for M&A increasing industry diversification relative to the base outcome of no M&A in that year; Column 2 shows the results for M&A increasing industry specialization relative to the base outcome of no M&A in that year; and Column 3 shows the statistical difference between Columns 1 and 2 and reports the p-values below the differences. Columns 1 and 2 report t-statistics below coefficients. See Appendix A for variable definitions. Standard errors are clustered by firm. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	Diversification versus no M&A	*Specialization versus no M&A*	*Statistical difference*
R-150 Score	0.680***	1.056***	-0.376*
	(3.68)	(8.68)	(0.07)
Mobility Score	0.418	0.564***	-0.146
	(1.33)	(2.93)	(0.68)
R-150 & Mobility	-0.300**	-0.272***	-0.028
	(-2.13)	(-3.27)	(0.86)
N		117,491	
Wald χ^2		2,237.3	
P-value		0.000	
Auditor FE		No	
Year FE		Yes	

Table 6. Client location and M&A

This table presents the results for a multinomial logit regression with the following outcomes: no M&A, M&A that joins firms with clients in the same states (geographic concentration); and M&A that joins firms with no overlap in their clients' states (geographic expansion). Column 1 shows the estimates for M&A increasing geographic expansion relative to the base outcome of no M&A in that year; Column 2 shows the results for M&A increasing geographic concentration relative to the base outcome of no M&A in that year; and Column 3 shows the statistical difference between Columns 1 and 2 and reports the p-values below the differences. Columns 1 and 2 report t-statistics below coefficients. See Appendix A for variable definitions. Standard errors are clustered by firm. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	Expansion to new states versus no M&A	*Concentration in existing states versus no M&A*	*Statistical difference*
R-150 Score	0.271	1.002***	-0.731*
	(0.54)	(9.17)	(0.05)
Mobility Score	1.600**	0.499***	1.101
	(2.22)	(2.90)	(0.38)
R-150 & Mobility	-0.748**	-0.284***	-0.464
	(-2.33)	(-3.64)	(0.86)
N		117,491	
Wald χ^2		1,974.8	
P-value		0.000	
Auditor FE		No	
Year FE		Yes	

Table 7. State M&A activity

This table presents the results for the OLS state-year analysis in equation (2). Column 1 models the share of firms that engage in an M&A and that serve clients in a state. Columns 2, 3, and 4 model the share of firms that serve clients in a state and engage in M&A connecting two small firms, a small firm and a large firm, and two large firms, respectively. The sample consists of 918 state-year observations for the 50 U.S. states and Washington D.C. from 2000-2017. See Appendix A for variable definitions. Reported below the estimated coefficients are t-statistics. Standard errors are clustered by state. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	M&A	*Small+Small*	*Small+Large*	*Large+Large*
R-150	0.037**	0.005**	0.015**	0.015
	(2.60)	(2.16)	(2.34)	(1.20)
Mobility	0.031***	0.001	0.011*	0.022**
	(3.21)	(0.54)	(1.69)	(2.58)
R-150 & Mobility	-0.004	-0.000	0.005	-0.008
	(-0.67)	(-0.19)	(1.59)	(-1.19)
GDP Growth	0.013	0.011	0.005	0.005
	(0.26)	(1.03)	(0.18)	(0.16)
# Auditors	0.019	-0.002	0.005	0.010
	(1.11)	(-0.86)	(0.54)	(0.83)
Acct. Employment	0.441**	-0.018	0.206**	0.257**
	(2.68)	(-0.70)	(2.41)	(2.10)
R-150×Acct. Employment	-0.336***	-0.028*	-0.162***	-0.150
	(-2.83)	(-1.69)	(-2.88)	(-1.26)
Mobility×Acct. Employment	-0.264***	-0.004	-0.151***	-0.170***
	(-3.26)	(-0.21)	(-2.89)	(-2.98)
N	918	918	918	918
R^2	0.83	0.50	0.80	0.79
State FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes

Table 8. State M&A activity and audit market concentration

This table presents the results for the OLS state-year analysis of audit market concentration in equation (3). Column 1 models the geographic state-level audit market concentration; and Column 2 models the state-industry-level concentration, using the 2-digit NAICS sector to measure industry. The sample consists of 918 state-year observations for the 50 U.S. states and Washington D.C. from 2000-2017. See Appendix A for variable definitions. Reported below the estimated coefficients are t-statistics. Standard errors are clustered by state. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

	Concentration	
	State	*State-Industry*
R-150	0.078***	0.026***
	(3.07)	(2.89)
Mobility	-0.018	0.019*
	(-0.70)	(1.92)
R-150 & Mobility	0.009	-0.009**
	(0.52)	(-2.24)
GDP Growth	0.074	-0.035
	(0.75)	(-0.85)
# Auditors	-0.042	-0.025**
	(-0.89)	(-2.02)
Acct. Employment	0.000	0.231**
	(0.00)	(2.27)
R-150×Acct. Employment	-0.698***	-0.103
	(-3.22)	(-1.19)
Mobility×Acct. Employment	0.232	-0.136
	(0.87)	(-1.41)
N	918	13,738
R^2	0.76	0.29
State FE	Yes	Yes
Industry FE	No	Yes
Year FE	Yes	Yes