Economic and Empirical Analysis of Contractual Dispute Resolution

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Introduction

During the last two decades, computer programmers have developed sophisticated

algorithms for analyzing the content of large amounts of textual data, as well as powerful tools

for retrieving this data efficiently. Although these techniques have only recently spread to legal

settings, they have already begun changing the way that law is practiced – for instance, firms

now frequently employ "e-discovery" methods when responding to document production

requests in lawsuits.[1] In contrast, the legal academy has been slower to implement these

techniques, although a handful of recent studies evince the potential they hold for increasing the

scale (and, hopefully, the quality) of empirical legal scholarship.

In my dissertation, I employ these programming techniques to conduct large-scale

analysis of contracts and the dispute resolution mechanisms they specify, with a particular focus

on arbitration. Contracts do seem to be a particularly ripe area for applying these techniques:

historically, empirical contract studies have been limited in size due to the difficulty of obtaining

and "hand-coding" large numbers of contracts.   In contrast, my dissertation uses Python-based

programming to obtain a new sample of approximately 400,000 material contracts filed with the

Securities and Exchange Commission (SEC) between 2001 and 2013, and to analyze their

features (e.g., identifying the presence of arbitration clauses, or of particular features within these

arbitration clauses) in much less time and with much less manual effort than would be involved

in hand-coding.

Turning to the dissertation chapters themselves, each chapter uses these contracts to

examine whether and how parties adjust their dispute resolution provisions in response to a

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[1] E-discovery involves the identification, collection, and production of electronically-stored information (or ESI) in response to a document production request. Once attorneys have identified potentially relevant ESI (which is often in bulk form), the algorithms described above are used to filter the bulk ESI, identifying potentially relevant data for further review.

pertinent policy change. In my first chapter, I consider the effectiveness of two state-level efforts to attract dispute resolution business – examining how states' establishment of specialized business courts and their adoption of the Revised Uniform Arbitration Act (RUAA) affect the use of arbitration clauses and state choice-of-forum clauses in my sample. In my second chapter, I consider how companies and executives "customized" their arbitration clauses in response to Internal Revenue Code § 409A – a controversial response to the Enron scandal that increased both the complexity and the likelihood of potential company-executive disputes. In my third chapter, I consider whether the Supreme Court cleared the way for efficient arbitration between companies and executives by reversing the Ninth Circuit's anomalous refusal to enforce arbitration clauses in employment agreements. Each chapter finds evidence that parties adjusted their dispute resolution provisions in response to the policy change(s) at issue – suggesting that, at least for the sophisticated parties in my dataset, these provisions receive careful thought and negotiation (and are not mere "boilerplate").

Before I proceed to the chapters themselves, this introductory section provides background that is pertinent to each chapter. First, I review literature that is methodologically relevant, describing other studies that have used automated methods to retrieve and/or analyze contracts and other legal texts. Second, I describe my data – the aforementioned sample of approximately 400,000 material contracts filed with the SEC between 2001 and 2013 (which I use in my first and second chapters), as well as an additional sample of approximately 30,000 executive employment agreements filed with the SEC between 1998 and 2005 (which I use in my third chapter).

I.   Methodological Literature Review

Interestingly, the earliest automated analyses of legal texts actually came from political scientists rather than from the legal academy. These forerunning studies used automated methods to classify selected judicial opinions and case briefs according to their political orientation. For instance, McGuire and Vanberg (2005) generated ideological scores for selected U.S. Supreme Court opinions involving search and seizure and First Amendment issues, while Evans et al. (2007) generated similar scores for amicus curiae briefs in the *Bakke* and *Bollinger* affirmative action cases.[2] Other political science studies have combined automated analysis with network theory, such as Fowler et al.'s (2007) development of citation-based "importance scores" for the entire corpus of cases decided by the U.S. Supreme Court between 1791 and 2005.[3]

In contrast, legal scholars have only recently begun to employ automated content analysis. Granted, some scholars were quick to realize its potential: in an article proposing best practices for content analysis of judicial opinions, Hall and Wright (2008) noted the promise of "completely mechanical forms of content analysis," while Ohm (2009) highlighted automated content analysis as part of a broader call for interdisciplinary research involving computer programming and the law. However, legal scholars as a whole have been slow to put these

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[2] Both McGuire and Vanberg (2005) and Evans et al. (2007) generate these ideological scores via word frequency analysis. Broadly, their methodology is as follows: first, they hand-select a representative "liberal" text and a representative "conservative" text. Second, they use a program to analyze these texts, finding certain words that comprise a high proportion of the words used in the liberal text and other words that comprise a high proportion of the words used in the conservative text. Third, they provide the program with new texts to analyze; the program then examines how often the words found in the second step occur in these new texts and assigns each new text an ideological score relative to the representative liberal text (given a score of -1) and the representative conservative text (given a score of +1).

[3] In particular, Fowler et al. (2007) detect and count each case's citations to other cases ("outward citations") and other cases' citations to that case ("inward citations"). A case's "importance score" is then based both on its number of outward citations (on the theory that outward citations help to define applicable precedent for a particular legal issue) and inward citations (on the theory that other judges see the case as an integral part of the law).

methods into practice, with initial examples such as Bommarito et al.'s (2011) network analysis of United States Tax Court citations hewing close to the social science literature.

Of particular interest for my dissertation is the small but growing literature that uses automated methods to retrieve and/or analyze large numbers of contracts. The first example of which I am aware is a working paper by Kondo (2011) that uses Perl-based programming to retrieve a sample of approximately 2,200 material contracts from the SEC's file servers. Kondo then codes these contracts using a mixture of automated and manual methods: he uses a Perl program to construct metrics for contractual vagueness (e.g., the percentage of sentences containing at least one of a practitioner-provided list of vague terms), and also reads through the contracts himself to identify various contractual features (e.g., arbitration clauses).[4]

Another forerunning study by Talley and O'Kane (2012) uses automated methods to replicate (and in some respects improve) the hand-coding in an existing contractual dataset. Using the Nixon Peabody dataset on Material Adverse Change (MAC) clauses[5] as "training data," Talley and O'Kane create a Python-based supervised machine learning program that "learns" how to detect various MAC clause provisions via word frequency analysis of the training data.[6] They then use this program, along with a Python-based search program, both to

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[4] In the ensuing empirical analysis, Kondo finds that vaguer contracts (i.e., contracts with a higher percentage of sentences containing at least one vague term) tend to include arbitration clauses, suggesting that parties might economize on their "front-end" drafting costs (i.e., including vaguer terms in their contracts rather than negotiating more precise terms) in anticipation of high-quality "back-end" dispute resolution (i.e., anticipating that expert arbitrators will accurately interpret these vaguer terms in contractual disputes).

[5] In this dataset, attorneys from the Nixon Peabody law firm hand-code 123 different MAC clauses for the presence or absence of different MAC clause provisions.

[6] The supervised machine learning here is actually similar to the approach used by McGuire and Vanberg (2005) and Evans et al. (2007), *supra* note 2, to classify legal texts along a liberal-to-conservative spectrum. The basic idea is that Talley and O'Kane hand-sort the MAC clauses according to whether a particular provision is present or absent, and the program then "learns" about the provision by analyzing each MAC clause for "characteristic words" (i.e., words that frequently appear in that clause). The program then examines new MAC clauses for the "characteristic words" from MAC clauses that do have the provision and the "characteristic words" from MAC clauses that do not

re-code the Nixon Peabody dataset (actually improving it by detecting small systematic errors in the original hand-coding)[7] and to simulate out-of-sample coding.[8]

More recently, studies by Brooks and Sanga (2013), Moszoro et al. (2014), and Sanga (2014) feature much larger samples of contracts: both the Brooks and Sanga and the Moszoro et al. studies use approximately 200,000 contracts, while the Sanga study uses approximately 500,000 contracts. Each of these studies uses automated methods to retrieve contracts *en masse* from the SEC's file servers, then uses search programs to identify various contractual features of interest (such as arbitration clauses and choice-of-law clauses). As discussed in Part II below, my dissertation will employ similar automated retrieval and search methods and will be closest in scale to these three studies. Moreover, these studies illustrate the variety of contract-related topics that can be examined using automated methods: the Brooks and Sanga paper examines the incidence of arbitration clauses in various contract types over time;[9] the Moszoro et al. paper compares the "rigidity" of private and public contracts;[10] and the Sanga paper considers the

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have the provision, and predicts whether the new MAC clauses do or do not have the provision of interest on the basis of these characteristic words.

[7] These errors were uncovered when Talley and O'Kane audited provisions for which their automated re-coding diverged from the original Nixon Peabody hand-coding.

[8] Talley and O'Kane simulated out-of-sample coding by using 75% of the Nixon Peabody data as training data for machine learning purposes, then using their machine learning program and search program to code the remaining 25% of the data.

[9] Brooks and Sanga report considerable heterogeneity in arbitration clause incidence across contract types and over time, noting that employment agreements display a particularly high incidence of arbitration clauses that has also increased over time. They also report that cross-border contracts are more likely to include arbitration clauses than purely domestic contracts, although the discrepancy they find is not as large as expected.

[10] In particular, Moszoro et al. code for the instance of various "rigidity clauses" (arbitration clauses, certification clauses, evaluation clauses, litigation clauses, penalty clauses, termination clauses, and design clauses) by searching for keywords related to each of these clauses. They also classify contracts as "public" or "private" based on the SIC code of the filing company (where public contracts are filed by companies in industries subject to substantial public scrutiny). Moszoro et al.'s central finding is that public contracts are more rigid than private contracts.

relationship between the states in which contracting parties are located and the choice of law specified in their contracts.[11]

II.   Description of Data

In this section, I describe the data I use in my dissertation: (i) my primary sample of contracts, which consists of approximately 400,000 material contracts that companies filed with the SEC between 2001 and 2013, and (ii) an additional sample of contracts, which consists of approximately 30,000 executive employment agreements that companies filed with the SEC between 1998 and 2005. I also describe my "machine-coding" process, in which I use Python-based programming to identify the presence or absence of particular contractual features. Finally, I report some summary statistics derived from my primary and additional samples.

A. Description of Contract Samples

1.   Primary Sample – Material Contracts from 2001-2013

The contracts in my primary sample are all "material contracts" that have been disclosed by companies registered with the Securities and Exchange Commission (SEC). Generally, companies must register with the SEC if they issue securities publicly or if they have "total assets exceeding $10,000,000 and a class of equity security . . . held of record by either 2,000 persons or 500 persons who are not accredited investors."[12] In turn, each registered company (or "registrant") is required to disclose a wealth of information to the public, including its material contracts – i.e., any "contract not made in the ordinary course of business which is material to the

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[11] Sanga finds that contracting parties' choice of law is converging towards Delaware, New York, and (somewhat surprisingly) Nevada. He also suggests that "lock-in" effects associated with companies' decision to incorporate in the state may account for the Delaware and Nevada convergence and that network effects may account for the New York convergence.

[12] Securities Exchange Act of 1934 § 12(g).

registrant."[13] These material contracts are filed as exhibits to forms 10-K, 10-Q, and 8-K, which are the annual, quarterly, and interim reports, respectively, that registrants must file with the SEC pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934.

In constructing my primary sample, my goal was to obtain all of the material contracts filed as exhibits to the approximately 1.8 million forms 10-K, 10-Q, and 8-K filed with the SEC between 2001 and 2013. To retrieve these contracts from the SEC's file servers, I employed a Python-based automated procedure similar to that described by Kondo (2011).[14] First, I used a program to download each of the SEC's daily index files from the beginning of 2001 to the end of 2013. (Each of these files contains a list of all of the different forms that registrants filed with the SEC during a given day, along with HTML links to plain-text versions of these forms.) Second, I used another program to identify just the HTML links to forms 10-K, 10-Q, and 8-K that were present in each daily index file. Third, using an SEC-provided conversion formula, I used another program to convert the HTML links identified in the second step (each of which leads to a 10-K, 10-Q, or 8-K in plain text format) into related links leading to the same forms in webpage format.[15] Finally, I used another program to search through the webpage-formatted forms 10-K, 10-Q, and 8-K to (i) identify HTML links to material contracts, (ii) download these contracts, and (iii) gather useful information about the company that filed the contract.

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[13] 17 C.F.R. 229.601(b)(10). Examples of material contracts include contracts "to which directors, officers, promoters, voting trustees, [certain] security holders . . . or underwriters are parties," contracts "calling for the acquisition or sale of any property, plant, or equipment . . . exceeding 15 percent of [the registrant's] fixed assets," "[a]ny material lease," and "[a]ny management contract or . . . compensatory plan." 17 C.F.R. 229.601(b)(10)(ii)(A)–(iii)(A).

[14] Although I expect that the retrieval procedures used in other studies were similar, only Kondo provided a detailed description of his retrieval procedure.

[15] Crucially, the webpage format separates the exhibits from the body of the 10-K, 10-Q, or 8-K and provides individual HTML links to each separated exhibit. In contrast, the plain text format simply lumps the exhibits together with the body in a giant mass of text – which makes it impossible to isolate the exhibits.

This retrieval procedure resulted in an initial sample of approximately 500,000 material contracts that were filed with the SEC between 2001 and 2013. From this initial sample, I then deleted both (i) contracts that I machine-coded as amendments, and (ii) documents with fewer than 500 words.[16] This resulted in a final sample of 390,291 material contracts, bringing my dissertation in line with the aforementioned large-scale contracts studies by Brooks and Sanga (2013), Moszoro et al. (2014), and Sanga (2014).[17] For each contract, I was also able to glean information about the filing company from the associated form 10-K, 10-Q, or 8-K – in particular, I can observe the state in which the filing company is legally incorporated, the state in which that company is physically headquartered, and that company's four-digit Standard Industrial Classification (SIC) code, representing the industry in which that company operates. However, I can only observe this information for the filing company – unfortunately, I am unable to observe any information about the non-filing parties to the contract.[18]

2. Additional Sample – Executive Employment Agreements from 1998-2005

In my third chapter, I analyze how a Supreme Court decision from 2001 affected the use of arbitration clauses in executive employment agreements. To conduct this analysis, I needed to obtain executive employment agreements from before and after that 2001 decision. Originally, I had intended to isolate those agreements from my primary sample; however, the automated

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[16] These two steps were intended to remove contractual amendments from my dataset – these are short documents that specify certain changes to existing material contracts. Since these amendments very rarely include or address dispute resolution provisions, I follow Brooks and Sanga (2013) and Sanga (2014) in excluding them.

[17] This procedure also yielded hundreds of thousands of contractual amendments that I excluded from the final sample, since contractual amendments very rarely include or address dispute resolution provisions.

[18] On a related note, I was also concerned about the possibility of duplicate filings – i.e., the possibility that the same contract might be present in my dataset multiple times if multiple parties to the contract file it as a material contract. However, a simple matching algorithm found that such duplicate filings were rare – a finding echoed by Brooks and Sanga (2013) and by Sanga (2014).

contract retrieval procedure described above does not work for material contracts filed earlier than 2001 (which is why my primary sample only extends back to 2001).[19]

As an alternative, I used the paid Morningstar Document Research service – which offers access to all of the material contracts filed with the SEC since 1994 – to download the 28,459 executive employment agreements (exclusive of amendments) filed with the SEC between 1998 and 2005. Unfortunately, the Morningstar service has a substantial drawback – for each contract, I can only observe the filing company's ticker symbol (and not any other information – e.g., its SIC code or the state in which it is incorporated or headquartered). For a sample of 28,459 executive employment agreements, this drawback was troublesome but not insurmountable – as a workaround, I manually obtained the company name that was associated with a given ticker symbol, then either (i) obtained the corresponding SIC code and geographic information from my primary dataset, or (ii) if that information was unavailable in my primary dataset, I looked it up myself. For larger samples (such as my 400,000-contract primary sample), though, this workaround would have been impractical – this is the reason I did not use Morningstar-downloaded contracts for my entire dissertation.

B. Machine Coding

In order to "machine-code" these samples, I used regular expression (RE)-based analysis to identify the presence or absence of various features in each contract. Essentially, RE-based analysis is a more powerful and flexible version of keyword searching – it involves searching documents for specified textual patterns (or "regular expressions"). These patterns can be as simple as a certain keyword or keywords – e.g., "arbitration" or "American Arbitration

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[19] Unfortunately, forms 10-K, 10-Q, and 8-K that were filed before 2001 are only available in plain text format, not in webpage format. This means that the exhibits to these forms (including the material contracts I want to download) are lumped in with the body of the form, rather than separated from the body of the form (with an individual HTML link to each separate exhibit). This makes it impossible to isolate and download the material contracts from these plain-text forms.

Association." However, more complicated Boolean patterns are often useful when machine-

coding contracts – for instance, when coding for arbitration clauses, I found that while a simple

keyword search for "arbitration" returned many false positives,[20] a series of searches for

"arbitration" within five words of various terms often found in arbitration clauses (e.g.,

"binding", or "rule" / "rules") yielded much more accurate results.[21]

In particular, I constructed a series of RE-based searches to identify each of the following

basic contractual features: amendments (i.e., whether or not the contract in question was an

amendment to a previous contract),[22] arbitration clauses, choice-of-forum clauses (for each of the

fifty states and the District of Columbia), choice-of-law clauses (again, for each of the fifty states

and the District of Columbia), and contract type (i.e., whether the contract falls into one of eight

different contract categories).[23] For my second chapter, I also constructed RE-based searches for

numerous arbitration clause "customizations," such as requirements that arbitrators possess

specified expertise or that they render a written opinion explaining their reasoning. (Further

information regarding these customizations can be found in that chapter.) For each of these

machine-coded features, all of the associated searches and documentation of my manual

validation process (in which I read through 100 randomly-selected contracts coded as having the

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[20] In addition to contracts that have arbitration clauses, a keyword search for "arbitration" will also identify contracts that mention arbitration in other contexts – e.g., in representations and warranties involving pending disputes.

[21] For illustrative purposes, the regular expression to search for "arbitration" occurring five or fewer words before "rule" or "rules" is: "arbitration([^\w]+\w+)?([^\w]+\w+)?([^\w]+\w+)?([^\w]+\w+)?([^\w]+\w+)?[^\w]+rule(s)?". Combining the results from this search with the results from searching for "rule" or "rules" occurring five or fewer words before "arbitration" yields search results for "arbitration" within five words of "rule" or "rules."

[22] As mentioned in note 16 *supra*, these amendments were then excluded.

[23] These contract type categories are drawn from previous studies by Brooks and Sanga (2013) and Moszoro et al. (2014). They are (i) employment agreements, (ii) change-in-control and severance agreements, (iii) benefits plans, (iv) commercial contracts, (v) finance contracts, (vi) merger agreements, (vii) partnership agreements, and (viii) all other material contracts.

feature and 100 randomly-selected contracts coded as not having the feature, then revised the searches if necessary[24]) can be found in the dissertation's Appendix.

C. Summary Statistics

Finally, I present some summary statistics derived from my primary and additional samples. For my primary sample of material contracts, Table 1 describes (i) the percentage of contracts in each of the eight contract-type categories I have identified through machine-coding; (ii) the ten states with the highest numbers of associated contracts;[25] and (iii) the ten industries with the highest numbers of associated contracts.[26] The most frequently-occurring contracts in this sample are benefits plans (e.g., bonus plans, retirement plans, and stock options), finance contracts (e.g., credit agreements, leases, and promissory notes), commercial contracts (e.g., licenses, purchase/sale agreements, and supply agreements), and executive employment agreements, while approximately one-third of the contracts could not be classified through my machine-coding. Unsurprisingly, the most frequently-observed states in this sample are Delaware, New York, and California – these are to be expected given the large number of publicly-traded companies that are incorporated in Delaware, that are headquartered in New York, and that are headquartered in California. Finally, there is considerable diversity in the industries represented in this sample – the only industry observed in more than 10% of the

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[24] Here, I revised the searches and repeated the manual validation process if I obtained less than 95% accuracy for the 100 contracts coded as having the feature of interest or less than 95% accuracy for the 100 contracts coded as not having the feature of interest.

[25] A state is "associated" with a contract if it is (i) the state indicated in the contract's choice-of-forum clause, (ii) the state indicated in the contract's choice-of-law clause, (iii) the filing company's state of incorporation, or (iv) the state in which the filing company is headquartered. Note that a single contract can be associated with multiple states – e.g., a contract filed by a company incorporated in Delaware and headquartered in New York would count as both a Delaware contract and a New York contract.

[26] The industry categories are based on the filing company's two-digit SIC code.

contracts is business services, while only four more industries were observed in more than 5% of the contracts.

Table 2 repeats parts (ii) and (iii) from Table 1 for the additional sample of executive employment agreements. The results indicate that these agreements are generally similar to my primary sample with regard to geographic ties and represented industries – again, the most frequently observed states are Delaware, New York, and California, and the most frequently observed industry is business services (with only two industries observed in more than 5% of these agreements).

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Table 1: Summary Statistics - Primary Sample

CONTRACT TYPES	Number	Percentage
Benefits plans	109,506	28.06%
Finance contracts	70,885	18.16%
Commercial contracts	60,635	15.54%
Executive employment agreements	52,116	13.35%
Change-in-control and severance agreements	27,942	7.16%
Partnership agreements	9,566	2.45%
Merger agreements	5,967	1.53%
Other material contracts	140,501	36.00%

STATES WITH MOST ASSOCIATED CONTRACTS	Number	Percentage
Delaware	202,409	51.86%
New York	87,827	22.50%
California	71,253	18.26%
Nevada	36,632	9.39%
Texas	36,255	9.29%
Florida	23,587	6.04%
Maryland	21,614	5.54%
Massachusetts	18,906	4.84%
New Jersey	17,592	4.51%
Pennsylvania	17,579	4.50%

INDUSTRIES WITH MOST ASSOCIATED CONTRACTS	Number	Percentage
73 - Business Services	45,809	11.74%
28 - Chemical & Allied Products	34,206	8.76%
36 - Electronic & Other Electric Equipment	23,696	6.07%
67 - Holding & Other Investment Offices	22,929	5.87%
60 - Depository Institutions	21,407	5.48%
38 - Instruments & Related Products	18,738	4.80%
49 - Electric, Gas, & Sanitary Services	16,185	4.15%
35 - Industrial Machinery & Equipment	14,577	3.73%
13 - Oil & Gas Extraction	14,359	3.68%
48 - Communications	14,214	3.64%

Notes: All summary statistics in this table are derived from my primary sample of 390,291 material contracts filed with the Securities and Exchange Commission between 2001 and 2013.

Table 2: Summary Statistics - Additional Sample

STATES WITH MOST ASSOCIATED CONTRACTS	Number	Percentage
Delaware	16,856	59.23%
New York	4,079	14.33%
California	4,530	15.92%
Texas	2,939	10.33%
Florida	1,901	6.68%
Pennsylvania	1,647	5.79%
New Jersey	1,611	5.66%
Maryland	1,500	5.27%
Illinois	1,431	5.03%
Massachusetts	1,285	4.52%

INDUSTRIES WITH MOST ASSOCIATED CONTRACTS	Number	Percentage
73 - Business Services	3,982	13.99%
60 - Depository Institutions	2,572	9.04%
28 - Chemical & Allied Products	1,759	6.15%
48 - Communications	1,399	4.92%
38 - Instruments & Related Products	1,305	4.59%
36 - Electronic & Other Electric Equipment	1,292	4.54%
67 - Holding & Other Investment Offices	1,079	3.79%
35 - Industrial Machinery & Equipment	989	3.48%
80 - Health Services	877	3.08%
49 - Electric, Gas, & Sanitary Services	873	3.07%

Notes: All summary statistics in this table are derived from my additional sample of 28,459 executive employment agreements filed with the Securities and Exchange Commission between 1998 and 2005.

<u>**Chapter 1**</u>

Can States Affect Parties' Choice of Dispute Resolution Forum?
The Cases of Business Courts and RUAA

In the context of dispute resolution, jurisdictional competition theory posits that individual jurisdictions (whether countries or individual states within a country) actively compete for disputes, whether in the form of litigation or alternative dispute resolution procedures such as arbitration. This competition is usually thought of as inter-jurisdictional, in which countries or states try to induce parties to litigate in their courts or arbitrate within their borders (rather than elsewhere). However, this competition can be intra-jurisdictional as well – for example, several U.S. states have introduced specialized business courts with the stated aim of stemming the "exodus" of cases from their court systems to private arbitration providers.

Although numerous studies have discussed inter-jurisdictional competition among countries for dispute resolution business (particularly in the context of international arbitration), there has been relatively little focus on domestic inter-jurisdictional competition for disputes or on intra-jurisdictional competition for disputes – though the aforementioned business courts have drawn more attention as they have grown in number and caseload. There is also a dearth of empirical work in this area as a whole – despite various discussions of jurisdictions' strategies to attract dispute resolution business, there has nevertheless been little rigorous testing of how effective these strategies have been.

This chapter begins to address these gaps in the jurisdictional competition literature by empirically analyzing whether two U.S. state-level policy changes have actually affected contracting parties' choice of dispute resolution forum. First, I consider the recent proliferation of business courts mentioned above, hypothesizing that these courts: (i) decrease contracting parties' use of arbitration (measured through the incidence of arbitration clauses in their

contracts), and (ii) increase parties' willingness to "opt in" to state court systems (measured

through the incidence of state choice-of-forum clauses in their contracts). Second, I consider

states' adoption of the Revised Uniform Arbitration Act (RUAA) – a potentially "arbitration-

friendly" revision of a state's arbitration laws. Accordingly, I hypothesize that adopting RUAA:

(i) increases parties' use of arbitration (again measured through arbitration clause incidence) and

(ii) decreases parties' willingness to opt in to state court systems (again measured through state

choice-of-forum clause incidence).

To test these hypotheses, I have constructed a new dataset consisting of approximately

400,000 "material contracts"[1] that publicly-traded companies filed with the SEC[2] between 2001

and 2013 – a period in which many states established business courts and many states adopted

RUAA. My econometric strategy here is two-fold: first, I employ a two-way fixed effects

approach to examine my arbitration-related hypotheses at an aggregate level (e.g., looking across

the various states that adopted business courts between 2001 and 2013, what was the aggregate

impact of these courts on arbitration clause use in my dataset?). Second, I employ a state-level

difference-in-differences approach – pairing each state that established a business court or

adopted RUAA with an appropriate control state – to examine whether each hypothesis holds in

particular states (e.g., looking at contracts with an observable connection to Maine,[3] how did

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[1] Publicly-traded companies are required to disclose their "material contracts," defined as any "contract not made in the ordinary course of business which is material to the registrant." 17 C.F.R. 229.601(b)(10). Examples of material contracts include contracts "to which directors, officers, promoters, voting trustees, [certain] security holders . . . or underwriters are parties," contracts "calling for the acquisition or sale of any property, plant, or equipment . . . exceeding 15 percent of [the registrant's] fixed assets," "[a]ny material lease," and "[a]ny management contract or . . . compensatory plan." 17 C.F.R. 229.601(b)(10)(ii)(A)–(iii)(A).

[2] As described in my introductory chapter, I obtained these contracts by using Python-based programs to retrieve them from the SEC's file servers. I then used other Python programs to "machine-code" these contracts for the presence or absence of contractual features such as arbitration clauses and state-specific choice-of-forum clauses.

[3] One of the challenges in this chapter was to determine which of my 400,000 contracts might be affected by a particular state's establishment of a business court or adoption of RUAA. As I will describe in detail later, I have made this determination based upon contractual features that I can observe through machine-coding.

Maine's 2006 establishment of a business court affect arbitration clause incidence and Maine choice-of-forum clause incidence in those contracts?).

Previewing my business-court-related results, I find mixed evidence regarding these courts' effect on arbitration clause use – while the hypothesized negative effect is absent from my aggregate results and from many of my state-specific results, it is nevertheless present for courts in states with a large number of associated contracts (e.g., California and Delaware). I also find evidence that business courts increase use of the corresponding state's choice-of-forum clause, suggesting that parties increasingly opt into a state's court system after that state establishes a business court. Previewing my RUAA-related results, I find that RUAA adoptions tend to have little effect on either arbitration clause or state choice-of-forum clause usage.

Collectively, these findings suggest that the sophisticated parties in my dataset do adjust their dispute resolution choices to state-level policy changes – particularly with regard to choice-of-forum clauses and business courts. Moreover, even if this chapter does not offer overwhelming evidence of competition between arbitration and state courts (in the sense that many business courts did not negatively affect arbitration clause use and many RUAA adoptions did not negatively affect choice-of-forum clause use), it does offer results in this vein from particularly important business courts – notably, arbitration clause use decreased in California and Delaware contracts with the establishment of a complex civil litigation court in close proximity to Silicon Valley and with a recent complex commercial addendum to the Delaware state court system, respectively.

The remainder of my chapter proceeds as follows: in Parts I and II, I describe business courts and RUAA in greater detail, providing testable hypotheses regarding their effects on parties' use of arbitration clauses and state choice-of-forum clauses, and also reviewing the (very

limited) existing evidence of these effects. In Part III, I lay the foundation for this chapter's

empirical analysis, providing arbitration- and choice-of-forum-related summary statistics and

describing the econometric approaches I use to formally test my hypotheses. In Part IV, I report

and discuss my econometric results, while Part V concludes.

I.   Description of Business Courts

As defined by Peeples and Nyheim (2008), a business court is "a division of a larger

court (typically a trial court) with a jurisdiction limited to some, but not all, kinds of business

disputes, presided over by only a few specialist judges, with an emphasis on aggressive case

management and use of alternative dispute resolution." The existence of specialized courts for

business disputes is not a new phenomenon – the Delaware Court of Chancery, which is the

oldest and best-known of these courts, has been hearing disputes for more than two hundred

years. What is new, however, is a considerable increase in the number of these courts over the

last twenty years: while Delaware had historically been the only state to provide such a forum,

this changed with the introduction of the Chicago Commercial Calendar in Illinois in 1993 and

of commercial divisions in Manhattan and Monroe Counties in New York in 1995. These have

been followed by more than 40 other business courts, as documented in Table 1 (which I have

grouped into state-wide business courts, city-specific business courts, and county-specific

business courts).[4]

Commentators have offered several reasons for the recent growth of these courts. Some

link this trend to real or perceived shortcomings of state court systems – for instance, Applebaum

(2011) highlights parties' "experience, or belief, that then-existing state trial courts were unable

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[4] Due to limited contractual availability, this chapter will only analyze business courts that were established between 2001 and 2013. These courts have been highlighted in Table 1.

to address commercial and business disputes expeditiously, consistently, and reliably."[5] Others suggest that these courts help attract companies to a state, whether in terms of physically locating in a state (thereby growing the state's economy), or legally incorporating in a state (thereby generating franchise fees).[6] Still others suggest that these courts may attract litigation business from out-of-state parties, thereby increasing revenue for local lawyers.[7]

Of particular interest in this chapter, though, is the frequently-advanced idea that these courts allow states to compete more effectively with private arbitration providers for dispute resolution business. Supporters of business courts have highlighted an "exodus" of cases from state courts to arbitration as a driving force behind their creation; for instance, Chief Justice John T. Broderick, Jr. of the New Hampshire Supreme Court stated that "[t]he impetus behind the bill [creating New Hampshire's business court] is that the state is losing market share . . . . The number of commercial disputes we are seeing ha[s] diminished,"[8] while Chief Justice Suzanne V. Delvecchio of the Massachusetts Superior Court indicated that "we were losing a body of law in Massachusetts because people were going to private dispute resolution versus keeping those

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[5] Applebaum notes that "the controlling belief in many large jurisdictions was that the state trial judges lacked the knowledge and experience base, as well as the facility with case-specific management tools, to ensure timely adjudication and well-reasoned decision making in business and commercial disputes." Moreover, in some jurisdictions, these shortcomings were "exacerbated by relatively slow moving general calendars with multiple judges handling different aspects of a single case."

[6] For instance, Baum (2011) writes that "[t]he creation of business courts . . . [is] motivated by the belief that these courts will appeal to businesses and thus attract them to a state," while Cleveland (2008) writes that "[i]n trying to attract incorporation business, states may create courts of specialized jurisdiction that appeal to business managers and investors." However, Coyle (2012) disagrees, suggesting that a business's decision to locate or incorporate in a particular state is unlikely to be driven by court quality.

[7] For instance, Miller and Eisenberg (2009) cite New York's creation of a business court as an attempt to attract out-of-state litigation business.

[8] Shir Haberman, *Chief Justice Fights for Business Court*, SEACOASTONLINE.COM, June 3, 2008, http://www.seacoastonline.com/apps/pbcs.dll/article?AID=/20080603/BIZ/806030377/-1/rss02 (last visited March 5, 2015).

cases in court."[9] This sentiment has been echoed by other judges,[10] practitioners,[11] and trade

journals.[12]

Why might parties view these business courts as an attractive alternative to arbitration? In

addressing this question, Drahozal (2009) observes that business courts incorporate several of the

features that make arbitration an attractive alternative to state courts in the first place, such as

decisionmakers with business expertise, expedited dispute resolution procedures, and attendant

cost savings. Moreover, Drahozal highlights several features that may make business courts

even more attractive to parties than arbitration: business courts allow parties to appeal adverse

decisions,[13] develop bodies of precedent,[14] and offer lower up-front costs as compared to

arbitration.[15] However, there are also reasons why arbitration might be more attractive than

business courts: arbitration lets parties keep their disputes confidential, typically involves

shorter queues, and allows parties to "customize" various aspects of the dispute resolution

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[9] *Making a Business Court a Reality,* METRO CORP. COUNS., May 2003, at 47.

[10] Bach and Applebaum (2004) cite a letter from the Honorable Gene T. Porter, of the Eighth Judicial District Court in Las Vegas, that Nevada's "Business Court thus provides another vehicle for dispute resolution, where the parties might otherwise choose private mediation or arbitration."

[11] *A Specially Suited Forum for Business Cases*, METRO CORP. COUNS., May 2003, at 50 (quoting Gael Mahony, co-chair of Business Litigation Session Resource Committee) ("When business clients are not comfortable with a court system they tend to move to alternative dispute resolution. For a case raising important issues that have ramifications beyond that case, a real loss results when the case goes to arbitration.").

[12] *Musical Benches*, 147 N.J.L.J. 1250 (1997) (editorials) ("Increasing competition from alternative dispute resolution furnished the impetus for Essex County's experiment. . . . It is an amusing illustration of Adam Smith's invisible hand that the justice system has felt it necessary to improve efficiency in order to prevent consumers from flocking to the competition.").

[13] Arbitration typically does not include an appeals process, and courts can only review arbitral awards on narrow grounds (usually involving substantial procedural defects).

[14] Arbitral awards have no binding precedential effect and are usually not published.

[15] By "lower up-front costs," I mean the administrative costs incurred by the parties at the beginning of the dispute. While parties pay only a small filing fee in business court, parties can incur substantial administrative costs at the beginning of an arbitration (e.g., paying arbitrators upon hiring them and paying often substantial administrative fees to arbitration providers up front).

process (e.g., requiring that their dispute be heard by an individual or individuals with specifed expertise).[16]

A. Testable Hypotheses

In light of the recent proliferation of business courts and the potential advantages they offer vis-à-vis arbitration, this chapter considers whether these courts have actually prompted parties to choose arbitration less often and to choose state court systems more often. I approach these questions using my database of material contracts, first examining whether a state's establishment of a business court reduces the use of arbitration clauses in that state's contracts:

Hypothesis 1-A: when a state establishes a business court, this <u>decreases</u> the incidence of arbitration clauses in that state's contracts.

Although I defer a detailed discussion of my empirics until Part II, I do want to define a "state's contracts" – this refers to all of the contracts for which I can observe (using Python-based programming) some connection between the contract and that particular state. In particular, I can observe four different connections between a contract and a state – the state specified in the contract's choice-of-forum clause, the state specified in the contract's choice-of-law clause, the state in which the company filing the contract is legally incorporated, and the state in which the company filing the contract is physically headquartered.[17] Since the choice-of-forum clause is an outcome variable analyzed in this chapter, I ignore that connection here and define a "state's contracts" as all of the contracts that have at least one of the remaining three observable

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[16] The extent to which parties actually "customize" arbitration in practice is an open question, however – one of my goals in Chapter 2 of my dissertation is to address this question empirically.

[17] Unfortunately, I can only observe the state of incorporation and the state in which the primary headquarters is located for the company that actually filed the contract – I am unable to observe these features for any non-filing counterparties. Later, I will discuss how this might affect my empirical results.

connections to a state.[18] The idea underlying this definition is that the dispute resolution choice in contracts with any of these three connections to a state could plausibly be influenced if that state established a business court (or if that state established RUAA, as the case may be).[19]

Next, I consider whether a state's establishment of a business court might increase parties' willingness to "opt in" to that state's court system, as evidenced through more frequent use of that state's choice-of-forum clauses in that state's contracts:

> **Hypothesis 1-B: when a state establishes a business court, this <u>increases</u> the incidence of that state's choice-of-forum clauses in that state's contracts.**

As an aside, we might also expect the establishment of a business court to yield numerous contracts specifying that disputes are to be heard in that particular court. However, contracting parties are generally unwilling or even unable to commit *ex ante* to resolving <u>all</u> of the disputes arising from their contract in a particular business court.[20] Accordingly, it is far more common to see general choice-of-forum clauses (e.g., indicating that disputes are to be heard in state X's courts) than to see court-specific choice-of-forum clauses (e.g., indicating that disputes are to be heard in state X's business court).

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[18] Note that contracts can and often do have connections with multiple states – for example, a contract with a Delaware choice-of-law clause that is filed by a company incorporated in Delaware but headquartered in New York qualifies as both a "Delaware contract" and a "New York contract."

[19] Technically, the idea is that any of these three features – a state X choice-of-law clause, the filing company being incorporated in state X, or the filing company being headquartered in state X – suggest that state X's courts will be able to exercise personal jurisdiction over the parties in a dispute arising from the contract. If state X's courts have personal jurisdiction over the parties and if the court has subject matter jurisdiction over the dispute, then either party should have the option to sue in state X's courts (unless the contract specifies otherwise in a choice-of-forum clause).

[20] Since business courts have limited subject matter jurisdiction – i.e., they can only hear certain types of disputes – parties specifying that all disputes be heard by a business court run the risk of having a dispute that that court cannot hear. If this happens, the contract's choice-of-forum clause is rendered invalid, and parties can then bring a claim in any court of competent jurisdiction.

B. Existing Evidence

The existing evidence regarding business courts' effect on parties' dispute resolution choices is very limited – to the best of my knowledge, the only studies to address this empirically are O'Connor and Rutledge (2014) and Drahozal (2009). In analyzing the determinants of arbitration venue, O'Connor and Rutledge regress a measure of arbitration activity in a state during 2011[21] upon a variety of explanatory variables – including an indicator for whether the state has a business court. Although they obtain a statistically insignificant effect for business courts (rather than the negative effect we might expect), O'Connor and Rutledge acknowledge various caveats that could affect their regression results – for instance, some of the arbitrations occurring in a state in 2011 may arise from older agreements that predate that state's establishment of a business court.[22,23]

In addition to O'Connor and Rutledge's regression analysis, Drahozal offers some summary statistics taken from (i) Thomas et al.'s (2010) existing study of executive employment agreements and (ii) two samples of franchise agreements that were previously analyzed in Drahozal and Wittrock (2008). For the former, Drahozal simply notes that arbitration clauses are more common at the end of Thomas et al.'s sample (present in 60.4% of agreements concluded in 2005) than at the beginning of their sample (present in 35.9% of agreements concluded in

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[21] This measure is a state's commercial and construction arbitration caseload with the American Arbitration Association (AAA) during 2011.

[22] O'Connor and Rutledge suggest that this may be the most important issue with their caseload data, though they acknowledge other issues as well: (i) their data only include arbitrations administered by the AAA, omitting both arbitrations administered by other arbitral institutions and "ad hoc" arbitrations not administered by any arbitral institution; (ii) their data only include commercial and construction arbitrations; and (iii) not all of the arbitrations in their data indicate the state in which they were conducted.

[23] I would add that there are potential endogeneity issues in the business court context – e.g., states with large arbitration caseloads might introduce business courts because they have the most to gain from capturing arbitral business. If true, then this could bias their estimated coefficient upwards and potentially offset the anticipated negative effect.

1997), despite the fact that several business courts were established between 1997 and 2005. For the latter, Drahozal finds little change in the incidence of arbitration clauses or choice-of-forum clauses between a small sample of franchise agreements from leading franchisors in 1999 and an analogous sample from 2007 (each consisting of approximately sixty agreements), again despite the fact that several business courts were established between 1999 and 2007.

Although these studies cannot resolve the questions of whether and how business courts affect parties' dispute resolution choices, they were undoubtedly meant to open rather than close the door to further inquiry – in fact, Drahozal writes that his empirics were meant "to begin the discussion, and to prompt others to examine the issue more systematically." This chapter provides this much-needed systematic analysis by combining my sample of material contracts (which spans a period in which many business courts were introduced) with more sophisticated econometric analysis (which will allow for more careful estimation of causal effects).

II.   Description of RUAA

The Revised Uniform Arbitration Act (also known as RUAA) was introduced in 2000 by the Uniform Law Commission in order to update the original Uniform Arbitration Act (UAA). The original UAA was promulgated in 1955 and had two primary purposes: (i) to overcome states' historical reluctance to enforce parties' agreements to arbitrate future disputes (e.g., arbitration clauses in contracts), and (ii) to provide some basic procedures for the conduct of arbitration proceedings. By 2000, UAA had served its first purpose – arbitration had become a generally accepted and widely used method of dispute resolution throughout the United States, and UAA itself had become the law in 49 states. As arbitration grew in popularity, though, parties also began submitting increasingly varied and complex disputes to arbitration – disputes for which UAA's basic procedures were inadequate.

Accordingly, the Uniform Law Commission promulgated RUAA in order to revise and augment UAA's procedural provisions. Key features of RUAA include: (i) provisions allowing arbitrators to award provisional remedies;[24] (ii) provisions allowing parties to seek provisional remedies from courts before an arbitrator is appointed in their dispute;[25] (iii) provisions for the consolidation of separate arbitrations into a single proceeding (including class arbitration provisions); (iv) disclosure requirements pertaining to arbitrators' neutrality;[26] (v) provisions allowing arbitrators to summarily dispose of claims and issues, to conduct pre-arbitration meetings, and to permit any discovery process they deem applicable; (vi) express immunity from civil liability for arbitrators (analogous to that given to state judges); and (vii) provisions authorizing arbitrators to award punitive damages and other exemplary relief.[27]

A. Testable Hypotheses

Despite the widespread adoption of the original UAA, only seventeen states and the District of Columbia have adopted RUAA to date, as shown in Table 2.[28] Accordingly, O'Connor and Rutledge (2014) posit that RUAA may help states differentiate themselves in

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[24] Provisional remedies are emergency measures (such as temporary injunctions) intended to preserve the status quo between parties until their dispute can be resolved. Although provisional remedies are traditionally issued by a court, RUAA ensures that parties to an arbitration can obtain provisional remedies directly from the arbitrator.

[25] Here, the concern is that a party will not be able to obtain a provisional remedy (as described in (i)) if an arbitrator has not yet been appointed in their dispute. (Note that the appointment process can sometimes be lengthy, and a party could intentionally draw out this process to prevent the other party from obtaining a provisional remedy.) Thus, this RUAA provision ensures that parties have a place to turn for provisional remedies even before an arbitrator has been appointed in their dispute.

[26] Here, arbitrators must disclose known facts that give rise to questions of neutrality, including a financial or personal interest in the outcome of the proceedings and an existing or past relationship with a party to the arbitration. Failure to disclose such facts creates a presumption that the arbitrator is non-neutral and may be grounds for vacating the arbitral award.

[27] Uniform Law Commission, *Arbitration Act (2000) Summary,* available at http://www.uniformlaws.org/ActSummary.aspx?title=Arbitration%20Act%20(2000) (last visited March 5, 2015).

[28] Three other states – Massachusetts, Pennsylvania, and West Virginia – introduced RUAA for adoption within the last two years, but none of these states have adopted it yet.

attracting arbitral business – i.e., adopting RUAA may signal to parties that a state is particularly receptive towards and eager to attract arbitration. Drawing on this idea, I hypothesize that a state's adoption of RUAA may lead to more frequent use of arbitration clauses in that state's contracts:

> **Hypothesis 2-A: when a state adopts RUAA, this <u>increases</u> the incidence of arbitration clauses in that state's contracts.**

For that matter, if adopting RUAA sways parties towards arbitration as a preferred dispute resolution mechanism, it could conversely lead parties away from the adopting state's court system:

> **Hypothesis 2-B: when a state adopts RUAA, this <u>decreases</u> the incidence of that state's choice-of-forum clauses in that state's contracts.**

B. Existing Evidence

To the best of my knowledge, the only evidence of RUAA's effect on parties' dispute resolution choices comes from O'Connor and Rutledge's own regression analysis, in which a RUAA indicator has a statistically insignificant effect on states' arbitration caseloads. In interpreting this result, one might question whether RUAA is a strong enough signal to affect parties' dispute resolution choices – that is, will parties who would otherwise resolve their dispute elsewhere decide to arbitrate because a state adopted RUAA? Along similar lines, one might also question whether RUAA-adopting states are actually more "arbitration-friendly" than non-RUAA-adopting states – for instance, O'Connor and Rutledge note that some states may have adopted some of RUAA's features (or even improved on these features) without actually adopting RUAA.

As mentioned above, though, O'Connor and Rutledge's regression results are subject to various caveats – and in any event, their RUAA coefficient is currently the lone data point in this

area. Accordingly, this chapter adds considerably to the volume and quality of evidence

regarding RUAA's effects on parties' dispute resolution choices – and as with business courts,

my approach here combines my sample of material contracts (which spans a period in which

many states adopted RUAA) with more sophisticated econometric analysis (which again allows

for more careful estimation of causal effects).

III.   Descriptive Statistics

In this section, I provide descriptive statistics regarding the incidence of

arbitration clauses and choice-of-forum clauses in my sample of material contracts. These

statistics examine how the percentage of contracts containing each type of clause changes after a

state establishes a business court or adopts RUAA – providing an initial look at whether my

hypotheses hold in practice.

A. Arbitration Clause Incidence

In Table 3, I look at arbitration clause incidence for contracts filed up to three years

before and up to three years after the establishment of a business court. The leftmost column

lists each of the state business courts that were established between 2004 and 2010, broken into

three groups: state-wide business courts (e.g., Maine's's state-wide business and consumer

docket), city-specific business courts (e.g., Orlando's complex business litigation court), and

county-specific business courts (e.g., New York's commercial division in Queens County).[29]

Turning to column (1), the first entry indicates that, of the 233 Maine contracts[30] that were filed

with the SEC between 2003 and 2005, 23.61 percent contained an arbitration clause. Similarly,

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[29] Table 3 omits business courts that were established before 2004 and after 2010. This is due to the unavailability of three years' worth of pre-court contracts for courts established before 2004 and of three years' worth of post-court contracts for courts established after 2010.

[30] Recalling the definition of a "state's contracts" from Part I.A *supra*, "Maine contracts" are contracts that include a Maine choice-of-law clause or that were filed by a company legally incorporated or physically headquartered in Maine.

the first entry in column (2) indicates that, of the 174 Maine contracts that were filed with the SEC between 2007 and 2009, 22.99 percent contained an arbitration clause – indicating that arbitration clauses occurred less frequently in Maine contracts after Maine established a business court. Column (3) indicates the direction of the change between columns (1) and (2).

Looking across Table 3, there seems to be ample evidence supporting hypothesis 1-A (in which the establishment of a business court decreases arbitration clause usage). For instance, column (3) shows that arbitration clause incidence decreased after 16 of the 19 business courts were introduced. Furthermore, the aggregate figures at the bottom of each group (i.e., for state-wide business courts, for city-specific business courts, and for county-specific business courts) each suggest that arbitration clause incidence decreases after business courts are introduced.[31] However, it is important not to read too much into these statistics – instead of the hypothesized business court effect, these decreases could also result from, e.g., a general downward trend in arbitration clause incidence over time, or a change in the mixture of contracts filed over time.[32] (The econometric approach in this chapter is intended to rule out these kinds of alternative explanations and isolate effects from business courts and RUAA.)

Table 4 is analogous to Table 3 but considers states' adoption of RUAA rather than their establishment of business courts. Unlike Table 3, though, Table 4 seems to offer little support for hypothesis 1-B (in which RUAA adoption increases arbitration clause usage). Column (3) shows that arbitration clause incidence increased after just one of these eight RUAA adoptions, and the aggregate figure actually shows an overall post-adoption decrease in arbitration clause

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[31] Because so many of the contracts in the state-wide business court group are Delaware contracts, I have also provided a second aggregate figure for this group that excludes Delaware contracts. The general trend I have described – in which arbitration clause incidence decreases after a business court is introduced – holds here as well.

[32] As a hypothetical example of how a changing mixture of contracts might affect arbitration clause incidence over time, suppose that more and more credit agreements (which very rarely contain arbitration clauses) are being filed over time. The increasing proportion of credit agreements over time could then produce an overall downward trend in arbitration clause incidence over time.

incidence. However, it is again important not to read too much into these figures, as these decreases are consistent with the kinds of alternative explanations mentioned above (e.g., an overall downward trend in arbitration clause incidence). Also, several of the states adopting RUAA have relatively few contracts associated with them, such that small changes in the number of contracts with arbitration clauses can produce large percentage swings.

B. "Matched Choice-of-Forum Clause" Incidence

The remaining tables of summary statistics – Tables 5 and 6 – are analogous to Tables 3 and 4, respectively, but examine what I call "matched choice-of-forum clause incidence" rather than arbitration clause incidence. The idea behind matched choice-of-forum clause incidence can be illustrated with a simple example – recalling that Maine established a business court in 2006, I am not interested in how that court affects the percentage of Maine contracts with *any state's* choice-of-forum clause. Instead, I want to know how the court affects the percentage of Maine contracts with a *Maine* choice-of-law clause – i.e., of the contracts that are most likely to be affected by Maine's establishment of a business court (what I have defined as Maine contracts), how many of these actually specify Maine as a forum state? Accordingly, for a given state X, I define matched choice-of-forum clause incidence as the percentage of state X contracts that contain a state X choice-of-forum clause.

Looking across Table 5, there is considerable support for hypothesis 2-A (in which a state's business court positively affects that state's choice-of-forum clause incidence). Matched choice-of-forum clause incidence increased after 12 of the 19 business courts were introduced, while the aggregate figures for state-wide courts, city-specific courts, and county-specific courts all show increases as well. Similarly, Table 6 offers support for hypothesis 2-B (in which a state's adoption of RUAA negatively affects that state's choice-of-forum incidence) – here, 4 of

the 7 states adopting RUAA saw a post-RUAA decrease in matched choice-of-forum clause

incidence, and the aggregate figure shows a decrease as well. (Of course, the aforementioned

caveat regarding reading too much into summary statistics also applies to these tables.)

IV.   Econometric Analysis – Two-Way Fixed Effects

My econometric approach in this chapter is divided into two parts. In this Part, I describe

and report results from a two-way fixed effects approach, which lets me examine the arbitration-

related hypotheses at an aggregate level (e.g., looking across the various states that established

business courts in my dataset, what is the aggregate impact of these courts on arbitration clause

use?). In Part V, I describe and report results from a state-level difference-in-differences

approach, which lets me examine whether the arbitration- and choice-of-forum-related

hypotheses hold in individual states.

A. Description

In order to test hypotheses 1-A and 2-A (regarding the effects of business courts and

RUAA on arbitration clause incidence) at an aggregate level, I estimate the following two-way

fixed effects model:

$$Arbitration_i = \ \beta_0 + \beta_1 BC_i + \ \beta_2 RUAA_i + \beta_3' State_{ij} + \beta_4' Year_{ik} + \beta_5' SIC_{il} + \beta_6' Type_{im} + \ \varepsilon_i. \quad (1)$$

The dependent variable, $Arbitration$, is an indicator for the presence of an arbitration clause in

contract i. The first independent variable, BC, is an indicator that takes a value of 1 for all

contracts meeting the following criteria: (i) the contract is a state B contract, where B is one of

the states that established a business court between 2001 and 2013, and (ii) the contract was filed

after state B established its business court.[33] The idea is that BC represents a business court

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[33] To see how this definition works in practice, consider two "state Bs" – Maryland, which established a business court in 2003, and Maine, which established a business court in 2006. BC therefore takes a value of 1 for all Maryland contracts filed after 2003 and for all Maine contracts filed after 2006.

"treatment group" – for all of the contracts with BC equal to 1, the choice of whether to include

an arbitration clause in these contracts could plausibly have been affected by a state's

establishment of a business court.[34]

The second independent variable, $RUAA$, is constructed analogously – it takes a value of

1 for all contracts (i) that are state R contracts, where R is one of the states that adopted RUAA

between 2001 and 2013, and (ii) that were filed with the SEC after state R adopted RUAA.[35]

The idea is that this variable represents a RUAA "treatment group" – for all of the contracts with

$RUAA$ equal to 1, the choice of whether or not to include an arbitration clause in these contracts

could plausibly have been affected by RUAA adoption. In turn, the contracts for which BC and

$RUAA$ both equal 0 comprise an omitted "control group" – these contracts are any of the

following: (i) neither state B contracts nor state R contracts,[36] (ii) state B contracts that were

filed before B established a business court,[37] or (iii) state R contracts that were filed before R

adopted RUAA.[38] For these control group contracts, then, the choice of whether to include an

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[34] Why is this? Because the contract has an observable connection to a state that established a business court – based on the contract's choice-of-law clause or on the filing company's state of incorporation or headquarters – and because the contract was filed after that state's business court was established.

[35] To see how this definition works in practice, consider two "state Rs" – Hawaii, which adopted RUAA in 2002, and New Jersey, which adopted RUAA in 2003. $RUAA$ takes a value of 1 for all Hawaii contracts filed after 2002 and for all New Jersey contracts filed after 2003.

[36] An example from this first control group category is Texas contracts – Texas does not have a business court and has not adopted RUAA. Another example from this first control group category is Illinois contracts – although Illinois did establish a business court back in 1993, it neither established a business court nor adopted RUAA during the 2001-2013 time period analyzed here.

[37] Examples from this second control group category include Maryland contracts that were filed before 2003 (when Maryland established its business court) and Maine contracts that were filed before 2006 (when Maine established its business court).

[38] Examples from this third control group category include Hawaii contracts that were filed before 2002 (when Hawaii adopted RUAA) and New Jersey contracts that were filed before 2003 (when New Jersey adopted RUAA).

arbitration clause should not have been affected by the establishment of a business court or by

RUAA adoption.

Accordingly, the estimated coefficient on BC, β_1, represents the aggregate effect of

business court establishment on arbitration clause incidence (allowing a formal test of hypothesis

1-A), while the estimated coefficient on $RUAA$, β_2, represents the aggregate effect of RUAA

adoption on arbitration clause incidence (allowing a formal test of hypothesis 2-A). The

remaining variables in equation (1) are all intended to control for factors other than the

establishment of business courts or the adoption of RUAA that might affect arbitration clause use

in my dataset. In particular, $State$ is a vector of state-level fixed effects that control for each

state's time-invariant characteristics affecting arbitration clause use; $Year$ is a vector of year-

level fixed effects that control for national trends in arbitration clause use over time; SIC is a

vector of Standard Industrial Classification (SIC) code indicators[39] that control for industry-level

variation in arbitration clause use; and $Type$ is a vector of contract type indicators that control

for variation in arbitration clause use across contract types. Finally, standard errors are clustered

at the state level, accounting for systematic correlation of error terms within each state.

I also use a variant of equation (1) to consider whether the effect of business courts on

arbitration clause incidence might differ depending on the type of business court – for instance,

might we see a stronger effect for state-wide business courts than for city-specific or county-

specific business courts? To examine this, equation (2) essentially splits the BC indicator into

three different indicators ($StateBC$, $CityBC$, and $CountyBC$):

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[39] For a given contract, the indicator corresponding to the filing company's two-digit SIC code takes a value of 1.

$$Arbitration_i = \beta_0 + \beta_1 StateBC_i + \beta_2 CityBC_i + \beta_3 CountyBC_i + \beta_4 RUAA_i + \beta_5' State_{ij}$$

$$+ \beta_6' Year_{ik} + \beta_7' SIC_{il} + \beta_8' Type_{im} + \varepsilon_i. \qquad (2)$$

These indicators are all patterned after BC, but are limited to state-wide business courts, city-specific business courts, and county-specific business courts, respectively.[40]

Before I turn to my results, two additional points bear mentioning. First, I do not extend this two-way fixed effects approach to the choice-of-forum context because of difficulties in defining the appropriate dependent variable – fortunately, my choice-of-forum analysis was more amenable to Part V's state-level difference-in-differences approach.[41] Second, my estimates here (and throughout the chapter) will be affected to some extent by a measurement error problem. All of my equations contemplate treatment groups of contracts that – based on their observable features – could plausibly have been affected by a state's establishment of a business court or adoption of RUAA. However, since I am only able to observe the state of incorporation and state of primary headquarters for the filing company (i.e., the company that filed the contract with the SEC), I am necessarily omitting some contracts that belong in these treatment groups because their *non-filing* parties are incorporated or headquartered in a state that established a

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[40] For example, the $StateBC$ variable is an indicator that takes a value of 1 for all contracts meeting the following criteria: (i) the contract is a state S contract, where state S is one of the states that established a state-wide business court between 2001 and 2013, and (ii) the contract was filed after state S established its state-wide business court.

[41] An earlier draft of this chapter had defined a matched-choice-of-forum dependent variable as taking a value of 1 if contracts that could be categorized as "state X" contracts contained a matching state X choice-of-forum clause. However, this meant that treatment contracts could take a value of 1 for "matches" that had nothing to do with the treatment state (i.e., the state that established a business court or adopted RUAA). For instance, in analyzing Maine's business court, a contract filed by a company incorporated in Delaware and headquartered in Maine with a Delaware choice-of-forum clause would take a value of 1 based on the Delaware match, not the Maine match. I then tried to redefine the matched choice-of-forum variable so that it only took a value of 1 for "treatment-matched" choice-of-forum clauses (e.g., requiring that Maine contracts actually have Maine choice-of-forum clauses), but I cannot analogously define "treatment-matched" choice-of-forum clauses for control contracts, which by definition have no treatment.

Fortunately, state-level difference-in-differences analysis can address this issue – as Part V shows, I can define a choice-of-forum dependent variable for this analysis that takes a value of 1 if contracts from Maine have a Maine choice-of-forum variable and if contracts from Maine's control state have that state's choice-of-forum clause.

business court or adopted RUAA, as the case may be. This problem – in which some treatment contracts are mis-classified as control contracts – will tend to bias my estimated business court and RUAA effects towards zero, which I will bear in mind when considering results throughout this chapter.

B. Results

Table 7 reports the results from my two-way fixed effects analysis. Here, column (1) reports estimates from equation (1), in which all business courts comprise one treatment group and all RUAA adoptions comprise the other treatment group, and column (2) reports estimates from equation (2), in which all state-wide business courts, all city-specific business courts, all county-specific business courts, and all RUAA adoptions are the treatment groups. Echoing earlier findings by O'Connor and Rutledge (2014) and Drahozal (2009), the results here are all statistically insignificant – they offer no evidence that business courts lead contracting parties away from arbitration, or that adopting RUAA sways these parties towards arbitration. As described in those preceding studies, there are several possible explanations for these (non-) results, including various reasons why parties might prefer arbitration to business courts (e.g., confidentiality, shorter queues, and the ability to customize the dispute resolution process), and legitimate questions as to whether RUAA is strong enough or "arbitration-friendly" enough to affect parties' dispute resolution choices.

However, there are also several reasons why Table 7 might understate the extent to which business courts and RUAA affect parties' use of arbitration. First, the aggregate nature of these results could obscure effects for individual business courts or individual RUAA adoptions – a possibility that I will explore in my state-specific analyses. Second, as described in Part IV.A, the mis-classification of some treatment contracts as control contracts means that these estimates

are necessarily biased towards zero. Third, because I am studying arbitration clauses rather than

actual arbitration proceedings, I cannot observe how business courts or RUAA affect parties'

eventual decisions to arbitrate when their contracts are silent regarding dispute resolution.[42]

Finally, because I am studying contracts that were filed with the SEC, I am only observing the

behavior of certain types of parties – large, publicly-traded companies and their counterparties

(which are usually other large companies or executive-level employees). Accordingly, my

results are silent as to how business courts or RUAA might affect arbitration clause use by

smaller and/or privately-held companies.

V.   Econometric Analysis – State-Level Difference-in-Differences

   A. Description

The intuition underlying my state-level difference-in-differences approach is

straightforward. As an example, if I want to consider how the establishment of a business court

in a given state (e.g., Maine) affects arbitration clause incidence in that state's contracts, I

compare the pre- and post-court incidence of arbitration clauses in Maine contracts, while also

"differencing out" any concurrent change in arbitration clause incidence in contracts from an

appropriate control state. Similarly, if I want to consider how this court affects the incidence of

Maine choice-of-forum clauses in Maine contracts, I again compare pre- and post-court

incidences while also "differencing out" any concurrent change in a control state's choice-of-

forum clauses in contracts from that control state.[43] (Of course, the same intuition applies if I

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[42] For that matter, parties that include an arbitration clause in their contract can waive it and decide on a different type of dispute resolution later, once an actual dispute arises. I cannot observe this either, although I suspect that this phenomenon – in which parties embroiled in a dispute can nevertheless agree upon a type of dispute resolution that differs from the one specified in their contract – is rare.

[43] This setup addresses the issue identified in note 41 *supra*. In the treatment group, I am considering the incidence of the treatment state's choice-of-forum clauses in the treatment state's contracts; in the control group, I am considering the incidence of the control state's choice-of-forum clauses in the control state's contracts.

want to analyze a state's adoption of RUAA instead of a state's establishment of a business court.)

As a precursor to this analysis, though, I must first select appropriate control states. Returning to the Maine business court example, my goal in finding an arbitration-related control is to find a state that (i) is fairly close to Maine geographically and (ii) has similar time trends in arbitration clause incidence in the years before Maine established a business court. To evaluate whether condition (ii) holds for a potential control state (say, Connecticut), I estimate the following equation using only Maine and Connecticut contracts that were filed in the three years before Maine established its business court (2003, 2004, and 2005):

$$Arbitration_i = \beta_0 + \beta_1 Yr2004_i + \beta_2 Yr2005_i + \beta_3 ME_i + \beta_4 CT_i + \beta_5 (ME_i * Yr2004_i)$$
$$+ \beta_6 (ME_i * Yr2005_i) + \beta_7' SIC_{ik} + \beta_8' Type_{il} + \varepsilon_i. \tag{3}$$

In equation (3), I regress an indicator for the presence of an arbitration clause in contract i ($Arbitration$) upon indicators for contracts filed in 2004 ($Yr2004$) and in 2005 ($Yr2005$), indicators for Maine contracts (ME) and Connecticut contracts (CT), interaction terms for Maine contracts that were filed in 2004 ($ME * Yr2004$) and for Maine contracts that were filed in 2005 ($ME * Yr2005$), and a series of indicators for SIC code and contract type. Here, condition (ii) regarding similar arbitration time trends is satisfied – and Connecticut is a valid control for Maine for arbitration purposes – if the estimated coefficients β_5 and β_6 are statistically insignificant.[44]

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[44] To see this, note that in equation (3), the coefficient β_5 on the interaction term *ME*Yr2004* represents the difference between (i) the 2003-2004 time trend in arbitration clause incidence for Maine contracts and (ii) the 2003-2004 time trend in arbitration clause incidence for Connecticut contracts. If this coefficient is insignificant, then there is no statistically significant difference between the trends in arbitration clause incidence for these states during 2003-2004.

Similarly, the coefficient β_6 on the interaction term *ME*Yr2005* represents the difference between (i) the 2003-2005 time trend in arbitration clause incidence for Maine contracts and (ii) the 2003-2005 time trend in arbitration clause

Similarly, my goal in finding a choice-of-forum control is to find a state that is (i) fairly

close to Maine geographically and (ii) has similar time trends in choice-of-forum clause

incidence in the years before Maine established a business court.[45] To evaluate whether condition

(ii) holds for a potential control state (say, Connecticut again), I estimate equation (4) using only

Maine and Connecticut contracts that were filed in the three years before Maine established its

business court (2003, 2004, and 2005):

$$MatchedCOF_i = \beta_0 + \beta_1 Yr2004_i + \beta_2 Yr2005_i + \beta_3 ME_i + \beta_4 CT_i + \beta_5 (ME_i * Yr2004_i)$$
$$+ \beta_6 (ME_i * Yr2005_i) + \beta_7' SIC_{ik} + \beta_8' Type_{il} + \varepsilon_i. \tag{4}$$

Equation (4) is analogous to equation (3) but replaces the arbitration clause indicator with a

matched choice-of-forum clause indicator ($MatchedCOF$) that takes a value of 1 for Maine

contracts that have a Maine choice-of-forum clause or for Connecticut contracts that have a

Connecticut choice-of-forum clause. Accordingly, condition (ii) regarding similar choice-of-

forum time trends is satisfied – and Connecticut is a valid control state for Maine for choice-of-

forum purposes – if the estimated coefficients β_5 and β_6 are statistically insignificant.[46]

Table 8 summarizes the results of this control state evaluation process. In the leftmost

column, I list the state and year of each of the treatments that occurred between 2004 and 2010 –

that is, each of the state-wide business courts, city-specific business courts, and county-specific

business courts that were established between 2004 and 2010, and each of the RUAA adoptions

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incidence for Connecticut contracts. If this coefficient is insignificant, then there is no statistically significant
difference between the trends in arbitration clause incidence for these states during 2003-2005.

[45] Although I allow the arbitration and choice-of-forum controls to be different states here, I will also report results
in the Appendix that require the arbitration and choice-of-forum control to be the same state.

[46] A possible issue with this process is that it will tend to produce potential control states with small numbers of
associated contracts – i.e., there will be no statistically-significant difference between the pre-treatment arbitration or
choice-of-forum time trends for the treatment state and the control state because the control state has few contracts
associated with it. (This issue is compounded if the treatment state itself has a small number of contracts associated
with it.) To address this issue, I will select the potential control state with the largest number of associated contracts
as the actual control.

that occurred between 2004 and 2010.[47] In column (1), I list each of the states that are geographically proximate to the treatment state and that exhibited similar pre-treatment arbitration clause time trends, while column (2) selects the state from column (1) with the largest number of associated contracts as the designated arbitration control. Similarly, in column (3), I list each of the states that are geographically proximate to the treatment state and that exhibited similar pre-treatment choice-of-forum clause time trends, while column (4) selects the state from column (3) with the largest number of associated contracts as the designated choice-of-forum control.

After selecting an arbitration control, I then isolate treatment state contracts and control state contracts for a period of three years before and at least three years after the treatment, using this sample to estimate equation (5):

$$Arbitration_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Post_i + \beta_3 (Treatment_i * Post_i)$$
$$+ \beta_4' Year_{ij} + \beta_5' SIC_{ik} + \beta_6' Type_{il} + \varepsilon_i. \tag{5}$$

Similarly, after selecting a choice-of-forum control, I isolate an analogous sample and use it to estimate equation (6):

$$MatchedCOF_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Post_i + \beta_3 (Treatment_i * Post_i)$$
$$+ \beta_4' Year_{ij} + \beta_5' SIC_{ik} + \beta_6' Type_{il} + \varepsilon_i. \tag{6}$$

In equations (5) and (6), the first explanatory variable, $Treatment$, is an indicator for whether contract i is a treatment state contract. The second explanatory variable, $Post$, is an indicator for whether contract i was filed after the treatment. The interaction term, $Treatment * Post$, then yields a difference-in-differences estimate (β_3) of the treatment's effect upon arbitration clause incidence or matched choice-of-forum clause incidence. Finally, I include a series of indicators

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[47] I restrict my attention to the 2004-2010 time period to ensure that I will have at least three years' worth of pre- and post-treatment contracts for difference-in-differences analysis.

for the year in which the contract was filed, for the filing company's two-digit SIC code, and for contract type.

B. Results

Table 9 reports the results of my state-level difference-in-difference analyses for each of the business courts in Table 8 with a corresponding control state. Column (1) provides the treatment state (i.e., the state that established the business court), the treatment year (i.e., the year in which the court was established), and the arbitration control (in italics), while column (2) reports the corresponding difference-in-differences estimate. (I have also bolded the statistically significant negative estimates, which are consistent with Hypothesis 1-A.) Similarly, column (3) repeats the treatment state and year and provides the choice-of-forum control, while column (4) reports the resulting difference-in-differences estimate from equation (6). (I have also bolded the statistically significant positive estimates, which are consistent with Hypothesis 1-B.)

Beginning with column (2), these state-level arbitration results are generally reminiscent of my two-way fixed effects results, in that the majority of these estimates are also statistically insignificant. However, there are also several statistically significant estimates here, usually from states with a large number of associated contracts (e.g., California, Delaware, and New York, and to a lesser extent Oregon and Pennsylvania). This suggests that the insignificant estimates from other states may reflect sample size issues rather than the actual absence of an effect – for instance, even in an overall sample of 400,000 contracts, there are relatively few South Carolina contracts (and even fewer South Carolina contracts that contain arbitration clauses). Moreover, two of the business courts that *did* produce the anticipated decrease in arbitration clause use seem to be particularly important courts – a complex civil litigation court

in California that is adjacent to Silicon Valley, and a recent complex commercial addendum to Delaware's state court system.

Turning to column (4), my results here differ considerably from the only other datapoint on business courts and choice-of-forum clauses – Drahozal's (2009) before-and-after summary statistics, which showed little effect.[48] Consistent with Hypothesis 1-B, I find that many of these courts yielded a statistically significant increase in the associated state's choice-of-forum clauses in that state's contracts (relative to the concurrent change in the control state's contracts). These increases are also fairly sizeable in magnitude, ranging from two to five percentage points (with most hovering around three percentage points). Of course, these results are somewhat indirect in nature – ideally, I would be able to observe more direct evidence of parties' intent to litigate their disputes in these newly-established business courts. However, since contracting parties do not (and often cannot) commit to submitting *any* dispute arising from their contract to a limited-jurisdiction business court, what I observe in column (4) is the next best thing – parties' increased willingness to "opt in" to a state court system when it establishes a business court, with the attendant ability to access that court if their eventual dispute falls within the court's jurisdiction.

Table 10 is analogous to Table 9 but reports the results of state-level difference-in-differences analyses for RUAA adoptions. Although most of column (2)'s results mirror my insignificant two-way fixed effects results (as well as earlier results from O'Connor and Rutledge (2014)), I do find very limited support for Hypothesis 2-A in a statistically significant

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[48] Recall that those summary statistics showed little change in the incidence of choice-of-forum clauses between a small sample of franchise agreements from leading franchisors and an analogous sample from 2007, despite the fact that several business courts were established between 1999 and 2007.

positive estimate for Alaska.[49] Similarly, column (4) offers little support for Hypothesis 2-B – a majority of the results here are again statistically insignificant. Interestingly, of the results in column (4) that are significant, more are actually positively-signed (Oregon and Washington) than negatively-signed (Oklahoma) – which suggests that some sophisticated parties may be using a state's choice-of-forum clauses *more* often after that state adopts RUAA. Although I am hesitant to place too much emphasis on these two estimates, one could perhaps tell a story in which parties are including choice-of-forum clauses alongside arbitration clauses in their contracts if they want to specify the location of any arbitration-related judicial proceedings (such as actions to enforce arbitration clauses or arbitral awards).[50] This story would be stronger, however, if the states that showed increased choice-of-forum clause use from RUAA also showed increased arbitration clause use from RUAA – which they do not.

In the Appendix to this chapter, I offer a series of robustness checks for the state-level difference-in-differences analyses in Tables 9 and 10. First, Tables A1 and A2 reproduce these analyses with alternative control states – while Tables 9 and 10 used the potential control state (from columns (1) and (3) of Table 8, respectively) that had the largest number of associated contracts, Tables A1 and A2 use the potential control state that had the next-largest number of associated contracts. Next, while Tables 9 and 10 allowed the arbitration control state and the choice-of-forum control state to differ for a given business court or RUAA adoption, Tables A3

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[49] I am admittedly concerned about the reliability of this estimate, however – Alaska has very few contracts associated with it.

[50] This idea of an arbitration/choice-of-forum combination is supported by my data – more than one-third of the contracts in my sample that contain arbitration clauses also contain choice-of-forum clauses.

and A4 require that the same state be used as the arbitration control and the choice-of-forum control.[51] The results in these tables are substantively similar to those in Tables 9 and 10.

VI.   Conclusion

In this chapter, I began addressing the dearth of empirical evidence in the jurisdictional competition literature by analyzing whether two U.S. state-level policy changes – the establishment of specialized business courts and the adoption of RUAA – affected dispute resolution choices in a large sample of contracts between sophisticated parties. I began by providing a pair of business-court-related hypotheses and a pair of RUAA-related hypotheses drawn from theories of jurisdictional competition. First, since numerous business courts were intended to slow an exodus of disputes from state courts to arbitration, I posited that when a state established a business court, it would (i) decrease the use of arbitration clauses and (ii) increase the use of that state's choice-of-forum clauses in contracts from that state. Second, drawing upon the idea of RUAA as an "arbitration-friendly" signal, I posited that when a state adopted RUAA, it would (i) increase the use of arbitration clauses and (ii) decrease the use of that state's choice-of-forum clauses in contracts from that state. To test these hypotheses, I used two econometric approaches: a two-way fixed effects approach, which let me examine the arbitration-related hypotheses at an aggregate level, and a state-specific difference-in-differences approach, which let me examine whether these hypotheses hold in particular states.

Contrary to my expectations, I found only limited evidence that business courts decrease these sophisticated parties' use of arbitration – although I also found that two important business courts (the San Mateo County complex civil litigation court in California and the complex commercial litigation division of the Delaware Superior Court) did have this effect. I also found

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[51] Here, I use the state, if any, that is common to columns (1) and (3) of Table 8 and that has the largest number of associated contracts as the control state. Generally, this exacerbates the control state selection process's tendency to produce potential control states with small numbers of associated contracts.

fairly strong evidence that business courts increase use of the corresponding state's choice-of-forum clause, suggesting that these parties increasingly opt into a state's court system after it establishes a business court. In contrast, I found relatively little evidence that adopting RUAA affected either arbitration or choice-of-forum clause use – echoing earlier findings and casting further doubt on the idea that RUAA can influence parties' dispute resolution choices.

Collectively, these findings suggest that the sophisticated parties in my dataset do adjust their dispute resolution choices to some state-level policy changes – particularly with regard to business courts and choice-of-forum clauses. In closing, though, it is important to qualify these findings as the behavior of large, publicly-traded companies and their counterparties – this chapter is silent as to how the dispute resolution choices of smaller and/or privately-held companies are affected by the establishment of business courts or the adoption of RUAA. In the business court context in particular, I can envision several reasons why smaller, privately-held companies may be more likely to switch away from arbitration when these courts are established: (i) private companies are likely less concerned than public companies with ensuring the confidentiality of a dispute through arbitration; (ii) smaller companies may be more risk-averse than larger companies and may therefore place more value on the ability to appeal adverse judgments; and (iii) smaller and more risk-averse companies may also prefer the predictability of a precedent-based system. If any or all of these reasons hold in practice – a topic that could be a fruitful avenue for future research – then this chapter's results may considerably understate the extent of intra-jurisdictional competition between arbitration and business courts.

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Table 1: Business Courts Established Since 1993

STATEWIDE BUSINESS COURTS

North Carolina (1996)	Business court
Connecticut (1998)	Complex litigation docket
Rhode Island (2001)	**Business calendar**
Maryland (2003)	**Business case management program**
Maine (2006)	**Business and consumer docket**
South Carolina (2007)	**Business court pilot program**
New Hampshire (2008)	**Business and commercial dispute docket**
Ohio (2009)	**Court of Common Pleas commercial docket**
Delaware (2010)	**Superior Court complex commercial litigation division**
Oregon (2010)	**Complex litigation court**
Michigan (2012)	**Business court**
West Virginia (2013)	**Business court**

CITY-SPECIFIC BUSINESS COURTS

Illinois (1993)	Chicago commercial calendar
New York (1995)	Manhattan commercial division
Pennsylvania (2000)	Philadelphia commerce court
Massachusetts (2000)	Boston business litigation session
Nevada (2000)	Reno business court
Nevada (2001)	**Las Vegas business court**
Arizona (2003)	**Phoenix complex litigation pilot program**
Florida (2004)	**Orlando complex business litigation court**
Georgia (2005)	**Atlanta business case division**
Florida (2006)	**Miami complex business litigiation section**
Oregon (2006)	**Eugene commercial court**
Colorado (2007)	**Colorado Springs commercial docket**
Florida (2007)	**Tampa complex business litigation division**
Pennsylvania (2007)	**Pittsburgh commerce and complex litigation center**
Florida (2008)	**Ft. Lauderdale complex business litigation subdivision**
Alabama (2009)	**Birmingham commercial litigation docket**

Notes: This chapter will only consider business courts that were established between 2001 and 2013. Courts meeting this criterion appear in bold.

Table 1 (cont.): Business Courts Established Since 1993

COUNTY-SPECIFIC BUSINESS COURTS

New York (1995)	Monroe County commercial division
New Jersey (1996)	Commercial pilot projects in Bergen and Essex counties
New York (1998)	Commercial divisions in Nassau, Erie, and Westchester counties
California (2000)	Complex litigation pilot program in six counties
New York (2002)	**Commercial divisions in Albany, Suffolk, and Kings counties**
New York (2005)	**Queens County commercial division**
California (2006)	**San Mateo County complex civil litigation division**
Georgia (2007)	**Gwinnett County business court pilot program**
New York (2007)	**Onandaga County commercial division**

Notes: This chapter will only consider business courts that were established between 2001 and 2013. Courts meeting this criterion appear in bold.

Table 2: States Adopting RUAA

STATES

Nevada (2001)
New Mexico (2001)
Hawaii (2002)
New Jersey (2003)
North Carolina (2003)
North Dakota (2003)
Utah (2003)
Colorado (2004)
Oregon (2004)
Alaska (2005)
Oklahoma (2005)
Washington (2005)
District of Columbia (2009)
Arizona (2010)
Arkansas (2011)
Minnesota (2011)
Florida (2013)
Michigan (2013)
Massachusetts (currently pending)
Pennsylvania (currently pending)
West Virginia (currently pending)

Notes: This chapter will only consider states that adopted RUAA between 2001 and 2013. States meeting this criterion appear in bold.

Table 3: Summary Statistics for Arbitration Clause Incidence, Before and After Business Court

STATEWIDE BUSINESS COURTS	(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
Maine (2006)			
Business and consumer docket			
% of ME contracts with arb. clauses:	23.61%	22.99%	decrease
No. of ME contracts:	233	174	
South Carolina (2007)			
Business Court pilot program			
% of SC contracts with arb. clauses:	22.44%	13.22%	decrease
No. of SC contracts:	410	681	
New Hampshire (2008)			
Business and commercial dispute docket			
% of NH contracts with arb. clauses:	11.41%	13.30%	increase
No. of NH contracts:	298	233	
Ohio (2009)			
Court of Common Pleas commercial docket			
% of OH contracts with arb. clauses:	11.27%	9.41%	decrease
No. of OH contracts:	3,265	2,487	
Delaware (2010)			
Superior Court complex commercial litigation division			
% of DE contracts with arb. clauses:	15.10%	12.25%	decrease
No. of DE contracts:	52,786	36,209	
Oregon (2010)			
Oregon Complex Litigation Court			
% of OR contracts with arb. clauses:	19.40%	15.40%	decrease
No. of OR contracts:	701	539	
Statewide business courts			
% of contracts with arb. clauses	15.19%	12.35%	decrease
No. of contracts:	57,693	40,323	
Statewide business courts less Delaware			
% of contracts with arb. clauses	13.96%	11.62%	decrease
No. of contracts:	4,907	4,114	

Notes: The leftmost column lists each of the business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 and after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state.

Table 3 (continued): Summary Statistics for Arbitration Clause Incidence, Before and After Business Court

	(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
CITY-SPECIFIC BUSINESS COURTS			
Florida (2004) Orlando complex business litigation court			
% of FL contracts with arb. clauses:	14.54%	13.36%	**decrease**
No. of FL contracts:	4,532	6,259	
Georgia (2005) Atlanta business case division			
% of GA contracts with arb. clauses:	14.67%	16.26%	increase
No. of GA contracts:	2,816	2,700	
Florida (2006) Miami complex business litigation section			
% of FL contracts with arb. clauses:	15.50%	11.07%	**decrease**
No. of FL contracts:	5,953	6,152	
Oregon (2006) Eugene Commercial Court			
% of OR contracts with arb. clauses:	21.73%	19.40%	**decrease**
No. of OR contracts:	819	701	
Colorado (2007) Colorado Springs commercial docket			
% of CO contracts with arb. clauses:	15.27%	13.84%	**decrease**
No. of CO contracts:	3,164	3,650	
Florida (2007) Tampa complex business litigation division			
% of FL contracts with arb. clauses:	15.20%	11.04%	**decrease**
No. of FL contracts:	5,995	6,124	
Pennsylvania (2007) Pittsburgh commerce and complex litigation center			
% of PA contracts with arb. clauses:	15.71%	12.25%	**decrease**
No. of PA contracts:	4,526	4,473	
Florida (2008) Ft. Lauderdale complex business litigation subdivision			
% of FL contracts with arb. clauses:	13.36%	11.49%	**decrease**
No. of FL contracts:	6,259	6,285	
Alabama (2009) Birmingham commercial litigation docket			
% of AL contracts with arb. clauses:	17.43%	11.80%	**decrease**
No. of AL contracts:	476	322	
City-specific business courts			
% of contracts with arb. clauses	15.05%	12.50%	**decrease**
No. of contracts:	34,540	36,666	

Notes: The leftmost column lists each of the business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 and after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state.

Table 3 (continued): Summary Statistics for Arbitration Clause Incidence, Before and After Business Court

	(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
COUNTY-SPECIFIC BUSINESS COURTS			
New York (2005)			
Queens County commercial division			
% of NY contracts with arb. clauses:	12.06%	10.46%	**decrease**
No. of NY contracts:	19,022	21,761	
California (2006)			
San Mateo County complex civil litigation division			
% of CA contracts with arb. clauses:	19.97%	18.61%	**decrease**
No. of CA contracts:	18,379	18,769	
Georgia (2007)			
Gwinnett County business court pilot program			
% of GA contracts with arb. clauses:	15.70%	14.96%	**decrease**
No. of GA contracts:	2,859	2,634	
New York (2007)			
Onandaga County commercial division			
% of NY contracts with arb. clauses:	10.55%	10.76%	increase
No. of NY contracts:	21,659	22,755	
County-specific business courts			
% of contracts with arb. clauses	14.05%	13.06%	**decrease**
No. of contracts:	61,919	65,919	

Notes: The leftmost column lists each of the business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 and after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state.

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Table 4: Summary Statistics for Arbitration Clause Incidence, Before and After RUAA Adoption

STATES ADOPTING RUAA		(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
Colorado (2004)	% of CO contracts with arb. clauses: No. of CO contracts:	18.78% 2,300	13.46% 3,515	decrease
Oregon (2004)	% of OR contracts with arb. clauses: No. of OR contracts:	24.81% 778	18.58% 775	decrease
Alaska (2005)	% of AK contracts with arb. clauses: No. of AK contracts:	26.03% 73	20.64% 63	decrease
Oklahoma (2005)	% of OK contracts with arb. clauses: No. of OK contracts:	13.11% 671	15.88% 737	**increase**
Washington (2005)	% of WA contracts with arb. clauses: No. of WA contracts:	19.82% 1,907	16.38% 2,002	decrease
District of Columbia (2009)	% of DC contracts with arb. clauses: No. of DC contracts:	15.19% 428	12.04% 299	decrease
Arizona (2010)	% of AZ contracts with arb. clauses: No. of AZ contracts:	14.89% 1,377	12.51% 1,231	decrease
States adopting RUAA	% of state contracts with arb. clauses: No. of state contracts:	18.32% 7,534	14.67% 8,622	decrease

Notes: The leftmost column lists each of the states that adopted RUAA between 2004 and 2010. (States adopting RUAA before 2004 and after 2010 were omitted.) A state's contracts (e.g., CO contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state.

Table 5: Summary Statistics for Matched Choice-of-Forum Clause Incidence, Pre- and Post-Business Court

STATEWIDE BUSINESS COURTS	(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
Maine (2006) Business and consumer docket			
% of ME contracts with ME choice of forum:	3.43%	12.07%	**increase**
No. of ME contracts:	233	174	
South Carolina (2007) Business Court pilot program			
% of SC contracts with SC choice of forum:	10.49%	13.07%	**increase**
No. of SC contracts:	410	681	
New Hampshire (2008) Business and commercial dispute docket			
% of NH contracts with NH choice of forum:	9.40%	8.15%	decrease
No. of NH contracts:	298	233	
Ohio (2009) Court of Common Pleas commercial docket			
% of OH contracts with OH choice of forum:	12.28%	15.28%	**increase**
No. of OH contracts:	3,265	2,487	
Delaware (2010) Superior Court complex commercial litigation division			
% of DE contracts with DE choice of forum:	4.58%	5.02%	**increase**
No. of DE contracts:	52,786	36,209	
Oregon (2010) Oregon Complex Litigation Court			
% of OR contracts with OR choice of forum:	16.83%	12.43%	decrease
No. of OR contracts:	701	539	
Statewide business courts			
% of state contracts with state choice of forum:	5.23%	5.94%	**increase**
No. of state contracts:	57,693	40,323	
Statewide business courts less Delaware			
% of state contracts with state choice of forum:	12.19%	14.00%	**increase**
No. of state contracts:	4,907	4,114	

Notes: The leftmost column lists each of the state business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 or after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state. Reported percentages represent "matched choice-of-forum clause incidence," defined as the percentage of a state's contracts that contain that state's choice-of-forum clause.

Table 5 (cont.): Summary Statistics for Matched Choice-of-Forum Clause Incidence, Pre- and Post-Business Court

CITY-SPECIFIC BUSINESS COURTS		(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
Florida (2004) Orlando complex business litigation court	% of FL contracts with FL choice of forum: No. of FL contracts:	14.56% 4,532	16.28% 6,259	**increase**
Georgia (2005) Atlanta business case division	% of GA contracts with GA choice of forum: No. of GA contracts:	13.45% 2,816	11.96% 2,700	decrease
Florida (2006) Miami complex business litigation section	% of FL contracts with FL choice of forum: No. of FL contracts:	15.61% 5,953	15.73% 6,152	**increase**
Oregon (2006) Eugene Commercial Court	% of OR contracts with OR choice of forum: No. of OR contracts:	12.70% 819	16.83% 701	**increase**
Colorado (2007) Colorado Springs commercial docket	% of CO contracts with CO choice of forum: No. of CO contracts:	10.59% 3,164	13.45% 3,650	**increase**
Florida (2007) Tampa complex business litigation division	% of FL contracts with FL choice of forum: No. of FL contracts:	16.81% 5,995	15.46% 6,124	decrease
Pennsylvania (2007) Pittsburgh commerce and complex litigation center	% of PA contracts with PA choice of forum: No. of PA contracts:	12.88% 4,526	12.74% 4,473	decrease
Florida (2008) Ft. Lauderdale complex business litigation subdivision	% of FL contracts with FL choice of forum: No. of FL contracts:	16.12% 6,259	16.28% 6,285	**increase**
Alabama (2009) Birmingham commercial litigation docket	% of AL contracts with AL choice of forum: No. of AL contracts:	9.66% 476	10.25% 322	**increase**
City-specific business courts	% of state contracts with state choice of forum: No. of state contracts:	14.63% 34,540	14.98% 36,666	**increase**

Notes: The leftmost column lists each of the state business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 or after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state. Reported percentages represent "matched choice-of-forum clause incidence," defined as the percentage of a state's contracts that contain that state's choice-of-forum clause.

Table 5 (cont.): Summary Statistics for Matched Choice-of-Forum Clause Incidence, Pre- and Post-Business Court

COUNTY-SPECIFIC BUSINESS COURTS		up to 3 years before	up to 3 years after	direction of change
New York (2005) Queens County commercial division	% of NY contracts with NY choice of forum:	39.05%	44.53%	**increase**
	No. of NY contracts:	19,022	21,761	
California (2006) San Mateo County complex civil litigation division	% of CA contracts with CA choice of forum:	14.52%	13.93%	decrease
	No. of CA contracts:	18,379	18,769	
Georgia (2007) Gwinnett County business court pilot program	% of GA contracts with GA choice of forum:	12.07%	12.34%	**increase**
	No. of GA contracts:	2,859	2,634	
New York (2007) Onandaga County commercial division	% of NY contracts with NY choice of forum:	42.03%	40.89%	decrease
	No. of NY contracts:	21,659	22,755	
County-specific business courts		31.57%	33.27%	**increase**
		61,919	65,919	

Notes: The leftmost column lists each of the state business courts that were established between 2004 and 2010, broken into state-wide business courts, city-specific business courts, and county-specific business courts. (Business courts that were established before 2004 or after 2010 were omitted.) A state's contracts (e.g., ME contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state. Reported percentages represent "matched choice-of-forum clause incidence," defined as the percentage of a state's contracts that contain that state's choice-of-forum clause.

Table 6: Summary Statistics for Matched Choice-of-Forum Clause Incidence, Pre- and Post-RUAA

STATES ADOPTING RUAA		(1) up to 3 years before	(2) up to 3 years after	(3) direction of change
Colorado (2004)	% of CO contracts with CO choice of forum:	14.30%	10.58%	**decrease**
	No. of CO contracts:	2,300	3,515	
Oregon (2004)	% of OR contracts with OR choice of forum:	12.98%	15.61%	increase
	No. of OR contracts:	778	775	
Alaska (2005)	% of AK contracts with AK choice of forum:	8.23%	14.29%	increase
	No. of AK contracts:	73	63	
Oklahoma (2005)	% of OK contracts with OK choice of forum:	16.39%	10.04%	**decrease**
	No. of OK contracts:	671	737	
Washington (2005)	% of WA contracts with WA choice of forum:	12.38%	12.44%	increase
	No. of WA contracts:	1,907	2,002	
District of Columbia (2009)	% of DC contracts with DC choice of forum:	8.64%	7.02%	**decrease**
	No. of DC contracts:	428	299	
Arizona (2010)	% of AZ contracts with AZ choice of forum:	12.27%	11.94%	**decrease**
	No. of AZ contracts:	1,377	1,231	
States adopting RUAA	% of state contracts with that state's choice of forum:	13.11%	11.52%	**decrease**
	No. of state contracts:	7,534	8,622	

Notes: The leftmost column lists each of the states that adopted RUAA between 2004 and 2010. (States that adopted RUAA before 2004 or after 2010 were omitted.) A state's contracts (e.g., CO contracts) are defined as all contracts meeting at least one of the following three criteria: the contract contains that state's choice-of-law clause; the contract was filed by a company that is legally incorporated in that state; or the contract was filed by a company that is physically headquartered in that state. Reported percentages represent "matched choice-of-forum clause incidence," defined as the percentage of a state's contracts that contain that state's choice-of-forum clause.

Table 7: Two-Way Fixed Effects Analysis

Treatment:	(1) Arbitration clause	(2) Arbitration clause
Business courts	-0.14661	--
	(0.81168)	--
State-wide business courts	--	0.22894
	--	(0.41271)
City-specific business courts	--	-0.63891
	--	(0.58355)
County-specific business courts	--	-0.08153
	--	(1.09038)
RUAA adoptions	-0.49333	-0.3770
	(0.54327)	(0.46625)

Notes: Results in columns (1) and (2) are from two-way fixed effects regressions that include state and year fixed effects and controls for the two-digit SIC code of the company filing a contract and for contract type. All coefficients and standard errors have been multiplied by 100. Robust standard errors that are clustered at the state level are in parentheses; * significant at 10%; ** significant at 5%.

Table 8: Evaluating Possible Control States for Difference-in-Differences Analysis

STATE-WIDE BUSINESS COURTS

Treatment State and Year	(1) Similar arb. clause time trends	(2) Arb. clause control state	(3) Similar COF clause time trends	(4) COF control state
Maine (2006)	RI	RI	MA, NH, RI, VT	MA
South Carolina (2007)	KY, MS, NC, TN	NC	AL, MS	AL
New Hampshire (2008)	RI, VT	RI	None	None
Ohio (2009)	IL, PA, VA	PA	WV	WV
Delaware (2010)	CA, IL	CA	CA	CA
Oregon (2010)	NV, WA	NV	None	None

Notes: This table reports the results of a process designed to find control states for difference-in-differences analysis of the effect of business court establishment or RUAA adoption upon arbitration clause incidence or matched choice-of-forum clause incidence. For each treatment (establishment of a business court or adoption of RUAA) listed in the leftmost column, column (1) lists states with similar time trends in arbitration clause incidence for the three years before the treatment in question, while column (2) selects the state from column (1) with the largest number of associated contracts as the designated arbitration control state. Column (3) lists states with similar time trends in matched choice-of-forum clause incidence for the three years before the treatment in question, while column (4) selects the state from column (3) with the largest number of associated contracts as the designated choice-of-forum control state.

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Table 8 (cont.): Evaluating Possible Control States for Difference-in-Differences Analysis

CITY-WIDE BUSINESS COURTS

Treatment State	(1) Similar arb. clause time trends	(2) Arb. clause control state	(3) Similar COF clause time trends	(4) COF control state
Florida (2004)	None	None	None	None
Georgia (2005)	None	None	MS, NC, SC, TX	TX
Florida (2006)	SC	SC	AL, NC, SC, TX	TX
Oregon (2006)	ID, NV	NV	None	None
Colorado (2007)	NM, WY	WY	NV, WY	NV
Florida (2007)	MS, NC	NC	MS, SC	SC
Pennsylvania (2007)	MD, NJ	NJ	MI	MI
Florida (2008)	MS, SC	SC	AL, MS, SC	SC
Alabama (2009)	LA, MS, SC, TN	TN	MS, SC, TN	TN

Notes: This table reports the results of a process designed to find control states for difference-in-differences analysis of the effect of business court establishment or RUAA adoption upon arbitration clause incidence or matched choice-of-forum clause incidence. For each treatment (establishment of a business court or adoption of RUAA) listed in the leftmost column, column (1) lists states with similar time trends in arbitration clause incidence for the three years before the treatment in question, while column (2) selects the state from column (1) with the largest number of associated contracts as the designated arbitration control state. Column (3) lists states with similar time trends in matched choice-of-forum clause incidence for the three years before the treatment in question, while column (4) selects the state from column (3) with the largest number of associated contracts as the designated choice-of-forum control state.

Table 8 (cont.): Evaluating Possible Control States for Difference-in-Differences Analysis

COUNTY-WIDE BUSINESS COURTS

Treatment State	(1) Similar arb. clause time trends	(2) Arb. clause control state	(3) Similar COF clause time trends	(4) COF control state
New York (2005)	DE	**DE**	None	**None**
California (2006)	DE	**DE**	DE	**DE**
Georgia (2007)	NC	**NC**	AL, MS, TX	**TX**
New York (2007)	IL	**IL**	None	**None**

Notes: This table reports the results of a process designed to find control states for difference-in-differences analysis of the effect of business court establishment or RUAA adoption upon arbitration clause incidence or matched choice-of-forum clause incidence. For each treatment (establishment of a business court or adoption of RUAA) listed in the leftmost column, column (1) lists states with similar time trends in arbitration clause incidence for the three years before the treatment in question, while column (2) selects the state from column (1) with the largest number of associated contracts as the designated arbitration control state. Column (3) lists states with similar time trends in matched choice-of-forum clause incidence for the three years before the treatment in question, while column (4) selects the state from column (3) with the largest number of associated contracts as the designated choice-of-forum control state.

Table 8 (cont.): Evaluating Possible Control States for Difference-in-Differences Analysis

Treatment State	RUAA		Similar COF clause time trends (3)	COF control state (4)
	Similar arb. clause time trends (1)	Arb. clause control state (2)		
Colorado (2004)	WY	**WY**	WY	**WY**
Oregon (2004)	ID	**ID**	AZ, ID	**AZ**
Alaska (2005)	HI, ID, MT	**ID**	HI, ID, MT	**ID**
Oklahoma (2005)	KS, TX	**TX**	AR, KS, MO	**MO**
Washington (2005)	ID, WY	**ID**	ID, MT, NV, WY	**NV**
District of Columbia (2009)	MD, NJ, PA, VA, WV	**MD**	MD, NJ, VA, WV	**MD**
Arizona (2010)	UT	**UT**	NM	**NM**

Notes: This table reports the results of a process designed to find control states for difference-in-differences analysis of the effect of business court establishment or RUAA adoption upon arbitration clause incidence or matched choice-of-forum clause incidence. For each treatment (establishment of a business court or adoption of RUAA) listed in the leftmost column, column (1) lists states with similar time trends in arbitration clause incidence for the three years before the treatment in question, while column (2) selects the state from column (1) with the largest number of associated contracts as the designated arbitration control state. Column (3) lists states with similar time trends in matched choice-of-forum clause incidence for the three years before the treatment in question, while column (4) selects the state from column (3) with the largest number of associated contracts as the designated choice-of-forum control state.

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Table 9: State-Level Difference-in-Differences Analysis for Business Courts

STATE-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Treatment / *control*	(4) Matched COF clause
Maine (2006) *Rhode Island*	-2.43106 (4.23758)	Maine (2006) *Massachusetts*	**4.73347*** **(2.6368)**
South Carolina (2007) *North Carolina*	1.33105 (2.19231)	South Carolina (2007) *Alabama*	1.28767 (2.36911)
New Hampshire (2008) *Rhode Island*	9.95703** (3.46048)	New Hampshire (2008) *None*	-- --
Ohio (2009) *Pennsylvania*	1.22547 (0.94883)	Ohio (2009) *West Virginia*	-1.74915 (3.11963)
Delaware (2010) *California*	**-3.62964**** **(0.65745)**	Delaware (2010) *California*	**2.88097**** **(0.57498)**
Oregon (2010) *Nevada*	**-3.34869*** **(2.01759)**	Oregon (2010) *None*	-- --

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from the corresponding control state (as identified in Table 8) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

Table 9 (cont.): State-Level Difference-in-Differences Analysis for Business Courts

CITY-WIDE BUSINESS COURTS

(1) Treatment / control	(2) Arbitration clause	(3) Treatment / control	(4) Matched COF clause
Georgia (2005) *None*	--	Georgia (2005) *Texas*	-0.49728 (0.87164)
Florida (2006) *South Carolina*	0.66484 (2.17459)	Florida (2006) *Texas*	**1.71409** (0.70852)**
Oregon (2006) *Nevada*	-0.74835 (1.75775)	Oregon (2006) *None*	--
Colorado (2007) *Wyoming*	2.88438 (3.17076)	Colorado (2007) *Nevada*	**2.23926** (0.68673)**
Florida (2007) *North Carolina*	-0.62480 (1.04036)	Florida (2007) *South Carolina*	-0.73747 (1.81042)
Pennsylvania (2007) *New Jersey*	**-3.16853** (0.85236)**	Pennsylvania (2007) *Michigan*	**2.8436** (1.07857)**
Florida (2008) *South Carolina*	-2.81154 (1.99886)	Florida (2008) *South Carolina*	**5.29742** (1.86947)**
Alabama (2009) *Tennessee*	**-3.63869* (2.16353)**	Alabama (2009) *Tennessee*	**2.90681* (1.99873)**

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from the corresponding control state (as identified in Table 8) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

Table 9 (cont.): State-Level Difference-in-Differences Analysis for Business Courts

COUNTY-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Treatment / *control*	(4) Matched COF clause
New York (2005) *Delaware*	0.46169 (0.33357)	New York (2005) *None*	-- --
California (2006) *Delaware*	**-0.88792**** **(0.39857)**	California (2006) *Delaware*	-1.7601** (0.34339)
Georgia (2007) *North Carolina*	-0.09748 (1.20497)	Georgia (2007) *Texas*	-0.05468 (0.8907)
New York (2007) *Illinois*	1.65223** (0.68041)	New York (2007) *None*	-- --

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from the corresponding control state (as identified in Table 8) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

Table 10: State-Level Difference-in-Differences Analysis for RUAA

	(1) Treatment / control	(2) Arbitration clause	(3) Treatment / control	(4) Matched COF clause
	Colorado (2004)	1.97263	Colorado (2004)	-1.88759
	Wyoming	(4.96214)	*Wyoming*	(2.39014)
	Oregon (2004)	-3.72844	Oregon (2004)	6.27665**
	Idaho	(2.79299)	*Arizona*	(1.94662)
	Alaska (2005)	**12.88292****	Alaska (2005)	3.71835
	Idaho	**(6.15845)**	*Idaho*	(4.18371)
	Oklahoma (2005)	-0.54367	Oklahoma (2005)	~~-6.73363***~~
	Texas	(1.61811)	*Missouri*	**(1.79717)**
	Washington (2005)	0.42808	Washington (2005)	2.12514**
	Idaho	(2.38838)	*Nevada*	(0.94889)
	District of Columbia (2009)	-0.67721	District of Columbia (200 9)	-1.24332
	Maryland	(2.31958)	*Maryland*	(1.90653)
	Arizona (2010)	-0.94052	Arizona (2010)	-0.51961
	Utah	(1.71696)	*New Mexico*	(2.82378)

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (adopting RUAA) and from the corresponding control state (as identified in Table 8) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 2-A and estimates in column (4) that are consistent with Hypothesis 2-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

App. Table 1: State-Level Difference-in-Differences Analysis for Business Courts (alternate control states)

STATE-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Treatment / *control*	(4) Matched COF clause
Maine (2006) *None*	-- --	Maine (2006) *New Hampshire*	**5.17446*** **(3.13313)**
South Carolina (2007) *Tennessee*	3.85885* (2.23271)	South Carolina (2007) *Mississippi*	-0.96158 (3.11530)
New Hampshire (2008) *Vermont*	8.32484* (4.59226)	New Hampshire (2008) *None*	-- --
Ohio (2009) *Illinois*	1.0096 (0.93009)	Ohio (2009) *None*	-- --
Delaware (2010) *Illinois*	**-2.36335**** **(1.1153)**	Delaware (2010) *None*	-- --
Oregon (2010) *Washington*	**-3.39504*** **(2.25429)**	Oregon (2010) *None*	-- --

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

App. Table 1 (cont.): State-Level Diff-in-Diffs Analysis for Business Courts (alternate control states)

CITY-WIDE BUSINESS COURTS

Treatment State *Control State*	(1) Arbitration clause	Control State	(2) Matched COF clause
Georgia (2005) *None*	-- --	Georgia (2005) *North Carolina*	-0.39445 (1.13599)
Florida (2006) *None*	-- --	Florida (2006) *North Carolina*	**1.8471*** **(1.02935)**
Oregon (2006) *Idaho*	-1.02944 (2.66706)	Oregon (2006) *None*	-- --
Colorado (2007) *Oregon*	0.63143 (1.88782)	Colorado (2007) *Wyoming*	**3.58097*** **(1.97804)**
Florida (2007) *Mississippi*	4.98559 (3.33636)	Florida (2007) *Mississippi*	0.93689 (2.39961)
Pennsylvania (2007) *Maryland*	**-5.32641**** **(0.83348)**	Pennsylvania (2007) *None*	-- --
Florida (2008) *Mississippi*	5.54863 (3.37183)	Florida (2008) *Alabama*	1.13076 (1.88945)
Alabama (2009) *Louisiana*	-2.78662 (2.81754)	Alabama (2009) *South Carolina*	0.84716 (2.81808)

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

App. Table 1 (cont.): State-Level Diff-in-Diffs Analysis for Business Courts (alternate control states)

COUNTY-WIDE BUSINESS COURTS

Treatment State	(1)		(2)
Control State	Arbitration clause	*Control State*	Matched COF clause
New York (2005)	0.60328*	New York (2005)	--
Delaware	(0.34530)	*None*	--
California (2006)	**-0.88792****	California (2006)	--
Delaware	**(0.39857)**	*None*	--
Georgia (2007)	-0.09748	Georgia (2007)	1.32522
North Carolina	(1.20497)	*Alabama*	(1.92823)
New York (2007)	--	New York (2007)	--
None	--	*None*	--

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (4) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

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App. Table 2: State-Level Difference-in-Differences Analysis for RUAA (alternate control states)

(1) Treatment / control	(2) Arbitration clause	(3) Treatment / control	(4) Matched COF clause
Colorado (2004) *None*	-- --	Colorado (2004) *None*	-- --
Oregon (2004) *None*	-- --	Oregon (2004) *Idaho*	4.40663** (2.23972)
Alaska (2005) *Montana*	**16.72059*** **(9.21386)**	Alaska (2005) *Hawaii*	11.64146** (5.50735)
Oklahoma (2005) *Kansas*	-5.28148** (2.37749)	Oklahoma (2005) *Kansas*	**-10.72281***** **(2.21844)**
Washington (2005) *Wyoming*	1.75892 (3.66218)	Washington (2005) *Idaho*	-2.01209 (2.05776)
District of Columbia (2009) *Pennsylvania*	0.33034 (2.30451)	District of Columbia (2009) *New Jersey*	3.03669 (2.09603)
Arizona (2010) *None*	-- --	Arizona (2010) *None*	-- --

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (adopting RUAA) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 2-A and estimates in column (4) that are consistent with Hypothesis 2-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

App. Table 3: State-Level Difference-in-Differences Analysis for Business Courts (identical arb. and COF control states)

STATE-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Matched COF clause
Maine (2006) *Rhode Island*	-2.43106 (4.23758)	3.75620 (3.80684)
South Carolina (2007) *Mississippi*	2.69262 (3.99062)	-0.96158 (3.11530)
Delaware (2010) *California*	**-3.62964**** **(0.65745)**	**2.88097**** **(0.57498)**

CITY-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Matched COF clause
Florida (2006) *South Carolina*	0.66484 (2.17459)	2.33948 (1.87206)
Colorado (2007) *Wyoming*	2.88438 (3.17076)	**3.58097*** **(1.97804)**
Florida (2007) *Mississippi*	3.81509 (3.24272)	0.06286 (3.22731)
Florida (2008) *South Carolina*	-2.81154 (1.99886)	**5.29742**** **(1.86947)**
Alabama (2009) *Tennessee*	**-3.63869*** **(2.16353)**	**2.90681*** **(1.99873)**

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (3) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

App. Table 3 (cont.): State-Level Diff-in-Diffs Analysis for Business Courts (identical arb. and COF control states)

COUNTY-WIDE BUSINESS COURTS

(1) Treatment / *control*	(2) Arbitration clause	(3) Matched COF clause
California (2006) *Delaware*	**-0.88792**** **(0.39857)**	-1.7601** (0.34339)

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (establishing a business court) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 1-A and estimates in column (3) that are consistent with Hypothesis 1-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

Table A4: State-Level Difference-in-Differences Analysis for RUAA (identical arb. and COF control states)

(1) Treatment / *control*	(2) Arbitration clause	(3) Matched COF clause
Colorado (2004)	1.97263	-1.88759
Wyoming	(4.96214)	(2.39014)
Oregon (2004)	-3.72844	4.40663**
Idaho	(2.79299)	(2.23972)
Alaska (2005)	**12.88292****	3.71835
Idaho	**(6.15845)**	(4.18371)
Oklahoma (2005)	-5.28148**	**-10.72281****
Kansas	(2.37749)	**(2.21844)**
Washington (2005)	0.42808	-2.01209
Idaho	(2.38838)	(2.05776)
District of Columbia (2009)	-0.67721	-1.24332
Maryland	(2.31958)	(1.90653)

Notes: All results are from difference-in-differences regressions using contracts from a treatment state (adopting RUAA) and from a corresponding control state (as defined in the text) that were filed up to three years before and up to five years after the treatment in question. Regressions include year fixed effects, controls for the two-digit SIC code of the company filing a contract, and controls for contract type. Estimates in column (2) that are consistent with Hypothesis 2-A and estimates in column (3) that are consistent with Hypothesis 2-B have been bolded. All coefficients and standard errors have been multiplied by 100. Heteroskedasticity-robust standard errors are in parentheses; * significant at 10%; ** significant at 5%.

Chapter 2

**Section 409A and Company-Executive Contracts:
A Natural Experiment in Arbitral Customization**

One of the theoretical advantages of arbitration as a form of dispute resolution is it can be customized to suit parties' desires – for instance, parties can specify certain procedural rules that will apply, or require that arbitrators possess particular qualifications or expertise. As arbitration proponents have emphasized, parties can therefore "tailor" the arbitral process to their disputes – or, at least, agree on a process that they both find preferable to litigation or other forms of dispute resolution.

However, a handful of recent empirical studies have raised questions as to whether parties actually customize arbitration in this manner. On one hand, studies that examine "non-adhesive" contracts – in which parties bargain over contract terms and can arrive at the kind of mutually-beneficial outcome contemplated above – have found that arbitral customization is generally rare. On the other hand, studies that examine "adhesive" contracts – which are offered by dominant parties to weaker parties on a "take-it-or-leave-it" basis – have found that arbitral customization is more common.[1] Although these studies are subject to caveats (notably, each uses small samples of a single contract type), they suggest that customizations are being adhesively imposed by dominant parties for their own benefit – a very different picture from the one painted in the previous paragraph.

In this chapter, I take a novel approach to examining whether and how parties customize arbitration by considering how a nation-wide policy change – the enactment of Section 409A of

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[1] Classic examples of adhesive contracts are employment contracts offered by companies to their potential rank-and-file employees, or the contracts that companies bundle with consumer products. The potential employees and potential consumers cannot bargain with companies over the terms of the contract – they either accept the contract along with the job or product, or they reject it along with the job or product.

the Internal Revenue Code[2] – affects the arbitration provisions in non-adhesive contracts between companies and their executives. Section 409A was considered a potential flashpoint for company-executive disputes for three reasons – (i) it introduced a host of complicated new rules governing the content and operation of companies' "non-qualified deferred compensation plans"; (ii) it defined these "plans" very broadly, so that the rules applied to a wide (and sometimes unexpected) variety of company-executive agreements; and (iii) it imposed severe penalties for non-compliance that were borne entirely by executives (regardless of whether executives bore any responsibility for the underlying violations). Accordingly, I consider whether companies and executives responded to the prospect of 409A-related disputes with the kind of arbitral customization envisioned by arbitration's proponents – i.e., did companies and executives "tailor" their arbitration clauses in response to Section 409A, and if so, how?

To address these questions, I provide various hypotheses regarding Section 409A's effect on arbitration clause use in company-executive contracts and on the use of various customizations within these clauses. These hypotheses derive from the idea that Section 409A both (i) introduced a new and potentially complicated type of dispute between companies and executives and (ii) increased the overall likelihood of disputes between companies and executives. I then test these hypotheses empirically, using a difference-in-differences approach in connection with a dataset of approximately 400,000 material contracts filed with the SEC. My results suggest that companies and executives did customize their arbitration clauses in response to Section 409A – for instance, they increasingly required arbitrators to possess certain qualifications and increasingly required them to render written opinions explaining their reasoning (perhaps anticipating the complexity of potential 409A-related disputes). These parties also increasingly specified the number of arbitrators that would decide their dispute, with

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[2] 26 U.S.C §409A.

single-arbitrator and "hybrid" setups[3] becoming more common and three-arbitrator panels becoming less common (perhaps streamlining the arbitral process in anticipation of more frequently-occurring disputes).

As a precursor to this analysis, I use Python-based programming to "machine-code"[4] all of the arbitration clauses in my dataset – not just the clauses in company-executive contracts that might be affected by Section 409A – for various possible customizations. Although this process is meant to facilitate my difference-in-differences approach, it also yields what is – by far – the largest and most diverse set of contracts ever analyzed in this area. Accordingly, this chapter also offers a much broader picture of arbitral customization than is present in previous studies – in general, I find substantially more customization in my dataset than in previous samples of non-adhesive contracts, and I also open the door to future research regarding the use of different customizations in different types of non-adhesive contracts.

The remainder of this chapter proceeds as follows: in Part I, I provide additional background on Section 409A – describing it in greater detail and explaining how it affected potential disputes between companies and executives. In Part II, I provide additional background on arbitral customization – briefly reviewing the existing empirical literature, describing the various customizations I consider in this chapter, and hypothesizing how Section 409A may have affected their incidence. In Part III, I describe my data in greater detail and

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[3] Although there a variety of "hybrid" setups, some of the most common are: (i) parties can use one arbitrator if they can agree on who the sole arbitrator will be, but must otherwise use a three-arbitrator panel; (ii) parties use different numbers of arbitrators in different circumstances (e.g., disputes involving higher-value claims will be heard by three arbitrators while disputes involving lower-value claims will be heard by one arbitrator); and (iii) a streamlined panel selection process, in which each party selects a single arbitrator, then these two arbitrators (rather than the parties themselves) select the presiding third arbitrator.

[4] As described in the introductory chapter to my dissertation, this machine-coding involves searching through the contracts for certain words or Boolean patterns (e.g., "written" within five words of "arbitrator") indicating that a feature of interest is present in a contract. This machine-coding also involves an extensive manual validation process, in which I read through many coded contracts to ensure that contracts coded as having a feature of interest actually had that feature and that contracts coded as not having a feature of interest actually did not have that feature.

provide some descriptive statistics – examining the use of various customizations in my dataset and considering how they vary across the period in which Section 409A was introduced. In Part IV, I describe my difference-in-differences approach, then I report and interpret my difference-in-differences results. Finally, Part V concludes.

I.   Background on Section 409A

Section 409A of the Internal Revenue Code pertains to deferred compensation – i.e., compensation that is awarded to "service providers" (employees, directors, and independent contractors) in one year but actually distributed to them in a later year. It was enacted in 2005 to address abusive practices in this area – the most notorious of which was the early or "accelerated" distribution of deferred compensation to Enron executives in advance of the company's bankruptcy. To prevent such abuses, Section 409A imposes a host of rules upon the content and operation of companies' "non-qualified deferred compensation plans." (Certain "qualified deferred compensation plans," including 401(k) plans, are exempted.)

A full description of Section 409A, and the approximately 400 pages of regulations that accompany it, is beyond the scope of this chapter – it has aptly been described as a "world unto itself."[5] Very broadly, though, Section 409A requires non-qualified deferred compensation plans to (i) specify the time that deferred compensation will be distributed and the form in which it will be distributed and to (ii) actually operate in accordance with the specifications in (i). Moreover, the time of distribution must be tied to one or more of the following events: (a) separation from

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[5] Seth Huffstetler, "409A Issues in Employment Agreements," Presentation to the Association of Corporate Counsel – Charlotte Chapter, August 7, 2013, *available at* http://www.acc.com/chapters/charlotte/upload/August-7-2013-409A-Issues-in-Employment-Agreements.pdf (last accessed February 20, 2015).

service, (b) disability, (c) death, (d) a specified time (or fixed schedule) set forth in the plan, (e) a change in control of the company, or (f) an unforeseeable emergency.[6]

Importantly, the definition of "non-qualified deferred compensation plan" – and hence the reach of Section 409A – is very broad. With the exception of certain "qualified deferred compensation plans," *any* arrangement in which a service provider obtains a legally binding right to compensation that is or may be payable in a future year is considered a non-qualified deferred compensation plan. As Huffstetler (2013) emphasizes, Section 409A therefore applies in many unexpected ways – in addition to more traditional deferred compensation arrangements like retirement plans and stock options, this definition of "non-qualified deferred compensation plan" sweeps in, e.g., bonuses, severance agreements and other post-employment arrangements, expense reimbursements, and employer-provided insurance.

Furthermore, regardless of whether a service provider bears any responsibility for a Section 409A violation, the resulting penalties are borne entirely by that service provider. According to Friedman et al. (2007), these penalties "can only be described as draconian" – upon a violation, all of the service provider's vested deferred compensation becomes immediately taxable and subject to an additional 20% penalty tax, and the service provider must also pay interest at a heightened rate on this tax bill (retroactive to the date of vesting).[7] Moreover, the service provider may have to pay these taxes and interest before he or she actually receives the

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[6] With the exception of death, each of these events is a defined term in Section 409A, and the corresponding event definitions in companies' non-qualified deferred compensation plans must conform to the definitions used in Section 409A (with certain permitted exceptions).

[7] For example, if a service provider's right to deferred compensation vests in 2011 and the company commits a Section 409A violation in 2014, the service provider must pay: (i) standard taxes on their already-vested deferred compensation; (ii) an additional 20% penalty tax on this already-vested deferred compensation; and (iii) interest at a heightened rate on the payments in (i) and (ii) retroactive to the 2011 vesting (i.e., as though the service provider was obligated to but failed to pay these taxes in 2011).

deferred compensation upon which the taxes and interest are based – raising the possibility of a large out-of-pocket expenditure.

Based on the foregoing, Section 409A was widely considered a potential flashpoint for disputes between companies and executives.[8] Companies could violate Section 409A in several different ways – by failing to identify arrangements with executives that were technically (and unexpectedly) "non-qualified deferred compensation plans" subject to Section 409A; by failing to structure these plans (even if identified correctly) in a Section 409A-compliant manner; or by failing to operate these plans (even if structured correctly) in a Section 409A-compliant manner. Furthermore, these violations had potentially "draconian" consequences for executives, regardless of whether those executives bore any responsibility for the violations. From a dispute resolution standpoint, then, the enactment of Section 409A represented (i) the introduction of a new and potentially complicated type of company-executive dispute (i.e., a negligence-based action against companies for failing to comply with Section 409A's requirements),[9] as well as (ii) an increase in the overall likelihood of company-executive disputes (since these parties were generally more likely to have disputes after Section 409A than before Section 409A).

II.   Background on Arbitral Customization

  A. Review of Existing Empirical Evidence

Several scholars have highlighted the potential benefits of arbitral customization,

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[8] In fact, there were a slew of "client bulletins" distributed by law firms in advance of Section 409A's enactment that warned of Section 409A's complex rules, unexpected applications, and severe consequences for executives (and encouraged companies to seek the counsel of the firms' benefits departments).

[9] Although this chapter is primarily concerned with arbitration of these negligence-based actions, they have recently appeared in courts as well. Recently, in *Davidson v. Henkel*, No. 12-cv-14103, 2015 WL 74257 (E.D. Mich. Jan. 6, 2015), the Eastern District of Michigan found a corporation liable to its retirees for tax penalties resulting from negligent mis-management of a retirement plan. Numerous commentators – e.g., Melbinger (2013) and Geloneck and Witt (2015) – have suggested that *Davidson* provides a blueprint for 409A-related negligence suits.

emphasizing the idea that contracting parties can "tailor" the arbitral process to their disputes in a mutually-beneficial fashion.[10] However, the existing empirical evidence in this area – though certainly limited – nevertheless raises questions as to whether such mutually-beneficial "tailoring" actually exists.

The earliest empirical evidence regarding arbitral customization involves so-called "adhesive contracts" – i.e., contracts that are offered by dominant parties to weaker parties on a take-it-or-leave-it basis. In a study of fifty-two arbitration clauses present in adhesive consumer contracts, Demaine and Hensler (2004) found numerous instances of arbitral customization. For instance, 33% of these clauses either limited the discovery process or eliminated it altogether; 21% addressed evidentiary standards (usually relaxing them in comparison to litigation); and 20% required arbitrators to issue a written opinion. Similarly, Drahozal and Wittrock (2008) find ample evidence of customization – and of its increase over time – when comparing twenty-eight arbitration clauses taken from adhesive franchise agreements in 1999 with updated versions of the same agreements in 2007. For instance, the percentage of arbitration clauses that specify a certain number of arbitrators rose from 50% in 1999 to 67% in 2007; the percentage of clauses that impose a limitations period on arbitration requests rose from 43% in 1999 to 68% in 2007; and the percentage of clauses that restrict the availability of punitive damages rose from 75% in 1999 to 86% in 2007.

More recently, a study by O'Connor et al. (2012) looks at customization in a sample of 469 arbitration clauses present in Fortune 1500 CEO employment agreements. Unlike the adhesive consumer contracts studied by Demaine and Hensler and the adhesive franchise contracts studied by Drahozal and Wittrock, these CEO employment agreements are non-

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[10] See, e.g., Stipanowich (2008), who suggests that customized arbitration represents parties' "best chance to achieve harmony between [dispute resolution] process and business priorities," and Vernon (2001), who offers various arbitral customizations that companies in the energy/minerals field might find useful.

adhesive in nature – they are typically heavily negotiated by the parties, often with the assistance of legal counsel.[11] Interestingly, other than the selection of an administering institution (present in 93% of the O'Connor et al. clauses) and the selection of an "off-the-rack" set of procedural rules (present in 96% of these clauses), customizations were generally much less common in O'Connor et al.'s non-adhesive sample than in the Demaine-Hensler and Drahozal-Wittrock adhesive samples. For instance, only 10% of the O'Connor et al. clauses contained restrictions on punitive damages (versus 86% of the later Drahozal-Wittrock clauses); only 10% of the O'Connor et al. clauses required arbitrators to issue a written opinion (versus 20% of the Demaine-Hensler clauses); only 6% of the O'Connor et al. clauses imposed discovery restrictions (versus 33% of the Demaine-Hensler clauses); less than 5% of the O'Connor et al. clauses imposed a limitations period on arbitration requests (versus 68% of the later Drahozal-Wittrock clauses); and less than 2% of the O'Connor et al. clauses imposed evidentiary restrictions (versus 21% of the Demaine-Hensler clauses).[12]

Although caution is warranted in drawing broad conclusions from these studies (especially since each is based on a small sample of a single contract type), there is a clear division between adhesive and non-adhesive arbitration clauses with regard to customization incidence. Moreover, there seems to be a further division in the adhesive clauses between (i) customizations that clearly favor the company imposing the clause (e.g., punitive damage

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[11] This is not to say that these parties have equal bargaining power – companies may be in a stronger bargaining position than CEOs or vice versa, and either party could be imposing their preferred contractual terms (such as arbitral customizations) on the other as a result. However, these contracts should still involve much more comparable bargaining power than the adhesive consumer and franchise contracts studied by Demaine and Hensler and Drahozal and Wittrock, and are therefore a good place to look for potentially mutually-beneficial customizations.

[12] O'Connor et al. do report that one type of customization – "carveouts" from arbitration clauses that allow certain types of claims to be brought in court rather than in arbitration – was surprisingly common in their sample. A subsequent paper by O'Connor and Drahozal (2014) studies these carveouts in detail.

restrictions and limitations periods), which occur particularly frequently, and (ii) customizations that may or may not favor the company imposing the clause (e.g., discovery restrictions, evidentiary restrictions, and written decisions), which occur less frequently.[13] While certainly not dispositive, these studies cast some doubt on the idea that parties use customizations to craft mutually-beneficial arbitral processes – instead, the customizations appearing most frequently across these studies are unilaterally imposed by, and generally favor, a single dominant party.[14]

B. Customizations in this Chapter

In this chapter, I study approximately 60,000 arbitration clauses taken from my sample of material contracts for the presence or absence of various arbitral customizations. Like the CEO employment contracts studied by O'Connor et al., virtually all of the contracts in my sample are non-adhesive in nature – the material contracts that publicly-traded companies file with the SEC generally involve substantial negotiation and are often prepared with the assistance of legal counsel.[15] Accordingly, this chapter will add considerably to the empirical evidence regarding arbitral customization in non-adhesive contracts – either refuting or resoundingly confirming O'Connor et al.'s finding that customizations are rare in these contracts.

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[13] To the extent that discovery and evidentiary restrictions could make it more difficult for a consumer or franchisee to proceed against the company in arbitration, though, these customizations could favor the company as well. (Of course, discovery and evidentiary restrictions could also make it more difficult for the company to defend itself.)

[14] Granted, there is an economic argument that adhesive contracts with arbitration clauses that favor the dominant party could still be "mutually beneficial" to the parties, in the sense that these contracts may leave both parties better off overall than adhesive contracts with arbitration clauses that do not favor either party. In particular, if (i) the dominant party translates their savings from arbitration (whether resulting from lower process costs or from lower expected award payments) into a lower contract price (or franchise fee, etc.) paid by the weaker party, and if (ii) this lower contract price more than offsets the weaker party's lower expected arbitration award, then both parties will be better off under this arrangement. (This is not the type of argument that is usually made by proponents of arbitral customization, though!)

[15] As in O'Connor et al.'s sample, this is not to say that the companies and executives in my sample have equal bargaining power – some contracts may reflect an imbalance of bargaining power between the contracting parties (so that one party could conceivably be imposing its preferred arbitral customizations on the other party). Again, though, these contracts should reflect fairly comparable bargaining power (much more so than the adhesive agreements studied by Demaine and Hensler and by Drahozal and Wittrock) and should be a good place to look for potentially mutually-beneficial customizations.

In particular, I machine-code these arbitration clauses for the following features: (i) an administering institution (e.g., the American Arbitration Association, also known as the AAA[16]); (ii) an "off-the-rack" set of procedural rules governing the arbitration (e.g., the AAA's Employment Arbitration Rules); (iii) a specified number of arbitrators; (iv) a requirement that the arbitrator(s) possess certain qualifications or expertise; (v) a requirement that the arbitrator(s) render a written opinion; (vi) any restrictions on the discovery process; (vii) any time limits imposed on the arbitration; and (viii) any restrictions on punitive damages.[17] Additional details regarding this machine-coding process, including descriptions of the associated searches and documentation of my manual validation process, can be found in the dissertation's Appendix.

C. Section 409A-Related Hypotheses

I conclude Part II with a series of hypotheses as to how Section 409A may have affected the arbitration provisions in company-executive contracts. My first hypothesis is that, apart from its effect on any particular customizations, Section 409A may have increased the overall use of arbitration clauses in these contracts. The idea is that the parties' choice of dispute resolution mechanism may have been influenced by the prospect of 409A-tailored arbitration, prompting them to switch from other mechanisms to arbitration. Accordingly, I hypothesize that after Section 409A, company-executive contracts will be:

1. More likely to have an arbitration clause.

My second hypothesis (actually, a set of related hypotheses) turns to Section 409A's effects on particular customizations, and stems from the idea that Section 409A introduced a new and complicated type of company-executive dispute. In anticipation of these 409A-related

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[16] The AAA is the largest and best-known alternative dispute resolution service provider in the United States, and is by far the most frequently-specified administering institution in my sample (and in previous studies as well).

[17] Unfortunately, I was unable to reliably code for some of the other customizations that were considered in previous studies (e.g., evidentiary restrictions and limitations periods).

disputes, parties may create a correspondingly more sophisticated arbitral process – one that is well-equipped to process these complex disputes and resolve them accurately. Accordingly, I hypothesize that after Section 409A, arbitration clauses in company-executive contracts will be:

> **2a. More likely to have three arbitrators and less likely to have a single arbitrator** (as three arbitrators may be more accurate than a single arbitrator when resolving complex disputes);
>
> **2b. More likely to require arbitrator expertise** (as experts may be quicker and/or more accurate than generalists in resolving complex disputes);
>
> **2c. More likely to require a written opinion** (which may improve the accuracy of decisions in complex disputes and/or increase the parties' confidence in these decisions); and
>
> **2d. Less likely to impose discovery restrictions and time limits** (both of which may hinder the resolution of complex disputes).[18]

My third hypothesis (or set of hypotheses) stems from the idea that Section 409A also increased the overall likelihood of company-executive disputes. As a result, parties may want to streamline the arbitration process in anticipation of more frequent disputes – aiming to resolve these disputes quickly and inexpensively. Accordingly, I hypothesize that after Section 409A, arbitration clauses in company-executive contracts will be:

> **3a. More likely to specify basic features such as an administering institution or an "off-the-rack" set of procedural rules** (as choosing these *ex ante* may be quicker and easier than choosing these *ex post* when the parties are at odds, or trying to proceed on an *ad hoc* basis);
>
> **3b. More likely to have a single arbitrator and less likely to have three arbitrators** (as a single arbitrator is less expensive and may resolve disputes more quickly than three arbitrators);

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[18] One might question whether both parties would prefer the customizations contemplated in this hypothesis – i.e., are these customizations really mutually beneficial? For instance, while executives bringing Section 409A claims might prefer these customizations to ensure that they can fully present their claims and that their claims are resolved accurately, perhaps companies defending these claims would prefer a more streamlined approach that lowers process costs and might even hinder executives' presentation of their claims. (Of course, companies could prefer these customizations as well, ensuring that they can fully defend against these complex 409A-related claims.)

3c. Less likely to require a written opinion (as written opinions may increase the time and expense involved in arbitration); and

3d. More likely to impose discovery restrictions and time limits (both of which may reduce the time and expense involved in arbitration).[19]

Notably, the preceding sets of hypotheses need not be mutually exclusive – since Section 409A affected both the complexity and likelihood of potential disputes between companies and executives, hypotheses from *both* of these sets may hold. (As an example, parties may specify that a single arbitrator will decide their disputes in accordance with Hypothesis 3b, but also require this arbitrator to have pertinent expertise in accordance with Hypothesis 2b; similarly, they may require that a three-arbitrator panel render a written opinion in accordance with Hypotheses 2b and 2d, but also limit the amount of time that the panel has to render the opinion in accordance with Hypothesis 3d.) In fact, I would argue that such "mixed" results are evidence of mutually-beneficial arbitral customization, in that companies and executives are responding to the substantial dispute resolution challenges posed by Section 409A by picking and choosing the features that make the most sense for them.

A fourth and final hypothesis is that Section 409A may not affect the arbitration clauses in company-executive contracts or the customizations therein at all, yielding:

4. No effect on the use of arbitration clauses and no effect on the use of customizations in those clauses.

This null hypothesis draws from the related concepts of contractual modularity and contractual "boilerplate." Contractual modularity means that different parts or "modules" of a contract – such as the deferred compensation provisions directly affected by Section 409A, on one hand,

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[19] Again, one might question whether both parties would prefer the customizations contemplated in this hypothesis. For instance, perhaps companies defending against 409A-related claims might prefer streamlined arbitration to reduce process costs and/or to hinder executives' ability to present 409A-related claims, while executives bringing 409A-related claims might prefer a less streamlined approach to ensure that they can fully present their claims and that their claims are resolved accurately. (Of course, executives could certainly prefer streamlined arbitration as well.)

and dispute resolution provisions, on the other hand – are generally unrelated (and may even be drafted and maintained by different teams of lawyers).[20] Relatedly, dispute resolution provisions such as arbitration clauses are sometimes thought to be "boilerplate" – i.e., provisions that are standardized across contracts and are not addressed in contractual negotiations. If company-executive contracts are indeed modular, and/or if their arbitration clauses are indeed boilerplate, then Section 409A may not affect arbitration clause incidence in these contracts, or the incidence of customizations in these clauses, at all.

III.   Data and Summary Statistics

To test the preceding hypotheses, I use the same material contracts that I used in Chapter 1 to examine the effect of business courts and RUAA on arbitration clause use. In this chapter, though, I also code these contracts for numerous arbitral customizations (as described in Part II.B above) and I also divide them into "treatment contracts" (where the arbitration clauses in these contracts could have been affected by Section 409A) and "control contracts" (where the arbitration clauses in these contracts could not have been affected by Section 409A).

In dividing the contracts, I defined the treatment group by using machine-coding to identify contract types with both (i) a high incidence of 409A-related language (on the theory that these contract types would be "non-qualified deferred compensation plans" that are subject to 409A) and (ii) a relatively high incidence of arbitration clauses (which could potentially be "tailored" to Section 409A). Based on this coding, I identified executive employment agreements, change-in-control agreements, and severance agreements as my "treatment

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[20] Per Smith (2006), "modularity is a device to deal with complexity by decomposing a complex system into pieces (modules), in which communications (or other interdependencies) are intense within the module but sparse and standardized across modules."

contracts," and the arbitration clauses in these contracts as my "treatment clauses."[21] In turn, all of the remaining contract types in my dataset – benefits plans, commercial contracts, finance contracts, merger agreements, partnership agreements, and all other material contracts – are my "control contracts," and the arbitration clauses in these contracts are my "control clauses."[22]

In the remainder of this Part, I report a variety of summary statistics derived from these treatment and control contracts (and from the treatment and control clauses therein). First, Table 1 provides an initial look at Hypothesis 1 (predicting increased post-409A use of arbitration clauses in treatment contracts) by describing how the incidence of arbitration clauses in treatment contracts and control contracts changed during the time period in which Section 409A was introduced. Notably, though Section 409A technically went into effect on January 1, 2005, the Internal Revenue Service actually imposed a final compliance date of January 1, 2009 – giving companies a four-year interim period to bring their non-qualified deferred compensation plans into compliance before incurring penalties. Accordingly, Table 1 differentiates among contracts from three time periods – those filed with the SEC between 2001 and 2004 (which precede Section 409A's enactment); those filed between 2005 and 2008 (which precede Section 409A's final compliance date but may anticipate being subject to its requirements); and those filed between 2009 and 2013 (which follow Section 409A's final compliance date).

Perhaps the most striking feature of Table 1 is that arbitration clauses occur much more frequently – about four times as often – in the treatment contracts than in the control contracts.

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[21] Buttressing these results, one of the bulletins mentioned in note 8 *supra* - Harders et al. (2009) – specifically identifies these executive employment agreements, change-in-control agreements, and severance agreements as "non-qualified deferred compensation plans" that could pose 409A-related problems.

[22] Notably, many of the contracts in the benefits category (e.g., bonus plans, stock option awards, and supplemental executive retirement plans) included 409A-related language and clearly qualify as "non-qualified deferred compensation plans" under Section 409A, but very few of these contracts included arbitration clauses. Since these contracts therefore do not have potentially 409A-customized arbitration clauses, I omit them from the treatment group and include them in the control group.

This relatively frequent use of arbitration in the treatment contracts suggests that they may be a good place to look for arbitral customization (as this chapter does). With regard to the hypothesized 409A-related effect on arbitration clause use, though, the evidence in Table 1 is mixed: while the treatment contracts filed in 2005-2008 do show a small increase in arbitration clause incidence (concurrent with a small decrease for control contracts), the treatment contracts filed in 2009-2013 show a sizeable drop in arbitration clause incidence (quite a bit larger than the concurrent decrease for control contracts).

In Table 2, I report the percentage of treatment clauses and control clauses that contain each of the features described in Part II.B above. As a point of reference, I also report analogous percentages (where available) for O'Connor et al.'s (2012) sample of arbitration clauses in Fortune 1500 CEO employment contracts – as mentioned earlier, this is the only other sample of non-adhesive arbitration clauses that has been analyzed for customization.

Some of the features in Table 2 warrant further explanation – for the administering authority, I report the percentage of arbitration clauses specifying that arbitration is to be administered by the AAA or by JAMS, as well as the percentage of arbitration clauses that do not specify administration by the AAA or JAMS.[23] For "off-the-rack" sets of procedural rules, I divide these into three broad categories – rules provided by the AAA, rules provided by JAMS, and none of the above – then I further divide the first two categories into: (i) the two most frequently-specified sets of procedural rules for each institution (commercial rules and employment rules for AAA; comprehensive rules and employment rules for JAMS); (ii) an

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[23] Along with the AAA, JAMS (formerly known as Judicial Arbitration and Mediation Services, Inc.) is the other major U.S.-based alternative dispute resolution service provider. The vast majority of the arbitration clauses in my dataset that do not specify administration by the AAA or by JAMS do not specify any administering authority, although a very small number of clauses do specify other administering institutions (such as the International Centre for Settlement of Investment Disputes (ICSID) or the Financial Industry Regulatory Authority (FINRA)).

"other" category that aggregates the less frequently-specified sets of procedural rules for each institution;[24] (iii) a "general" category for clauses that call generally for "AAA procedural rules" or the like (or "JAMS procedural rules" or the like), instead of a specific set of procedural rules; and (iv) an "any" category for clauses that call for any AAA procedural rules (or any JAMS procedural rules), whether specific or general.[25] For the number of arbitrators, I distinguish between four situations: (i) clauses that call for one arbitrator to resolve disputes; (ii) clauses that call for a panel of three arbitrators to resolve disputes; (iii) "hybrid" clauses that, e.g., call for different numbers of arbitrators in different circumstances;[26] and (iv) clauses that are silent as to the number of arbitrators that will resolve disputes. Finally, for time limits, I code for the imposition of any time limit upon the arbitration – i.e., any arbitration-related requirement that must occur within a certain number of days, months, or years.[27]

With regard to the arbitral customization literature, the most important aspect of Table 2 is that several features occur fairly often in both my treatment and control clauses. For instance, more than two-thirds of the treatment and control clauses address the number of arbitrators that will hear disputes (with this figure approaching three-fourths in the treatment clauses); more than

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[24] For AAA-provided procedural rules, the aggregated "other" category includes its Expedited Arbitration Rules, its International Arbitration Rules, and its Procedures for Large, Complex Commercial Disputes. For JAMS-provided procedural rules, the aggregated "other" category includes its Commercial Arbitration Rules, its International Arbitration Rules, and its Streamlined Arbitration Rules.

[25] Category (iv) – the "any" category – aggregates categories (i) through (iii).

[26] An examination of various "hybrid" clauses revealed a variety of possible scenarios, including the following examples: (i) the parties can have a single arbitrator if they can agree upon who it will be, but will have a three-arbitrator panel otherwise; (ii) the parties will have a single arbitrator for low-value claims and a three-arbitrator panel for high-value claims; and (iii) each party chooses an arbitrator and these two arbitrators choose a third arbitrator to complete the panel.

[27] Although I initially attempted to code for the presence of a limitations period (per O'Connor et al. (2012)), I had greater success with coding more generally for the presence of any time limit upon the arbitration. This can reflect many different types of time limits imposed on the arbitration – in addition to limitations periods, some of the most common time limits in my dataset include time limits for the arbitrator selection process, time limits for the actual hearing before the arbitrators, time limits for arbitrators to render their decisions after the hearing concludes, and overall time limits for the arbitration process.

twenty percent of the treatment and control clauses require arbitrators to possess pertinent qualifications or expertise (with this figure exceeding twenty-five percent in the treatment clauses); more than twenty percent of the treatment and control clauses impose some type of time limit upon the arbitration (with this figure exceeding one-third in the control clauses); and almost twenty percent of the treatment and control clauses require arbitrators to render written opinions (nearly twice the rate seen in the O'Connor et al. sample).[28]

Unfortunately, I am unable to compare incidence rates with the O'Connor et al. sample for several arbitration clause features – for instance, neither the number of arbitrators nor the arbitrator qualifications requirement were reported in that paper, and I was unable to reliably code for some of the features (e.g., evidentiary restrictions and limitation periods) that were reported in that paper. Nevertheless, Table 2 indicates that arbitral customization is not as rare in non-adhesive contexts as the O'Connor et al. paper suggests – in part because (i) some of the features occurring fairly often in Table 2 were absent from that paper's results, and in part because (ii) Table 2 simply reflects a broader collection of non-adhesive contracts than were studied in that paper.

One other aspect of Table 2 bears mentioning – although many of the features I consider were more common in my sample than in O'Connor et al.'s sample, the most obvious exception is the percentage of arbitration clauses that specify an administering authority. This percentage is much lower in my sample (both in the treatment and control clauses) than in the Fortune 1500 CEO employment agreements that O'Connor et al. study. Although striking, this discrepancy

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[28] One caveat bears mentioning with regard to the number of arbitrators – since "off-the-rack" sets of procedural rules generally provide a default number of arbitrators, parties may simply be specifying the default number of arbitrators in the particular set of "off-the-rack" rules that they are using. (In Table 2, this would almost always be one – although some types of "off-the-rack" rules, especially those intended for international arbitration, specify a default of three arbitrators, these rules are specified very rarely in my sample.) Even if this is the case, though, Table 2 still shows substantial percentages of three-arbitrator and "hybrid" setups that will almost always be deviations from the "off-the-rack"-specified default number of arbitrators.

likely reflects the different types of contracts present in each sample – it seems plausible that arbitration clauses in contracts between Fortune 1500 companies and their CEOs would specify an administering authority (which is almost always the AAA) at a much higher rate than the gamut of contracts filed with the SEC.[29]

Finally, Table 3 looks at the incidence of customizations in treatment clauses before, during, and after the introduction of Section 409A – providing an initial look at whether Section 409A may have affected arbitral customization in treatment clauses. Notably, several features became more common in treatment clauses during 2005-2008 and even more common during 2009-2013: specification of an administering authority (both AAA and JAMS); use of employment-related "off-the-rack" procedural rules; specification of the number of arbitrators (particularly a single arbitrator); requirements that arbitrators possess certain qualifications; and requirements that arbitrators render written opinions. (Of course, these increases may reflect general trends that are present in control clauses as well – the econometric approaches described below will ascertain whether they can actually be attributed to Section 409A.)

IV.   Econometric Analysis

 A. Description

In this section, I describe the difference-in-differences approaches I use to analyze (i) whether Section 409A affected the incidence of arbitration clauses in treatment contracts, and (ii) whether Section 409A affected the incidence of various customizations within these treatment clauses.

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[29] I also re-checked my machine coding procedure and employed another round of manual validation to allay concerns regarding false negatives.

1. Section 409A's Effect on Arbitration Clause Incidence

In my first difference-in-differences analysis, I compare arbitration clause incidence in treatment contracts before, during, and after the introduction of Section 409A, differencing out the concurrent change in arbitration clause incidence for control contracts. To implement this analysis, I use my entire dataset of contracts to estimate the following equation:

$$Arbitration_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Interim_i + \beta_3 Post_i$$

$$+ \beta_4 Treatment * Interim_i + \beta_5 Treatment * Post_i + \beta_6' State_{ij}$$

$$+ \beta_7' Year_{ik} + \beta_8' SIC_{il} + \beta_9' Type_{im} + \varepsilon_i. \tag{1}$$

Here, the dependent variable, $Arbitration$, is an indicator for the presence of an arbitration clause in contract i. On the right-hand-side, the $Treatment$ variable is an indicator that takes a value of 1 if contract i is a treatment contract and a value of 0 if it is a control contract. The $Interim$ and $Post$ variables are indicators for whether contract i was filed with the SEC during the interim period between 2005 and 2008 (after Section 409A was introduced but before its final compliance date) or during the period between 2009 and 2013 (after Section 409A's final compliance date), respectively.[30] The interaction term $Treatment * Interim$ then yields a difference-in-differences estimate (β_4) of Section 409A's effect on arbitration clause incidence in treatment contracts filed between 2005 and 2008 relative to treatment contracts filed between 2001 and 2004 (differencing out the concurrent change in arbitration clause incidence in control contracts). Similarly, the interaction term $Treatment * Post$ yields a difference-in-differences estimate (β_5) of Section 409A's effect on arbitration clause incidence in treatment contracts filed between 2009 and 2013 relative to treatment contracts filed between 2001 and 2004 (differencing out the concurrent change in arbitration clause incidence in control contracts).

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[30] The omitted category is contracts that were filed between 2001 and 2004, before Section 409A was introduced.

I also include a series of controls in Equation (1) for factors other than Section 409A that might affect arbitration clause incidence in these contracts.[31] The $State$ term represents a vector of state-level fixed effects, where the indicator for state j takes a value of 1 if contract i has a state j choice-of-law clause or is filed by a company legally incorporated or physically headquartered in state j. The $Year$ term represents a vector of year-level fixed effects, where the indicator for year k takes a value of 1 if contract i was filed with the SEC in that year. The SIC term represents a vector of industry-level fixed effects corresponding to filing companies' two-digit Standard Industrial Classification (SIC) codes. The $Type$ term represents a vector of contract-type fixed effects corresponding to the various contract-type categories I identified through machine-coding. The standard errors in equation (1) are clustered by contract type, accounting for systematic correlation of error terms within each of the contract-type categories.

2. Section 409A's Effect on Customization Incidence

I employ a similar approach in my second difference-in-differences analysis, comparing the incidence of a particular customization for treatment clauses before, during, and after the introduction of Section 409A and differencing out the concurrent change in the customization's incidence in control clauses. To implement this analysis, I use a sub-sample of my dataset – only the contracts I have coded as containing arbitration clauses[32] – to estimate variants of the following equation:

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[31] These controls are similar to those included in my regression equations in Chapter 1's analysis of business court establishment and RUAA adoption on arbitration clause incidence.

[32] Note that this sub-sample is comprised of contracts with "treatment clauses" and contracts with "control clauses" (and no other contracts), thereby facilitating the contemplated difference-in-differences analysis.

$$Custom_i = \beta_0 + \beta_1 Treatment_i + \beta_2 Interim_i + \beta_3 Post_i$$

$$+ \beta_4 Treatment * Interim_i + \beta_5 Treatment * Post_i + \beta_6' State_{ij}$$

$$+ \beta_7' Year_{ik} + \beta_8' SIC_{il} + \beta_9' Type_{im} + \varepsilon_i. \tag{2}$$

Besides the data used to estimate them, the primary difference between Equation (2) and

Equation (1) is the dependent variable – Equation (2) replaces $Arbitration$ with $Custom$, which

is simply a placeholder for different customization-related dependent variables.[33]

When constructing these dependent variables, it is important to distinguish between two

types of customizations – those that have non-dichotomous outcomes (e.g., administering

institution – as I have coded it, the administering institution can be AAA, JAMS, or neither AAA

nor JAMS),[34] and those that have dichotomous outcomes (e.g., written opinions – either the

arbitration clause calls for a written opinion or it does not).[35] For non-dichotomous

customizations, I can take two different approaches: either (i) define separate indicators for each

of the outcomes and estimate Equation (2) separately for each indicator,[36] or (ii) define a single

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[33] For example, in order to test whether Section 409A affects how often treatment clauses require written opinions, I will construct an indicator variable for written opinions and then estimate Equation (2) using that indicator as the dependent variable. As another example, in order to test whether Section 409A affects how often treatment clauses require arbitrators to possess certain qualifications or expertise, I will construct an indicator variable for arbitrator qualifications and then estimate Equation (2) using that indicator as the dependent variable.

[34] Based on my machine-coding, the customizations that have non-dichotomous outcomes are (i) the administering institution (AAA, JAMS, or neither AAA nor JAMS), (ii) "off-the-rack" procedural rules (which can either have three broad outcomes – AAA-provided, JAMS-provided, or neither – or nine specific outcomes for each specific set of procedural rules), and (iii) number of arbitrators (one, three, hybrid, and not specified).

[35] Based on my machine-coding, the customizations that have dichotomous outcomes are arbitrator qualifications (either the clause calls for arbitrators to possess qualifications or it does not), written opinions (either the clause calls for a written opinion or it does not), discovery restrictions (either the clause imposes discovery restrictions or it does not), time limits (either the clause imposes time limits on the arbitration or it does not), and punitive damage restrictions (either the clause imposes punitive damage restrictions or it does not).

[36] For instance, when analyzing administering institutions, I would construct one indicator for AAA-administered arbitration clauses, a second indicator for JAMS-administered arbitration clauses, and a third indicator for neither-AAA-nor-JAMS-administered arbitration clauses. I would then estimate Equation (2) once using the AAA-administered indicator as the dependent variable (yielding a diff-in-diffs estimate of Section 409A's effect on AAA administration), estimate Equation (2) a second time using the JAMS-administered indicator as the dependent variable (yielding a diff-in-diffs estimate of Section 409A's effect on JAMS administration), and estimate Equation

dependent variable with more than two possible outcomes and estimate Equation (2) using multinomial logit methods.[37] For dichotomous customizations, the approach here is simpler – the dependent variable in Equation (2) is simply an indicator that takes a value of 1 if the customization is present and a value of 0 if the customization is absent.

On the right-hand-side, the $Treatment$ indicator takes a value of 1 if contract i contains a treatment clause and a value of 0 if it contains a control clause.[38] The interaction term $Treatment * Interim$ then yields a difference-in-differences estimate (β_4) of Section 409A's effect on a particular customization in treatment clauses from 2005-2008 relative to treatment clauses in 2001-2004 (differencing out the concurrent change in the customization's incidence in control clauses). Similarly, the interaction term $Treatment * Post$ yields a difference-in-differences estimate (β_5) of Section 409A's effect on a particular customization in treatment clauses from 2009-2013 relative to treatment clauses in 2001-2004 (differencing out the concurrent change in the customization's incidence in control clauses).

B. Results

1. Section 409A's Effect on Arbitration Clause Incidence

Table 4 reports the results I obtained from estimating Equation (1) – that is, estimates of Section 409A's effect on arbitration clause incidence in treatment contracts filed between 2005-

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(3) a third time using the neither-AAA-nor-JAMS indicator as the dependent variable (yielding a diff-in-diffs estimate of Section 409A's effect on non-AAA and non-JAMS-administered arbitration).

[37] For instance, when analyzing administering institutions, I could construct a dependent variable that takes a value of 0 for neither AAA-nor-JAMS-administered arbitration clauses, a value of 1 for AAA-administered arbitration clauses, and a value of 2 for JAMS-administered arbitration clauses. I would then estimate Equation (2) once using multinomial logit methods.

[38] Recall that by construction, every contract in the sub-sample I use to estimate Equation (2) contains either a "treatment clause" or a "control clause" and that this distinction depends on contract type – i.e., whether the contract is a "treatment contract" or a "control contract." Thus, the $Treatment$ indicator (which in Equation (1) distinguished between treatment contracts and control contracts) distinguishes between treatment clauses and control clauses in Equation (2).

2008 and between 2009-2013. Hypothesis 1 suggested that Section 409A might make arbitration (and the attendant possibility of 409A-customized dispute resolution) more attractive to companies and executives, leading them to include more arbitration clauses in their contracts. However, Table 4 offers no support for this idea – there is an insignificant effect on arbitration clause use in treatment contracts filed between 2005 and 2008, and there is actually a weakly-significant two-percentage-point decrease in arbitration clause use for treatment contracts filed between 2009 and 2013 (in each case, relative to the concurrent change in arbitration clause use in control contracts).

If anything, Section 409A seems to have *reduced* rather than increased companies' and executives' use of arbitration clauses – a result that can be interpreted in any number of ways. First, it suggests that the prospect of 409A-customized arbitral procedures was insufficient to sway companies and executives towards arbitration – and, more generally, that "customizability" may have little influence on parties' choices between arbitration and other forms of dispute resolution. Second, this decrease could mean that some companies and executives found other types of dispute resolution to be a better fit for 409A-related disputes than arbitration – for instance, executives may prefer bringing companies' 409A-related errors and the large resulting tax penalties before courts or juries rather than arbitrators.[39] Third, this decrease could mean that some companies and executives were less willing to commit *ex ante* to a particular type of dispute resolution (whether arbitration or otherwise) after Section 409A. Although Section 409A introduced a new type of dispute that seems amenable to customized arbitration, it also added to the universe of dispute types covered by a contractually-specified dispute resolution choice. Accordingly, parties may have preferred a more flexible, "wait-and-see" approach to dispute

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[39] *Davidson v. Henkel* in note 9 *supra* provides some support for this point.

resolution after Section 409A – finding out more about the disputes that actually arise before deciding how they would be resolved.

Even if some or all of these explanations hold, though, two caveats to Table 4 are worth emphasizing. First, these results only speak to whether Section 409A affected companies' and executives' use of arbitration clauses, not their overall use of arbitration. Indeed, companies and executives could take a "wait-and-see" approach by writing contracts that do not contain arbitration clauses (or any other dispute resolution provisions, for that matter), but then preferentially submit their 409A-related disputes to arbitration once these disputes arise – this would be entirely consistent with Table 4. Second, even if Section 409A did not increase (or even decreased) the use of arbitration clauses in company-executive contracts, it may still have prompted the companies and executives that *did* include these clauses to customize them accordingly – a possibility that I will consider below.

2. Section 409A's Effect on Customization Incidence

Table 5 reports my first set of results from estimating variants of Equation (2) – here, I look at how Section 409A affected the three customizations with non-dichotomous outcomes (administering authorities, "off-the-rack" sets of procedural rules, and number of arbitrators). As discussed in Part V.A.2 above, I can take two different econometric approaches for these non-dichotomous customizations – while Table 5 reports results from the first approach (in which I define separate indicators for each outcome and estimate Equation (2) separately for each indicator), I also report results from the second approach (in which I define a single dependent variable with more than two outcomes and estimate Equation (2) using multinomial logit methods) in Table 5a. However, the following discussion will focus on the results in Table 5 for two reasons: (i) I was unable to obtain results for "off-the-rack" sets of procedural rules using

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multinomial logit methods,[40] and (ii) the results in Tables 5 and 5a are otherwise substantively similar.

Table 5 offers considerable evidence that Section 409A did, in fact, affect treatment clauses – here, I obtain statistically significant positive effects for administering authorities (both AAA and JAMS, ranging from two- to five-percentage-point increases) and for employment-related "off-the-rack" procedural rules (starting at six percentage points in 2005-2008 and increasing to eight percentage points in 2009-2013), and I also observe increased use of "off-the-rack" procedural rules in general (as evidenced by a statistically significant negative effect for "none of the above"). These results are all consistent with Hypothesis 3a – in which parties facing more frequently-occurring disputes may find it quicker and easier to make these fundamental choices in advance (rather than trying to make these choices when already embroiled in disputes, or trying to proceed on an *ad hoc* basis).

Table 5 also indicates that Section 409A affected specification of the number of arbitrators in treatment clauses – clauses from both 2005-2008 and 2009-2013 were more likely to specify "hybrid" setups, clauses from 2005-2008 were less likely to specify three-arbitrator panels, and clauses from 2009-2013 were more likely to specify a single arbitrator and to address the number of arbitrators in general (evidenced by a statistically significant negative effect for "not specified"). Collectively, these results suggest that parties responded to Section 409A by shifting away from three-arbitrator setups and towards one-arbitrator and "hybrid" setups – per

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[40] As suggested in note 34 *supra*, the dependent variable for estimating "off-the-rack" procedural rules using multinomial logit methods could either have three outcomes (AAA-provided, JAMS-provided, or neither-AAA-nor-JAMS provided) or nine outcomes (corresponding to the various specific sets of procedural rules). Although I tried to run multinomial logit regressions using both of these dependent variables, neither of these regressions converged. As a result, Table 5a only reports multinomial logit results for administering authorities and number of arbitrators.

Hypothesis 3b, the post-409A possibility of more frequent disputes may have made the speed

and cost advantages of a single arbitrator particularly attractive.[41]

Table 6 reports the remaining estimates from Equation (2) – here, I look at how Section

409A affected the five customizations that have dichotomous outcomes. Like Table 5, Table 6

provides evidence that Section 409A affected treatment clauses – specifically, it shows

statistically significant increases in arbitrator expertise requirements (a four-percentage-point

increase in 2005-2008 that widens to five percentage points in 2009-2013) and in written opinion

requirements (a one-and-a-half-percentage-point increase in 2005-2008 that widens to nearly

four percentage points in 2009-2013).[42] These findings are consistent with Hypotheses 2c and

2d, suggesting that these customizations may improve the accuracy and efficiency of arbitral

decisions, as well as parties' confidence in these decisions, in complex 409A-related disputes.

In considering the results in Tables 5 and 6 collectively, it is important to remember the

considerable dispute resolution challenges that Section 409A posed for companies and

executives – notably, several of the arbitral customizations that seem appropriate for more

complicated disputes seem less appropriate for more frequent disputes, and vice versa (a tension

which resulted in various conflicting hypotheses in Part II.C. above). Against this backdrop,

Tables 5 and 6 may reflect a sophisticated and coherent response to these challenges – for

instance, companies and executives seem to be shifting away from the expense and delay of

three-arbitrator panels towards the relative economy and speed of a single arbitrator (a

reasonable response to more frequent disputes), but also requiring this arbitrator to possess

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[41] Drawing on the connection between single-arbitrator setups and "off-the-rack" sets of procedural rules discussed in note 28 *supra*, some of the observed increase in single-arbitrator specifications could also reflect the increased use of "off-the-rack" sets of procedural rules (e.g., the AAA's Employment Rules) that use a single arbitrator as a default.

[42] The magnitudes of these effects are all the more impressive when compared to the underlying averages – arbitrator expertise and written opinion requirements were present in 24% and 16% of treatment clauses in 2001-2004, respectively.

certain qualifications or expertise and to render written opinions (which are reasonable responses to more complex disputes). Accordingly, the results in Tables 5 and 6 hold substantial significance for the arbitration literature – not only as the fruits of a new empirical approach (i.e., analyzing how parties customize arbitration in response to a policy change), but also as evidence of the kind of nuanced and mutually-beneficial customization that has often been discussed but rarely seen.

V.   Conclusion

In this chapter, I considered how the introduction of Section 409A of the Internal Revenue Code affected the arbitration provisions in contracts between companies and executives – a novel approach to examining whether and how parties customize arbitration. As part of this analysis, I also used Python-based programming to "machine-code" all of the arbitration clauses in my dataset for the presence or absence of various customizations. In addition to facilitating my difference-in-differences analysis, this machine-coding process also yielded the largest and most diverse sample of non-adhesive contracts ever analyzed for arbitral customization – a contribution in and of itself to the arbitration literature.

Generally, my results suggest that arbitral customization is more common in non-adhesive contracts than was previously thought. First, I found that several types of customizations occur fairly often in my sample of material contracts – both in the "treatment contracts" (i.e., executive employment agreements, change-in-control agreements, and severance agreements) that are the focus of my Section 409A analysis, and in the "control contracts" that comprise the rest of my sample. Second, I found that companies and executives actually did customize the arbitration clauses in their contracts in response to Section 409A – responding both to the prospect of increasingly complex disputes (e.g., by requiring arbitrators to possess

certain qualifications and to render written opinions) and to the prospect of increasingly common disputes (e.g., by increasingly selecting one arbitrator rather than three arbitrators to hear their disputes). These findings provide needed support for the oft-stated but rarely-demonstrated idea that parties customize arbitration in a mutually-beneficial fashion. Importantly, they also open the door to new and potentially fruitful avenues of research – for instance, though this chapter focuses primarily on the incidence of customizations in company-executive treatment contracts, future work could examine the relationship between these customizations and the many different types of control contracts that are present in my dataset.

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Table 1: Summary Statistics - Arbitration Clause Incidence

	Filed 2001-2004	Filed 2005-2008	Filed 2009-2013
Treatment contracts:			
% with arb. clauses	44.71%	45.48%	40.03%
Number of contracts	16,805	14,895	15,955
Control contracts:			
% with arb. clauses	11.78%	10.29%	9.10%
Number of contracts	95,110	117,467	130,058

Notes: Treatment contracts refer to executive employment agreements, change-in-control agreements, and severance agreements that were filed with the Securities and Exchange Commission during the specified time period. Control contracts refer to benefits plans, commercial contracts, finance contracts, merger agreements, partnership agreements, and all other material contracts that were filed with the Securities and Exchange Commission during the specified time period. Contract type and arbitration clause incidence were identified through regular expression-based searches.

Table 2: Summary Statistics - Customization Incidence

	Treatment clauses		Control clauses		Clauses from O'Connor et al. (2012)	
	Number	Percent	Number	Percent	Number	Percent
Administering authority:						
Administered by AAA:	6,662	30.36%	11,581	31.23%	399	85.07%
Administered by JAMS:	1,496	6.82%	2,497	6.73%	30	6.40%
Neither AAA nor JAMS specified:	14,183	64.63%	23,528	63.44%	40	8.53%
"Off-the-rack" procedural rules:						
AAA-provided rules:						
Commercial Rules	4,539	20.68%	11,688	31.51%	105	22.39%
Employment Rules	7,149	32.58%	3,099	8.36%	119	25.37%
Other specific AAA rules	81	0.37%	822	2.22%	6	1.28%
General AAA rules	6,907	31.47%	8,720	23.51%	179	38.17%
Any AAA rules	18,272	83.26%	23,485	63.32%	409	87.21%
JAMS-provided rules:						
Comprehensive Rules	153	0.70%	380	1.02%	--	--
Employment Rules	826	3.76%	587	1.58%	--	--
Other specific JAMS rules	124	0.57%	652	1.76%	--	--
General JAMS rules	517	2.36%	915	2.47%	28	5.97%
Any JAMS rules	1,558	7.10%	2,445	6.59%	28	5.97%
None of the above:	2,411	10.99%	11,703	31.55%	32	6.82%

Table 2 (continued): Summary Statistics - Customization Incidence

	Treatment clauses		Control clauses		Clauses from O'Connor et al. (2012)	
	Number	Percent	Number	Percent	Number	Percent
Number of arbitrators:						
One	11,422	52.05%	15,160	40.88%	-	-
Three	2,285	10.41%	3,601	9.71%	-	-
Hybrid	2,971	13.54%	8,148	21.97%	-	-
Not specified	5,891	26.84%	11,723	31.61%	-	-
Arbitrator qualifications:	6,030	27.48%	7,686	20.72%	-	-
Written opinions:	4,057	18.49%	6,887	18.57%	47	10.02%
Discovery restrictions:	895	4.08%	1,397	3.77%	30	6.40%
Time limits:	4,734	21.57%	12,630	34.05%	-	-
Punitive damage restrictions:	1,285	5.86%	3,822	10.31%	46	9.81%
Total number of arbitration clauses:	21,945	100.00%	37,088	100.00%	469	100.00%

Notes: Treatment contracts refer to executive employment agreements, change-in-control agreements, and severance agreements that were filed with the Securities and Exchange Commission between 2001 and 2013. Control contracts refer to benefits plans, commercial contracts, finance contracts, merger agreements, partnership agreements, and all other material contracts that were filed with the Securities and Exchange Commission during the specified time period. The O'Connor et al. (2012) sample refers to arbitration clauses from Fortune 1500 CEO employment agreements concluded between 1995 and 2005. For the treatment contracts and control contracts, contract type, arbitration clause incidence, and arbitration clause customizations were all identified through regular expression-based searches. For the O'Connor et al. sample, all numbers and percentages are taken or calculated from the figures reported in that paper.

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Table 3: Summary Statistics - Customizations in Treatment Clauses, 2001-2013

% of treatment clauses filed in:	2001-2004	2005-2008	2009-2013
Administering authority:			
Administered by AAA:	27.34%	31.27%	32.49%
Administered by JAMS:	4.54%	7.72%	9.10%
Neither AAA nor JAMS specified:	69.42%	63.72%	59.99%
"Off-the-rack" procedural rules:			
AAA-provided rules:			
Commercial Rules	21.71%	20.93%	19.29%
Employment Rules	28.24%	35.40%	35.50%
Other specific AAA rules	0.47%	0.47%	0.14%
General AAA rules	37.40%	27.97%	27.36%
Any AAA rules	86.65%	82.31%	80.21%
JAMS-provided rules:			
Comprehensive Rules	0.44%	1.05%	0.56%
Employment Rules	1.76%	4.06%	5.98%
Other specific JAMS rules	0.55%	0.62%	0.56%
General JAMS rules	1.81%	2.66%	2.99%
Any JAMS rules	4.22%	8.02%	9.97%
None of the above:	10.03%	11.21%	11.60%
Number of arbitrators:			
One	45.14%	57.29%	56.86%
Three	9.64%	12.67%	9.60%
Hybrid	13.65%	14.04%	12.73%
Not specified	31.57%	26.12%	20.81%
Arbitrator qualifications:	24.18%	28.48%	31.10%
Written opinions:	16.10%	18.56%	21.45%
Discovery restrictions:	3.21%	4.61%	4.65%
Time limits:	22.03%	21.86%	20.67%
Punitive damage restrictions:	5.48%	6.33%	6.04%

Notes: Treatment clauses refer to arbitration clauses in executive employment agreements, change-in-control agreements, and severance agreements that were filed with the Securities and Exchange Commission between 2001 and 2013. Contract type, arbitration clause incidence, and arbitration clause customizations were all identified through regular expression-based searches.

Table 4: Difference-in-Differences Estimates - Arbitration Clause Incidence

Years:	2005-2008	2009-2013
Arbitration clause	1.9869 (1.33854)	-2.08482* (1.12575)

Notes: The above results are from a difference-in-differences regression estimated using my primary sample of contracts. The regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company and for contract type. Contract type and arbitration clause incidence were identified through regular expression-based searches. Coefficients and standard errors were multiplied by 100. Robust standard errors that are clustered by contract type are in parentheses; * significant at 10%; ** significant at 5%.

Table 5: Difference-in-Differences Estimates for Non-Dichotomous Customizations

Arbitral customizations:	2005-2008	2009-2013
Administering authority:		
Administered by AAA:	3.91449**	4.86123**
	(0.98859)	(0.54424)
Administered by JAMS:	2.21079**	3.2125**
	(0.35096)	(0.7352)
Neither AAA nor JAMS specified:	-5.06631**	-7.72356**
	(1.05555)	(0.48875)
"Off-the-rack" procedural rules:		
AAA procedural rules:		
Commercial Rules	2.77152**	-0.21865
	(0.52564)	(1.15272)
Employment Rules	6.21119**	8.11814**
	(1.58116)	(1.34499)
Other specific AAA rules	-0.18491	-0.94789**
	(0.24977)	(0.28182)
General AAA rules	-8.43885**	-4.84855**
	(1.49567)	(1.63105)
Any AAA rules	-0.5918	1.85761**
	(0.75671)	(0.64326)
JAMS procedural rules:		
Comprehensive Rules	-0.09521	-0.39582*
	(0.15934)	(0.21524)
Employment Rules	1.99944**	3.08926**
	(0.3406)	(0.28099)
Other specific JAMS rules	0.08856	-0.58861**
	(0.18731)	(0.27798)
General JAMS rules	0.56729	1.46016*
	(0.37727)	(0.70576)
Any JAMS rules	2.65551**	3.93554**
	(0.49648)	(0.79389)

Table 5 (continued): Difference-in-Differences Estimates for Non-Dichotomous Customizations

Arbitral customizations:	2005-2008	2009-2013
"Off-the-rack" proc. rules (cont.):		
None of the above:	-1.77292** (0.56008)	-4.88661** (0.60878)
Number of arbitrators:		
One	-1.16148 (1.25107)	5.83558** (0.99886)
Three	-3.87681** (0.82809)	0.93312 (0.85932)
Hybrid	2.78228** (1.1169)	2.08343* (1.03777)
Not specified	-1.31026 (0.93729)	-9.03082** (1.14003)

Notes: Each row reports the results from a difference-in-differences regression estimated using a sub-sample of the contracts in my primary sample (consisting of all of the contracts I have coded as including arbitration clauses). Each regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company and for contract type. Contract type, arbitration clause incidence, and arbitration clause customizations were all identified through regular expression-based searches. Coefficients and standard errors have been multiplied by 100. Robust standard errors that are clustered by contract type are in parentheses; * significant at 10%; ** significant at 5%.

Table 5a: Multinomial Logit Estimates for Non-Dichotomous Customizations

Arbitral customizations:	2005-2008	2009-2013
Regression 1: administering authority		
Administered by AAA:	0.2149868** (0.0485244)	0.2907711** (0.0229573)
Administered by JAMS:	0.403193** (0.06900031)	0.7190748** (0.0763133)
Regression 2: number of arbitrators		
One	0.0319803 (0.0628061)	0.4441504** (0.0697034)
Three	-0.1894282** (0.0844095)	0.5179344** (0.0986394)
Hybrid	0.1908745* (0.1081534)	0.4442935** (0.1168869)

Notes: This table reports the results from two separate difference-in-differences regressions estimated with multinomial logit methods using a sub-sample of the contracts in my primary sample (consisting of all of the contracts I have coded as including arbitration clauses). Each regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company and for contract type. Contract type, arbitration clause incidence, and arbitration clause customizations were all identified through regular expression-based searches. Robust standard errors that are clustered by contract type are in parentheses; * significant at 10%; ** significant at 5%.

Table 6: Difference-in-Differences Estimates for Dichotomous Customizations

Arbitral customizations:	2005-2008	2009-2013
Arbitrator qualifications:	4.05591**	5.58265**
	(0.73653)	(1.4329)
Written opinions:	1.46894**	3.74487**
	(0.68771)	(1.28465)
Discovery restrictions:	0.90554**	-0.20623
	(0.17787)	(0.25908)
Time limits:	1.3177	-0.41247
	(1.99551)	(1.88716)
Punitive damages restrictions:	0.24718	0.61571
	(0.37633)	(0.38597)

Notes: Each row reports the results from a difference-in-differences regression estimated using a sub-sample of the contracts in my primary sample (consisting of all of the contracts I have coded as including arbitration clauses). Each regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company and for contract type. Contract type, arbitration clause incidence, and arbitration clause customizations were all identified through regular expression-based searches. Coefficients and standard errors were multiplied by 100. Robust standard errors that are clustered by contract type are in parentheses; * significant at 10%; ** significant at 5%.

Chapter 3

Clearing the Way, but for What?
How *Adams* Affected Employment Arbitration between Sophisticated Parties

In *Circuit City Stores, Inc. v. Adams*, 532 U.S. 105 (2001), the Supreme Court resolved an important circuit split regarding the enforceability of arbitration clauses in employment agreements. The *Adams* case involved the scope of an exemption to the Federal Arbitration Act (FAA) – while the FAA provides that arbitration clauses are generally enforceable, it also contains an exemption for clauses in "contracts of employment of seamen, railroad employees, or any other class of workers engaged in foreign or interstate commerce."[1] Accordingly, arbitration clauses in any employment agreements falling within this exemption cannot be enforced.

On one hand, nine of the twelve federal circuit courts interpreted this exemption narrowly, limiting it to the employment agreements of transportation workers (i.e., workers who, like seamen or railroad employees, are actually engaged in foreign or interstate commerce). On the other hand, the Ninth Circuit interpreted "engaged in foreign or interstate commerce" very broadly and applied this exemption to virtually *all* employment agreements – essentially refusing to enforce employment-related arbitration clauses. (On the sidelines, neither the Eighth nor the Eleventh Circuits ever addressed the exemption's scope.) In *Adams*, the Supreme Court rejected the Ninth Circuit's anomalous approach and held that arbitration clauses were enforceable in most (i.e., non-transportation-worker) employment agreements.

Despite resolving a rather lopsided circuit split, the *Adams* decision still generated some controversy – commentators had criticized employers' practice of imposing arbitration clauses

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[1] 9 U.S.C. § 2.

on their rank-and-file employees (via adhesive employment agreements),[2] and subsequently

criticized *Adams* for letting this practice continue.[3] In this chapter, though, I consider how *Adams*

affected a very different type of employment agreement – those between companies and their

executives. Because the Ninth Circuit had flatly refused to enforce arbitration clauses in

employment agreements (regardless of who these employees were or how much bargaining

power they had), I argue that some companies and executives in that circuit were therefore

unable to include arbitration clauses in their agreements – and that *Adams* subsequently cleared

the way for their use.

This argument begins from the proposition that companies and executives use arbitration

clauses in three situations: (i) the parties both prefer arbitration to litigation (I call the resulting

clauses "collective clauses"); (ii) an arbitration-preferring party offers some concession to a non-

arbitration-preferring party in exchange for the clause (I call these "negotiated clauses"); or (iii)

an arbitration-preferring party with superior bargaining power simply imposes the clause on a

non-arbitration-preferring party (I call these "imposed clauses"). While enforceability (and

hence the *Adams* decision) is immaterial in the collective scenario, it is essential in both the

negotiated and imposed scenarios, where the non-arbitration-preferring parties would escape the

clause if they could. Therefore, the *Adams* decision should have facilitated the use of negotiated

clauses and imposed clauses in the Ninth Circuit (where employment-related arbitration clauses

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[2] As mentioned in Chapter 2, adhesive employment agreements are offered to potential employees on a "take-it-or-leave-it" basis. Many commentators expressed concern that including arbitration clauses in these agreements meant that rank-and-file employees were signing away their ability to bring important claims in court as a condition of employment – often without understanding or even being aware of these clauses. See, e.g., Sarah Rudolph Cole, *Incentives and Arbitration: The Case Against Enforcement of Executory Arbitration Agreements Between Employers and Employees*, 64 UMKC L. REV.. 449 (1996); David S. Schwartz, *Enforcing Small Print to Protect Big Business: Employee and Consumer Rights Claims in an Age of Compelled Arbitration*, 1997 WIS. L. REV. 33; Jeffrey W. Stempel, *Bootstrapping and Slouching Toward Gomorrah: Arbitral Infatuation and the Decline of Consent*, 62 BROOK. L. REV. 1381 (1996).

[3] See, e.g., David R. Wade and Curtiss K. Behrens, *Opening Pandora's Box: Circuit City v. Adams and the Enforceability of Compulsory, Prospective Arbitration Agreements*, 86 MARQUETTE. L. REV. 1 (2002-2003).

were previously unenforceable) and possibly in the Eighth and Eleventh Circuits as well (where their enforceability was previously uncertain).

To test these claims empirically, I have constructed a new dataset of approximately 30,000 executive employment agreements filed with the SEC between 1998 and 2005. I analyze the pre- and post-*Adams* use of arbitration clauses in this dataset using a difference-in-differences approach – taking the agreements filed by companies incorporated and/or headquartered in Ninth Circuit states[4] as one treatment group, the agreements filed by companies incorporated and/or headquartered in Eighth or Eleventh Circuit states[5] as another treatment group, and the remaining agreements in the dataset as a control group. As expected, I observe increased post-*Adams* use of arbitration clauses in the Ninth Circuit treatment group relative to the control group, though the Eighth and Eleventh Circuit treatment group displays insignificant post-*Adams* effects.

Using a variation of this difference-in-differences approach, I also consider whether the observed Ninth Circuit increase might be attenuated in the Ninth Circuit state of California. This alternative approach is motivated by the California courts, which have been especially active in striking arbitration clauses in employment agreements as "unconscionable" (even after *Adams*). The results show a striking discrepancy – a significant positive effect in "rest-of-the-Ninth-Circuit" states that is absent in California. Since the unconscionability doctrine should only deter imposed clauses (and should not affect negotiated clauses), this discrepancy may reflect a post-*Adams* influx of imposed clauses in most of the Ninth Circuit (but not in California). I

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[4] The states within the Ninth Circuit are Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington.

[5] The states within the Eighth Circuit are Arkansas, Iowa, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota, while the states within the Eleventh Circuit are Alabama, Florida, and Georgia.

conclude by considering the normative desirability of this result – in the context of executive employment agreements, I am more concerned by the clauses that *did not* appear in California (which may have created benefits outweighing any harms they imposed) than by the clauses that did appear elsewhere in the circuit.

The remainder of this chapter proceeds as follows: Part I provides additional legal background, reviewing pertinent provisions of the FAA as well as the history of the *Adams* case. Part II predicts *Adams'* effects on arbitration clause use in executive employment agreements – first, it provides game-theoretic intuition for how enforceability affects the three types of clauses I have identified (collective, negotiated, and imposed). Then, it draws on this intuition in hypothesizing how *Adams* affected agreements from the Ninth Circuit and from the Eighth and Eleventh Circuits. Part III describes my empirical setup, including my dataset and the difference-in-differences approach I use to test the hypotheses from Part II. Part IV presents my empirical findings, including descriptive statistics and my difference-in-differences results. Part V provides additional analysis of executive employment agreements from the Ninth Circuit, focusing on discrepant results between California agreements and "rest-of-the-Ninth-Circuit" agreements. Finally, Part VI concludes.

I.   Legal Background

Congress enacted the Federal Arbitration Act in 1925 in order to "reverse longstanding judicial hostility to arbitration agreements that had existed at English Common law and had been adopted by American courts, and to place arbitration agreements upon the same footing as other contracts."[6] To this end, the FAA provides that arbitration agreements (such as arbitration clauses) are generally enforceable: its coverage provision, § 2, indicates that arbitration

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[6] *Gilmer v. Interstate/Johnson Lane Corp.*, 500 U.S. 20, 24 (1991)

agreements in "any . . . contract evidencing a transaction involving commerce" are "valid, irrevocable, and enforceable, save upon such grounds as exist at law or in equity for the revocation of any contract."[7]

In the decades following the FAA's enactment, though, there was lingering uncertainty as to what kinds of contracts "evidenc[ed] a transaction involving commerce." Congress enacted the FAA pursuant to its power to regulate interstate commerce under the Commerce Clause of the Constitution, and the Supreme Court had historically interpreted certain language pertaining to this Commerce Clause power very broadly (e.g., the phrase "affecting commerce" is interpreted as broadly as possible),[8] and other language pertaining to this power more narrowly (e.g., the phrases "in commerce" and "engaged in commerce" are both interpreted narrowly).[9] However, no federal statute had ever used the phrase "involving commerce" before – which left the extent of the FAA's coverage unclear. In *Allied-Bruce Terminix Cos. v. Dobson*, 513 U.S. 265 (1995), the Supreme Court finally resolved this uncertainty by interpreting § 2's "involving commerce" language – and hence the FAA's coverage – as broadly as possible.

In addition to its § 2 coverage provision, the FAA also contains a coverage exemption under § 1 for "contracts of employment of seamen, railroad employees, or any other class of workers engaged in foreign or interstate commerce" – meaning that any arbitration clauses in

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[7] 9 U.S.C. § 2. I say that these clauses are generally enforceable because they can still be challenged "upon such grounds as exist at law or in equity for the revocation of any contract."

[8] In particular, the Supreme Court had interpreted the term "affecting commerce" as a signal of Congress's intent to exercise its Commerce Clause power to the fullest extent possible. As a result, statutory provisions containing this "affecting commerce" language are to be read as broadly as possible.

[9] Similarly, the Supreme Court had interpreted the terms "in commerce" and "engaged in commerce" as signals of a more limited exercise of Congress's Commerce Clause power. As a result, statutory provisions containing this "in commerce" or "engaged in commerce" language are to be read more narrowly.

these exempted contracts were unenforceable.[10] As with the "involving commerce" language in § 2, interpretive questions arose regarding the "engaged in foreign or interstate commerce" language in § 1, resulting in a (rather lopsided) split among the federal circuit courts. On one hand, nine of the ten circuits to interpret this language – the First through Seventh Circuits, the Tenth Circuit, and the D.C. Circuit – held that § 1 exempted only the employment contracts of transportation workers: individuals who, like seamen and railroad employees, are "actually engaged in the movement of goods in interstate commerce."[11,12] On the other hand, in *Craft v. Campbell Soup Co.*, 161 F.3d 1199 (9th Cir. 1998), the Ninth Circuit held that § 1 exempted virtually *all* employment contracts from the FAA's coverage – taking this language as a signal of Congress's full exercise of its Commerce Clause power.[13] (On the sidelines, neither the Eighth Circuit nor the Eleventh Circuit ever addressed § 1, so that the exemption's scope was an open question in those circuits.)

In May 2000, the Supreme Court granted certiorari in *Circuit City Stores, Inc. v. Adams* – a Ninth Circuit case that was decided in accordance with *Craft v. Campbell Soup Co.* – in order to resolve this circuit split. In March 2001, in a 5-4 decision authored by Justice Kennedy, the Supreme Court reversed the Ninth Circuit and held that § 1 only exempted the employment

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[10] 9 U.S.C. § 1.

[11] *Cole v. Burns Int'l Sec. Servs.*, 105 F.3d 1265 (D.C. Cir. 1997).

[12] *See Dickstein v. DuPont*, 443 F.2d 783 (1st Cir. 1971); *Erving v. Va. Squires Basketball Club*, 468 F.2d 1064 (2d Cir. 1972); *Tenney Eng'g Inc. v. United Elec. & Mach. Workers of Am.*, 207 F.2d 450 (3d Cir., 1953); *O'Neil v. Hilton Head Hosp.*, 115 F.3d 272 (4th Cir. 1997); *Rojas v. TK Communications, Inc.*, 87 F.3d 745 (5th Cir. 1996); *Asplundh Tree Co. v. Bates* 71 F.3d 592 (6th Cir. 1995); *Pryner v. Tractor Supply Co.*, 109 F.3d 354 (7th Cir. 1997); *McWilliams v. Logicon, Inc.*, 143 F.3d 573 (10th Cir. 1998); *Cole v. Burns Int'l Sec. Servs.*, 105 F.3d 1265 (D.C. Cir. 1997).

[13] This interpretation may seem puzzling at first - as noted above, the phrase "engaged in commerce" is now commonly understood as a signal of Congress's limited exercise of its Commerce Clause power. However, the Ninth Circuit emphasized that when the FAA was enacted in 1925, the phrase "engaged in commerce" did not yet have this meaning – instead, it was understood as coming close to a full exercise of Congress's Commerce Clause power.

contracts of transportation workers. In arriving at its decision, the majority relied principally

upon *ejusdem generis* – the interpretive principle that "[w]here general words follow specific

words in a statutory enumeration, the general words are construed to embrace only objects

similar in nature to those objects enumerated by the preceding specific words."[14] Accordingly,

the phrase "any other class of workers engaged in foreign or interstate commerce" in § 1 could

only embrace workers who were similar in nature to "seamen" and "railroad employees" – i.e.,

other transportation workers. The majority also rejected the Ninth Circuit's interpretation of the

"engaged in foreign or interstate commerce" language as signaling Congress's full exercise of its

Commerce Clause power, emphasizing that the phrase "engaged in commerce" is generally read

as a narrow exercise of Commerce Clause power.[15]

By holding that § 1 exempted only the employment agreements of transportation

workers, the *Adams* decision made clear that the FAA covered all other employment agreements

– and, in turn, that arbitration clauses in these agreements were generally enforceable. Within

the First through Seventh Circuits, the Tenth Circuit, and the D.C. Circuit, then, *Adams* simply

confirmed the existing law. But in the Eighth, Ninth, and Eleventh Circuits, *Adams* represented

concrete legal change – a reversal of course in the Ninth Circuit, and the first clear statement of

the applicable law in the Eighth and Eleventh Circuits. This chapter accordingly considers

whether these legal changes cleared the way for companies and executives in affected circuits to

use arbitration clauses – and, by implication, whether the pre-*Adams* approaches in these circuits

impeded their use.

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[14] *Adams*, 532 U.S. at 114-15 (quoting 2A N. Singer, Sutherland on Statutes and Statutory Construction § 47.17 (1991)).

[15] While acknowledging the Ninth Circuit's position that the phrase "engaged in commerce" may have had a different meaning when the FAA was adopted in 1925 than it does now, the Supreme Court nevertheless declined to adopt this reasoning, writing that "[a] variable standard for interpreting common, jurisdictional phrases would contradict our earlier cases and bring instability to statutory interpretation." *Adams*, 532 U.S. at 117.

As a summary of the preceding discussion, the following chart describes how *Adams* affected the enforceability of arbitration clauses in executive employment agreements from the Ninth Circuit, the Eighth and Eleventh Circuits, and all other circuits (i.e., the First through Seventh, Tenth, and D.C. Circuits):

Jurisdiction	Before *Adams*	After *Adams*
Ninth Circuit	Unenforceable	Generally enforceable
Eighth and Eleventh Circuits	Uncertain	Generally enforceable
All other circuits	Generally enforceable	Generally enforceable

II.   *Adams'* Effects: Intuition and Hypotheses

Having described the legal changes effected by *Adams*, Part II considers how these changes may have affected the use of arbitration clauses in executive employment agreements. I begin by offering simple game-theoretic intuition for how enforceability affects the three types of arbitration clauses that might appear in these agreements: collective clauses, negotiated clauses, and imposed clauses.[16] Then, I draw on this intuition in hypothesizing how *Adams* affected executive employment agreements in the Ninth Circuit and in the Eighth and Eleventh Circuits.

A. Game-Theoretic Intuition

1. Enforceability and Collective Clauses

In Figure 1, I show that when both parties to a contract prefer arbitration to litigation, the enforceability of their "collective" arbitration clause is immaterial: the parties will mutually

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[16] As a reminder, collective clauses see both parties prefer arbitration to litigation; negotiated clauses see an arbitration-preferring party offer some concession to a non-arbitration-preferring party in exchange for the clause; and imposed clauses see an arbitration-preferring party with superior bargaining power simply impose the clause on a non-arbitration-preferring party.

agree to include the clause in their contract and then mutually honor it once a dispute arises. I

begin by assuming that there are two arbitration-preferring players, Player 1 and Player 2, who

each receive additional utility $a > 0$ from arbitrating a dispute.[17] In the first stage of the game,

Player 1 decides whether to ask Player 2 to include an arbitration clause in their contract. If

Player 1 does not ask, the players each receive a zero payoff and the game ends; if Player 1 does

ask, the game proceeds to the second stage. In this second stage, Player 2 decides whether to

reject the clause, in which case the players each receive a zero payoff and the game ends, or to

accept the clause, in which case the game proceeds to the third stage.

In the third stage, a dispute arises between the parties, and Player 2's options in this stage

depend on whether the arbitration clause is unenforceable (in the top part of Figure 1) or

enforceable (in the bottom part of Figure 1). If the clause is unenforceable, Player 2 then decides

whether to abide by the clause or to challenge the clause. If Player 2 abides by the clause, then

both players receive payoffs of a; if Player 2 challenges the clause, then both players receive

payoffs of zero. If the clause is enforceable, though, Player 2 has no choice but to abide by the

clause, and both players receive payoffs of a. Simple backwards induction in both parts of

Figure 1 reveals that the game's outcome is unaffected by enforceability – Player 2 will abide by

the clause in the third stage whether or not it can be enforced and will agree to the clause in the

second stage, while Player 1 will ask to include the clause in the first stage.

2. Enforceability and Negotiated Clauses

In Figure 2, I show that the viability of negotiated arbitration clauses depends on their

enforceability. As in Figure 1, I assume that Player 1 is an arbitration-preferring party that

receives additional utility a from arbitrating a dispute, but Player 2 is now a non-arbitration-

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[17] For simplicity, I also assume – here and in the following figures – that the parties' preferences regarding
arbitration are common knowledge and that the parties are risk-neutral.

preferring party that incurs disutility -*d* from arbitrating a dispute. In the first stage of the game,

Player 1 still decides whether to ask Player 2 to include an arbitration clause in their contract –

but here, Player 1 must offer Player 2 some concession *c* to induce the non-arbitration-preferring

Player 2 to agree to the clause.[18] I also assume that $a > c > d > 0$, so that this concession-for-

arbitration-clause-deal can make both Player 1 and Player 2 better off.[19]

If Player 1 decides not to offer this deal in the first stage, the parties each receive a zero

payoff and the game ends. If Player 1 offers the deal, the game then proceeds to the second

stage, where Player 2 can either reject the deal (in which case the parties receive zero payoffs

and the game ends) or accept the deal, leading to the third stage. In the third stage, a dispute

arises between the parties, and Player 2's options again depend on whether the arbitration clause

is unenforceable (in the top part of Figure 2) or enforceable (in the bottom part of Figure 2). If

Player 2 abides by the clause (either because they choose to in the top part or because they have

no choice in the bottom part), then Player 1 receives a payoff of $a - c$ and Player 2 receives a

payoff of $c - d$;[20] if Player 2 challenges the clause, then Player 1 receives a payoff of $-c$ and

Player 2 receives a payoff of c.[21]

Employing backwards induction in the top part of Figure 2, we see that Player 2 will

challenge the arbitration clause at the third stage – essentially reneging on the deal by refusing to

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[18] Note that this concession need not be monetary – it could be, e.g., more favorable terms elsewhere in the contract. The key is that Player 2's utility from whatever concession is offered outweighs their disutility from arbitrating, $c > d$.

[19] Put more colloquially, the deal makes sense for both parties - Player 1 values arbitration more than the concession they make to Player 2, and Player 2 values this concession more than the disutility they incur from arbitration.

[20] Here, Player 1 receives their utility from arbitration *a* less the concession *c* needed to induce Player 2 to agree to the arbitration clause, while Player 2 receives the concession *c* from Player 1 less their disutility *d* from arbitration.

[21] Here, Player 1 makes the concession -*c* to Player 2 to induce them to include the arbitration clause in the contract, but does not receive the arbitration benefit *a* since they cannot enforce the arbitration clause. In turn, Player 2 receives the concession *c* but need not incur disutility *d* since they cannot be forced to arbitrate.

arbitrate (and avoiding disutility –*d*) despite having received the concession *c*. Working

backwards, Player 2 will accept the deal at the second stage if it is offered, but Player 1 – in

anticipation of Player 2's third-stage reneging – will refuse to offer the deal in the first stage.

Therefore, because the arbitration clause is unenforceable, the parties will not include it in their

contract, will both receive zero payoffs, and will each be worse off than if they had managed to

agree and adhere to the contemplated deal (which would have yielded strictly positive payoffs

for both players).

Employing backwards induction in the bottom part of Figure 2, though, we see that

Player 2 must abide by the arbitration clause at the third stage, with the parties receiving payoffs

of $a - c$ for Player 1 and $c - d$ for Player 2. Working backwards, Player 2 will still accept the

deal in the second stage (since the strictly positive payoff $c - d$ from agreeing to and abiding by

the deal is preferable to the zero payoff from rejecting the deal), and Player 1 will now offer the

deal in the first stage. Therefore, because the arbitration clause is enforceable, the parties will

include it in their contract, will each receive strictly positive payoffs, and will each be better off

than if the clause were unenforceable.

    3. Enforceability and Imposed Clauses

In Figure 3, I show that the viability of imposed arbitration clauses also depends on their

enforceability. As in Figure 2, I assume that Player 1 receives additional utility *a* and that Player

2 incurs disutility *d* from arbitrating a dispute. In the first stage of the game, though, Player 1

simply decides whether to impose an arbitration clause on Player 2 – because of Player 1's

bargaining power, there is no need to secure Player 2's agreement through a concession *c*. I also

relax the assumption that $a > d$, as imposed clauses require only that $a > 0$ (Player 1 prefers

arbitration) and that $d > 0$ (Player 2 does not prefer arbitration – otherwise this would be a collective-clause situation).

If Player 1 decides not to impose the clause in the first stage, the parties each receive a zero payoff and the game ends. If Player 1 imposes the clause, the game proceeds to the second stage, where – unlike in Figures 1 and 2 – Player 2 has no option but to accept the clause. In the third stage, a dispute arises between the parties, and Player 2's options again depend on whether the arbitration clause is unenforceable (in the top part of Figure 3) or enforceable (in the bottom part of Figure 3). If Player 2 abides by the clause (either because they choose to in the top part or because they have no choice in the bottom part), then Player 1 receives a payoff of a and Player 2 receives a payoff of $-d$; if Player 2 challenges the clause in the top part, then both players receive payoffs of zero.

Employing backwards induction in the top part of Figure 3, we see that Player 2 will challenge the arbitration clause at the third stage to avoid disutility $-d$, and that Player 1 will therefore be indifferent in the first stage between omitting and imposing the clause. In the bottom part, though, Player 2 has no choice in the third stage but to abide by the clause, so that Player 1 will choose to impose the clause in the first stage to secure the arbitration payoff a.

B. Resultant Hypotheses

The preceding intuition applies fairly readily to the legal changes effected by the *Adams* decision: in the Ninth Circuit, *Adams* clears the way for negotiated and imposed arbitration clauses, essentially moving companies and executives from the top parts to the bottom parts of Figures 2 and 3. Accordingly, *Adams* should have increased overall arbitration clause use in executive employment agreements within this circuit, with this increase reflecting negotiated and/or imposed clauses:

Hypothesis 1: *Adams* **increased arbitration clause use in executive employment agreements in the Ninth Circuit.**

In the Eighth and Eleventh Circuits, *Adams* makes clear to parties contemplating negotiated or imposed arbitration clauses that they face the bottom parts of Figure 2 or 3, rather than leaving them unsure (based on these circuits' silence) of where they are in these figures. By eliminating this uncertainty, *Adams* may have increased arbitration clause use in executive employment agreements in these circuits as well (with the increase again reflecting negotiated and/or imposed clauses):

Hypothesis 2: *Adams* **increased arbitration clause use in executive employment agreements in the Eighth and Eleventh Circuits.**

I conclude Part II with an updated version of the chart that ended Part I – here, I add a column summarizing *Adams'* hypothesized effects on arbitration clause use in executive employment agreements in the various jurisdictions:

Jurisdiction:	Before *Adams*	After *Adams*	Hypothesized Effect
Ninth Circuit	Unenforceable	Generally enforceable	Increase
Eighth and Eleventh Circuits	Uncertain	Generally enforceable*)*	Increase
All other circuits	Generally enforceable	Generally enforceable	--

III.   Empirical Setup – Data and Difference-in-Differences Approach

To test the preceding hypotheses empirically, I have gathered approximately 30,000 executive employment agreements that were filed with the SEC between 1998 and 2005. I

obtained these agreements from the Morningstar Document Research database, a paid service

that provides access to all of the material contracts filed with the SEC between 1993 and the

present (along with other publicly-available filings). I had originally intended to isolate these

executive employment agreements from the sample of material contracts that I obtained from the

SEC's file servers (and then used in Chapters 1 and 2). However, the automated procedure that I

used to download these contracts unfortunately does not work for contracts filed earlier than

2001 (which is when the *Adams* case was decided).

The primary drawback of using the Morningstar database is that the only information

accompanying these contracts is the filing company's ticker symbol. (In contrast, contracts

downloaded from the SEC's file servers include the filing company's state of incorporation, state

of primary headquarters, and SIC code, which I have used to generate state and industry controls

in previous chapters.) Therefore, I had to manually obtain this information for each ticker symbol

– a lengthy process that precluded the use of Morningstar for my entire dissertation.[22] Finally, I

machine-coded these agreements for the presence of an arbitration clause, using the same

searches that I used when coding for this feature in Chapters 1 and 2.

I analyze these agreements using a difference-in-differences approach, comparing the

pre- and post-*Adams* incidence of arbitration clauses in (i) a treatment group of agreements filed

by companies that are incorporated and/or located in states within the Ninth Circuit,[23] (ii) another

treatment group of agreements filed by companies that are incorporated and/or located in states

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[22] Specifically, I had to open the contract(s) with a given ticker symbol, identify the corresponding company name, and either (i) match the name with a contract filed by that company in my original database (which gives me that company's state of incorporation, state of primary headquarters, and SIC code), or if such a contract was unavailable, (ii) look up the company's state of incorporation, state of primary headquarters, and SIC code on the SEC's website or through Google searches.

[23] As mentioned in note 1 *supra*, these are Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington.

within the Eighth or Eleventh Circuits,[24] and (iii) a control group of all other agreements in my

dataset. To implement this analysis, I estimate the following equation:

$$Arbitration_i = \beta_0 + \beta_1 9thCir_i + \beta_2 8th11thCir_i + \beta_3 Adams_i$$

$$+ \beta_4 9thCir * Adams_i + \beta_5 8th11thCir * Adams_i + \beta_6' State_{ij} + \beta_7' Year_{ik}$$

$$+ \beta_8' SIC_{il} + \varepsilon_i. \tag{1}$$

Here, the dependent variable, $Arbitration$, is an indicator that takes a value of 1 if contract i

contains an arbitration clause. The first two explanatory variables, $9thCir$ and $8th11thCir$, are

indicators that take a value of 1 if contract i was filed by a company incorporated and/or

headquartered in the Ninth Circuit, or filed by a company incorporated and/or headquartered in

the Eighth or Eleventh Circuits, respectively. The third explanatory variable,$Adams$, is an

indicator that takes a value of 1 if contract i was filed with the SEC after a particular treatment

date related to the *Adams* decision. I will consider two different treatment dates in different

specifications – either (i) the May 2000 grant of certiorari (i.e., the date that the Supreme Court

agreed to hear the *Adams* case, which may have produced anticipatory effects), or (ii) the March

2001 date of the decision.

      The interaction term $9thCir * Adams$ yields a difference-in-differences estimate (β_4) of

Adams' effect on arbitration clause use in Ninth Circuit executive employment agreements

(letting me test Hypothesis 1 above), while the interaction term $8th11thCir * Adams$ yields a

similar difference-in-differences estimate (β_5) of *Adams'* effect on arbitration clause use in

Eighth and Eleventh Circuit executive employment agreements (letting me test Hypothesis 2).

The equation also includes a series of controls for other factors that might affect arbitration

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[24] As mentioned in note 2 *supra*, the states in the Eighth Circuit are Arkansas, Iowa, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota, while the states in the Eleventh Circuit are Alabama, Florida, and Georgia.

clause incidence in my dataset – including state-, year-, and industry-level fixed effects – and standard errors are clustered by state.

IV.   Empirical Findings

   A. Descriptive Statistics

Tables 1 and 2 present descriptive statistics regarding pre- and post-*Adams* arbitration clause use in executive employment agreements from the Ninth Circuit treatment group, the Eighth and Eleventh Circuit treatment group, and the "all other circuits" control group. While Table 1 reports average arbitration clause incidence in agreements that were filed before and after the March 2001 decision date in *Adams* (taking the decision itself as the treatment), Table 2 repeats this analysis for agreements that were filed before and after the May 2000 grant of certiorari in *Adams* (taking the Supreme Court's decision to hear the case as the treatment).

One of the most important features of Tables 1 and 2 is that average arbitration clause use increased in <u>each</u> of these groups after *Adams* – even the control group (which was unaffected by *Adams*) shows a 1.3 to 1.7 percentage point increase. This underscores the importance of my difference-in-differences approach, which "differences out" the control group's increase when analyzing *Adams'* effect on the treatment groups. Although I will consider more formal difference-in-differences results shortly, Tables 1 and 2 do provide some initial support for my hypotheses – post-*Adams* increases in arbitration clause use in the Ninth Circuit group and the Eighth and Eleventh Circuit group that outstrip the concurrent increase in the control group.

I also note that increases for the treatment groups are larger in Table 2 (before and after the grant of certiorari) than in Table 1 (before and after the decision) – and that this effect is absent from the control group. These larger increases in Table 2 may reflect anticipatory effects

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in the Ninth Circuit and the Eighth and Eleventh Circuits – i.e., companies and executives in those circuits may have included arbitration clauses in their contracts after the Supreme Court announced they would hear the *Adams* case, in anticipation of the eventual decision. To see how these anticipatory effects could impact Tables 1 and 2, consider a hypothetical one-percentage-point increase in arbitration clause use in the Ninth Circuit in response to the grant of certiorari – this increase would appear in column (1) of Table 1 (before the decision) but in column (2) of Table 2 (after the grant of certiorari), so that the column (3) increase would actually be two percentage points larger in Table 2 than in Table 1.

In Table 3, I isolate these potential anticipatory effects by taking each group's column (3) difference from Table 2 (i.e., the average arbitration clause incidence after certiorari less the average arbitration clause incidence before certiorari) and subtracting that group's column (3) difference from Table 1 (the average arbitration clause incidence after the decision less the average arbitration clause incidence before the decision). These figures show a two-percentage-point swing in the Ninth Circuit treatment group that roughly corresponds to a one-percentage-point anticipatory increase in arbitration clause use. There is also a considerably smaller swing in the Eighth and Eleventh Circuit treatment group, suggesting that anticipatory effects are less important in these circuits.

The assumption underlying this anticipatory-effects story is that the Supreme Court's grant of certiorari signaled to companies and executives (and their legal counsel) that it would be overturning the Ninth Circuit in *Adams*. Although this story requires speculation as to the case's outcome, this speculation is actually quite plausible given the lopsided circuit split at issue in *Adams* (coupled with the Ninth Circuit's reputation as an outlier circuit) and the Supreme

Court's decidedly pro-arbitration track record during the preceding decade.[25] Therefore, given

that some companies and executives may have reacted to the May 2000 grant of certiorari in

advance of the March 2001 decision in *Adams*, the grant of certiorari may actually be the

preferable treatment in the following difference-in-differences results.

B. Difference-in-Differences Results

Table 4 reports the difference-in-differences results obtained from estimating Equation

(1), where column (1) uses the May 2000 grant of certiorari as the treatment and column (2) uses

the March 2001 decision as the treatment. Consistent with Hypothesis 1, column (1) shows that

Adams caused a post-certiorari increase of almost four percentage points in the Ninth Circuit

treatment group relative to the control group. This increase is statistically significant at the 10%

level and is also quite comparable to the corresponding figures in Table 2 (a 5.45-percentage-

point increase in the Ninth Circuit treatment group less a 1.35-percentage-point increase in the

control group). However, column (1) also shows an insignificant post-certiorari effect for the

Eighth and Eleventh Circuit treatment group relative to the control group (which is inconsistent

with Hypothesis 2), while column (2) shows insignificant post-decision effects for both treatment

groups relative to the control group (which undermines both hypotheses).

Despite its various insignificant results, Table 4 still supports the idea that *Adams* cleared

the way for negotiated and imposed arbitration clauses in executive employment agreements – at

least in the Ninth Circuit, where these clauses were clearly unenforceable beforehand. Granted,

the clauses' enforceability was technically uncertain in the Eighth and Eleventh Circuits before

Adams, in that neither circuit had addressed the FAA's § 1 exemption and pronounced that

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[25] Prominent examples from this pro-arbitration track record include *Gilmer v. Interstate / Johnson Lane Corp.,* 500 U.S. 20 (1991) (holding that claims under the Age Discrimination in Employment Act were arbitrable), *Allied-Bruce Terminix Cos. v. Dobson*, 513 U.S. 265 (1995) (interpreting the FAA § 2's "involving commerce" language – and hence the FAA's coverage – as broadly as possible), and *Doctor's Associates, Inc. v. Casarotto*, 517 U.S. 681, 687 (1996) (holding that state laws "singling out arbitration provisions for suspect status" were preempted by the FAA).

executive employment agreements were not "contracts of employment of . . . workers engaged in foreign or interstate commerce." From a practical standpoint, though, this may not have kept companies and executives in those circuits from using arbitration clauses – perhaps they thought it unlikely that the Eighth and Eleventh Circuits would actually side with the Ninth Circuit and against the other circuits on this issue, or perhaps they were simply unaware of this legal vacuum.

Moreover, in light of the anticipatory effects described earlier, I am fairly unconcerned that the Ninth Circuit effect loses significance when moving from column (1) to column (2). Table 3 had indicated that some of the increased arbitration clause use in the Ninth Circuit treatment group came in the "anticipatory period" between the grant of certiorari and the ultimate decision in *Adams*, so I am not surprised that disregarding this increase (and, in fact, attributing it to the pre-treatment period) compromises statistical significance. In the following section, I explore the Ninth Circuit effect further by distinguishing between executive employment agreements from California and from the rest of the Ninth Circuit, on the theory that attenuated effects in California may be obscuring stronger effects in other Ninth Circuit states.

V.   Additional Ninth Circuit Analysis

   A. Motivation – California and the Unconscionability Doctrine

The *Adams* decision ensured that most employment agreements in the Ninth Circuit were covered by the FAA, so that arbitration clauses therein were generally enforceable – as we have seen, this shift significantly increased the use of arbitration clauses in executive employment agreements from that circuit. Even after *Adams*, though, employment-related arbitration clauses are not <u>necessarily</u> enforceable – from FAA § 2, arbitration clauses are enforceable "save upon

such grounds as exist at law or in equity for the revocation of any contracts."[26] In interpreting

this language, the Supreme Court has recognized that "generally applicable contract defenses,

such as fraud, duress, or unconscionability, may be applied to invalidate arbitration

agreements."[27]

Although various state courts have recognized various challenges to arbitration clauses

based on "generally applicable contract defenses," California courts have historically been very

receptive to these challenges – particularly in the employment area, where there are a litany of

decisions striking arbitration clauses from employment agreements as unconscionable.[28]

Accordingly, this Part considers whether frequent application of the unconscionability doctrine

may have weakened arbitration clause use in California executive employment agreements even

after *Adams*:

> **Hypothesis 3: *Adams* had a weaker effect on arbitration clause use in executive employment agreements in California relative to other Ninth Circuit states.**

Technically, agreements (such as arbitration clauses) must be both substantively and

procedurally unconscionable for this doctrine to apply – while substantive unconscionability

refers to "overly harsh or one-sided" results, procedural unconscionability focuses on

"oppression or surprise due to unequal bargaining power" between the parties (with adhesive

"take-it-or-leave-it" employment agreements being a classic example of procedural

unconscionability).[29] In practice, though, courts in California and elsewhere have tended to

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[26] 9 U.S.C. § 2.

[27] *Casarotto*, 517 U.S. at 687.

[28] This litany of cases began with the California Supreme Court's decision in *Graham v. Scissor-Tail, Inc.*, 28 Cal.3d 807 (1981), actually includes the Ninth Circuit's decision on remand in *Adams*, 279 F.3d 889 (9th Cir. 2002) (applying California state law to find the arbitration clause at issue unconscionable), and continues to the present day.

[29] *Armendariz v. Foundation Health Psychcare Services, Inc.*, 204 Cal.4th 83, 92 (2000).

apply a "sliding-scale" approach in evaluating unconscionability – allowing strong evidence of substantive unconscionability to compensate for weaker evidence of procedural unconscionability, or vice versa.[30]

Based on the procedural requirement of "oppression or surprise due to unequal bargaining power," one might question whether this doctrine would ever apply to the executive employment agreements I study. Of course, there may be some disparity in bargaining power between companies and executives – but can these agreements (which usually involve sophisticated parties, substantial negotiation, and the assistance of specialized counsel) ever involve "oppression or surprise"? At least in California, the answer is yes – there are actually several cases in which California courts have struck the arbitration clauses from executive employment agreements as unconscionable.[31] Despite negotiating the economic terms of their contracts, the executives in these cases (which include a vice president/CFO, a vice president of operations, and a president/CEO) convinced the courts that they had "no realistic ability"[32] to address the arbitration clauses in their agreements – buttressing these arguments with evidence of the clauses' one-sidedness.[33]

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[30] As the California Supreme Court has stated, "the more substantively oppressive the contractual term, the less evidence of procedural unconscionability is required to come to the conclusion that the term is unenforceable, and vice versa." *Id*. at 90.

[31] *See, e.g., Stirlen v. Supercuts, Inc.,* 51 Cal. App. 4th 1519 (Ct. Appl. 1997); *Kalmbach v. Sportsmobile W., Inc.,* No. F054648, 208 WL 4988663 (Ct. App. Nov. 25, 2008); *Trivedi v. Curexo Tech. Corp.,* 116 Cal. Rptr. 3d 804 (Ct. App. 2010).

[32] *Stirlen*, 51 Cal. App. 4th at 1534.

[33] This evidence included: "non-mutual" carve-outs that allow the company but not the executive to bring certain claims or seek injunctive relief in court (*Stirlen, Trivedi*); non-mutual carve-outs that only carve out certain claim types that the company is particularly likely to bring (*Kalmbach*); restrictions on available remedies for claims that the executive is particularly likely to bring (*Stirlen*); and mandatory attorney fee and cost provisions for claims where the executive would ordinarily be able to recover attorney's fees and costs in court (*Trivedi*).

Based on the preceding discussion and hypothesis, a revised version of the chart that ended Part II follows – replacing the Ninth Circuit row from that chart with a "Ninth Circuit (except California)" row and a California row:

Jurisdiction:	Before *Adams*	After *Adams*	Hypothesized Effect
Ninth Circuit (except California)	Unenforceable	Generally enforceable	Increase
California	Unenforceable	Unconscionable?	Weaker or no increase
Eighth and Eleventh Circuits	Uncertain	Generally enforceable	Increase
All other circuits	Generally enforceable	Generally enforceable	--

B. Alternative Difference-in-Differences Approach and Results

In order to differentiate between *Adams'* effect in California and in other Ninth Circuit states, I will estimate the following equation (which is a variant of Equation (1)):

$$Arbitration_i = \beta_0 + \beta_1 Restof9thCir_i + \beta_2 CA_i + \beta_3 8th11thCir_i + \beta_4 Adams_i$$
$$+ \beta_5 Restof9thCir * Adams_i + \beta_6 CA * Adams_i + \beta_7 8th11thCir * Adams_i$$
$$+ \beta_8' State_{ij} + \beta_9' Year_{ik} + \beta_{10}' SIC_{il} + \varepsilon_i. \qquad (2)$$

Equation (2) simply segments the Ninth Circuit indicator and interaction term from Equation (1) into a "rest-of-the-Ninth-Circuit" indicator and interaction term ($Restof9thCir$ and $Restof9thCir * Adams$) and a California indicator and interaction term (CA and $CA * Adams$),

and is otherwise identical to Equation (1). I can then test Hypothesis 3 by comparing the

difference-in-differences estimate of *Adams'* effect in the other Ninth Circuit states (β_5) to the

difference-in-differences estimate of *Adams'* effect in California (β_6). (It may also be interesting

to compare both β_5 and β_6 to Equation (1)'s difference-in-differences estimate of *Adams'* effect

in the Ninth Circuit as a whole.)

Table 5 reports the results obtained from estimating Equation (2). Consistent with

Hypothesis 3, column (1) shows that *Adams* caused a post-certiorari increase of almost seven

percentage points in the "rest-of-the-Ninth-Circuit" treatment group relative to the control group,

along with an insignificant effect on the California treatment group relative to the control group.

The "rest-of-the-Ninth-Circuit" effect is statistically significant at the 5% level, and is also

comparable to the corresponding descriptive statistics (an eight-percentage-point increase in

"rest-of-the-Ninth-Circuit" agreements less a one-percentage-point increase in control group

agreements).[34] Much like in Table 4, this "rest-of-the-Ninth-Circuit" effect also loses statistical

significance when moving from column (1) to column (2) – although the result here is at least

somewhat close to statistical significance (P-value = 0.20).

In surveying the difference-in-differences results in Table 5, two important insights

emerge: first, California's frequent use of the unconscionability doctrine appears to have

weakened arbitration clause use in that state's treatment group as compared to the "rest-of-the-

Ninth-Circuit" treatment group. Second, because of this California effect, *Adams'* effects in the

other Ninth Circuit states are considerably stronger than was suggested by Table 4 (note that the

6.7-percentage-point "rest-of-the-Ninth-Circuit" effect in Table 5 is almost twice as large as the

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[34] In particular, the average pre-certiorari incidence of arbitration clauses in the "rest-of-the-Ninth-Circuit" treatment group was 42.52%, while the average post-certiorari incidence of arbitration clauses in this group was 50.59%, for an 8.07-percentage-point increase. From Table 2, there was a concurrent 1.35-percentage-point increase in average arbitration clause incidence for the control group.

3.7-percentage-point Ninth-Circuit-wide effect in Table 4). In the remainder of this Part, I

discuss the normative implications of these results – that is, should we be pleased or concerned

that companies and executives in most of the Ninth Circuit are more likely to have arbitration

clauses in their employment agreements after *Adams*? Conversely, should we be concerned or

pleased that this effect is absent in California?

C. Discussion – "Clearing the Way, but for What?"

In assessing the desirability of these effects, I return to the question of what kinds of

clauses are appearing in the Ninth Circuit (but not in California) after *Adams*.[35] Up until this

point, I have assumed that *Adams* cleared the way for a mixture of negotiated and imposed

clauses – as shown in Figures 2 and 3, enforceability is vital in both of these scenarios.

However, the observed discrepancy between the California treatment group and the "rest-of-the-

Ninth-Circuit" treatment group provides some additional insight – since the unconscionability

doctrine should only affect imposed clauses (which can be found procedurally unconscionable)

and should not affect negotiated clauses (which lack procedural unconscionability),[36] I posit that

this discrepancy reflects a post-*Adams* influx of imposed clauses in most of the Ninth Circuit

(but not in California).

Admittedly, assessing the desirability of imposed clauses is more complicated than

assessing the desirability of negotiated clauses (which result from deals that are mutually

beneficial to the contracting parties). Considering imposed clauses from a Kaldor-Hicks

perspective, for instance, these clauses can be undesirable if the weaker party is substantially

harmed while the stronger party is only slightly benefited by arbitration (that is, if $d > a$ in Figure

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[35] Hence "but for what?" in the title to this chapter.

[36] Even given California courts' permissive attitudes towards procedural unconscionability in the context of executive employment agreements, it would be a stretch for an executive to bargain for a concession in exchange for an arbitration clause, then challenge that clause as unconscionable.

3). However, they can also be desirable if the stronger party is substantially benefited while the weaker party is only slightly harmed by arbitration (that is, if *a* > *d* in Figure 3). Unfortunately, my empirical analysis cannot discern whether the arbitration clauses appearing in Ninth Circuit states other than California have *d* > *a*, *a* > *d*, or a mixture thereof – leaving their Kaldor-Hicks efficiency in question.

However, it is important to remember that these clauses come from a sample of material contracts between publicly-traded companies and their high-ranking executives. While I do worry that *Adams* allowed for the imposition of arbitration clauses that harm employees more than they benefit employers, I am much more concerned about this in the context of adhesive rank-and-file employment agreements – where these employees cannot bargain at all with their employers and may not understand (or even be aware of) these arbitration clauses. (In turn, these procedural elements are a much better fit for the "oppression or surprise due to unequal bargaining power" contemplated by the unconscionability doctrine than the assertion that executives had "no realistic ability" to address dispute resolution provisions during contractual negotiations.) In the context of executive employment agreements, I am more concerned that California's use of the unconscionability doctrine appears to be affecting the dispute resolution choices of these sophisticated parties – a seeming mismatch that protects parties with little need for protection and risks precluding arbitration clauses whose benefits outweigh any harms they impose.

VI.   Conclusion

In this chapter, I examined how companies and executives responded when the *Adams* decision provided that their arbitration clauses would generally be enforceable. After considering how enforceability might affect these parties' use of arbitration clauses in different

scenarios (collective, negotiated, and imposed), I provided several hypotheses regarding *Adams'* effects: 1) increased use of arbitration clauses in agreements from the Ninth Circuit (where these clauses were previously unenforceable); 2) a similar increase in agreements from the Eighth and Eleventh Circuits (where these clauses' enforceability was previously uncertain); and 3) an attenuated increase in agreements from California (where courts are particularly receptive to unconscionability-based challenges, even in executive employment agreements). I tested these hypotheses using a new dataset of approximately 30,000 executive employment agreements – finding increased use of arbitration clauses in agreements from Ninth Circuit states other than California, and finding insignificant effects in agreements from California and from the Eighth and Eleventh Circuits.

I then considered what this discrepancy between California and other Ninth Circuit states might tell us about the arbitration clauses appearing in the Ninth Circuit after *Adams* – interpreting it as evidence that these "rest-of-the-Ninth-Circuit" clauses were unilaterally imposed by companies. Of course, this raises the possibility that, in the rest of the Ninth Circuit, the benefits of these clauses to companies are outweighed by the harm done to executives – echoing concerns voiced in the context of adhesive rank-and-file employment agreements. However, this result also raises concerns that the benefits to California companies from any foregone clauses would have outweighed the harm they created for California executives.

Admittedly, this chapter cannot discern whether either or both of these concerns are valid – or even whether the clauses at issue were actually unilaterally imposed. It does, however, suggest that California's use of the unconscionability doctrine has affected the dispute resolution provisions in my sample of executive employment agreements. Based on this seeming mismatch between doctrine and contracting parties, and based on the benefits that may have been foregone

as a result, a careful reevaluation of California's approach to analyzing employment-related

arbitration clauses for unconscionability may be warranted.

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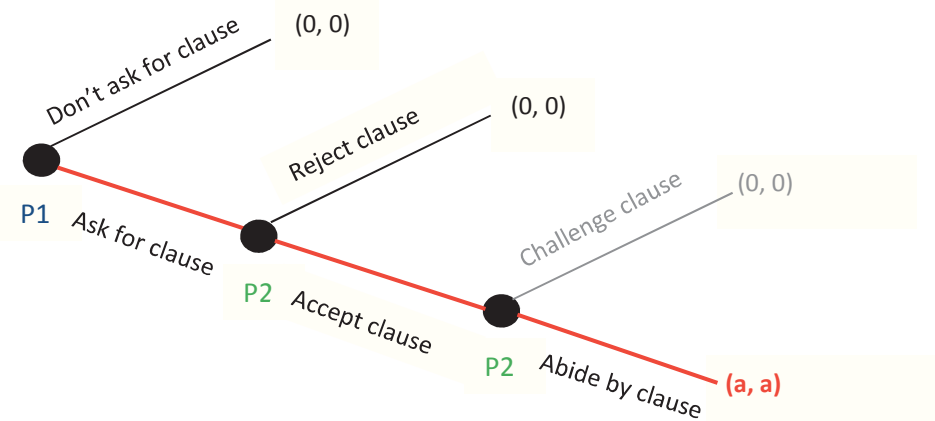
Figure 1: Enforceability and Collective Clauses

Assumptions:
- P1 prefers arbitration, receives utility a from arbitration
- P2 prefers arbitration, receives utility a from arbitration
- $a > 0$
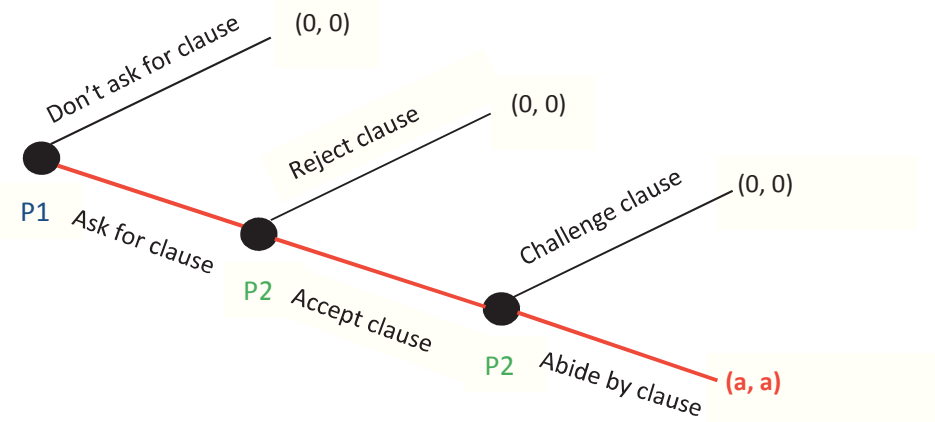
Top: arbitration clause is unenforceable

Bottom: arbitration clause is enforceable

Figure 2: Enforceability and Negotiated Clauses

Assumptions:
- P1 prefers arbitration, receives utility a from arbitration
- P2 prefers not to arbitrate, incurs disutility $-d$ from arbitration
- P1 can offer P2 a deal: concession of c to include arbitration clause
- $a > c > d > 0$
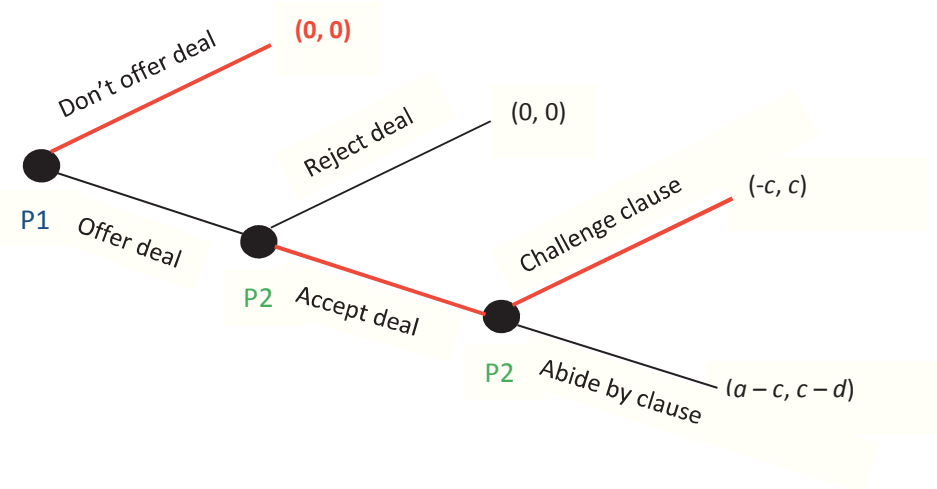

Top: arbitration clause is unenforceable
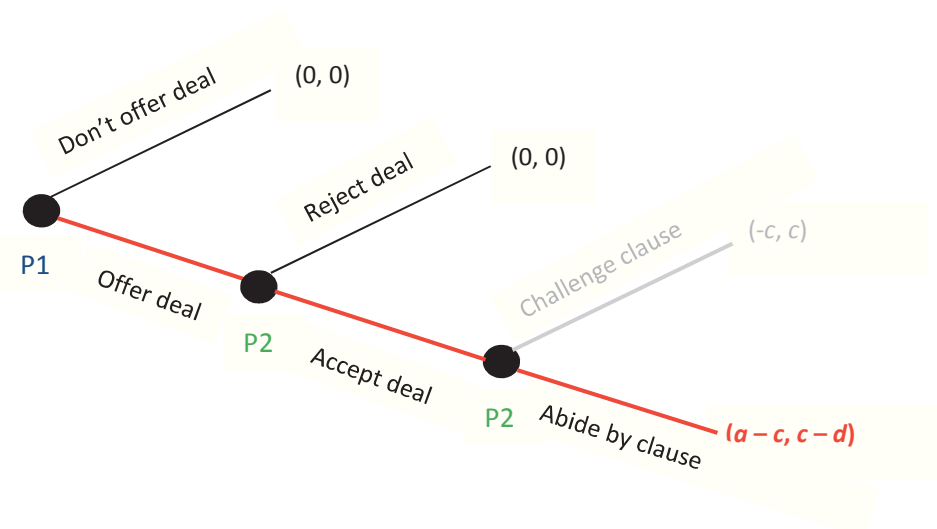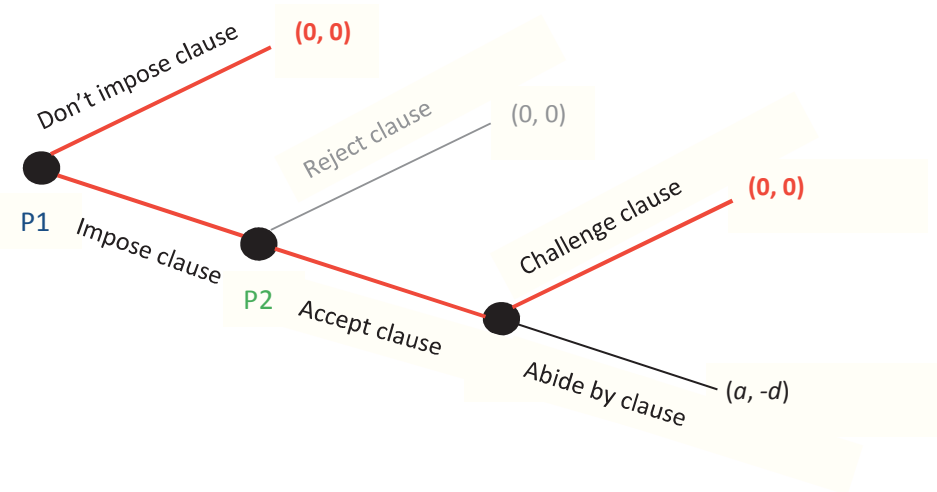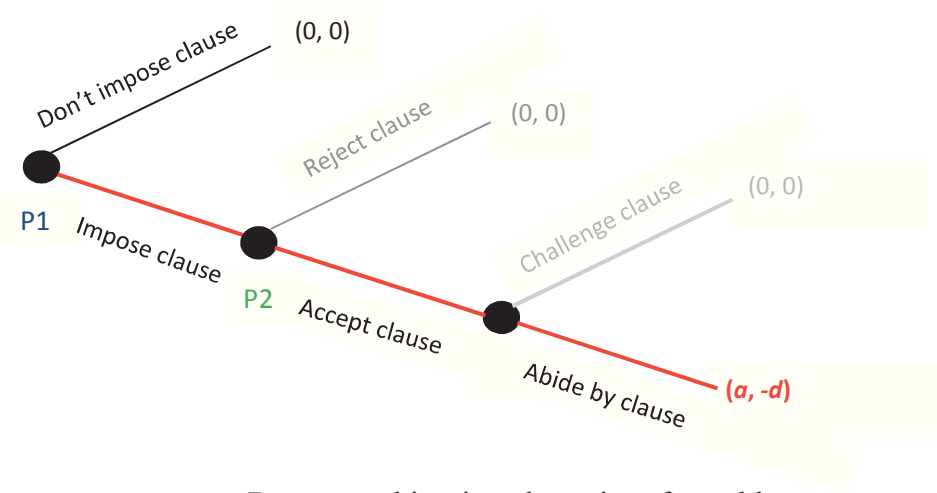

Bottom: arbitration clause is enforceable

Figure 3: Enforceability and Imposed Clauses

Assumptions:
- P1 prefers arbitration, receives utility a from arbitration
- P2 prefers not to arbitrate, incurs disutility $-d$ from arbitration
- $a > 0$, $d > 0$; relationship between a and d unclear

Top: arbitration clause is unenforceable

Bottom: arbitration clause is enforceable

Table 1: Arbitration Clause Incidence in Executive Employment Agreements: Pre- and Post-Decision

Executive employment agreements:	(1) Filed before decision	(2) Filed after decision	(3) Change
From Ninth Circuit			
% with arbitration clauses	49.02%	52.45%	3.43 pp increase
Number of agreements	2,442	4,036	
From Eighth or Eleventh Circuits			
% with arbitration clauses	32.78%	35.65%	2.87 pp increase
Number of agreements	1,852	2,881	
From other circuits (no 8th, 9th, or 11th)			
% with arbitration clauses	37.96%	39.63%	1.67 pp increase
Number of agreements	7,592	10,027	

Notes: Cells in columns 1 and 2 represent executive employment agreements filed with the Securities and Exchange Commission before and after the March 2001 decision in *Adams*, respectively, by a company incorporated or headquartered in the specified jurisdiction(s). Within a given row, column 3 subtracts the percentage of executive employment agreements with arbitration clauses in column 2 from the corresponding percentage in column 1. Arbitration clause incidence was identified through regular expression-based searches.

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Table 2: Arbitration Clause Incidence in Executive Employment Agreements: Pre- and Post-Certiorari

Executive employment agreements:	(1) Filed before certiorari	(2) Filed after certiorari	(3) Change
From Ninth Circuit % with arbitration clauses Number of agreements	47.30% 1,890	52.75% 4,588	**5.45 pp increase**
From Eighth or Eleventh Circuits % with arbitration clauses Number of agreements	32.05% 1,482	35.65% 3,251	**3.60 pp increase**
From other circuits (no 8th, 9th, or 11th) % with arbitration clauses Number of agreements	38.01% 5,874	39.36% 11,745	**1.35 pp increase**

Notes: Cells in columns 1 and 2 represent executive employment agreements filed with the Securities and Exchange Commission before and after the May 2000 grant of certiorari in *Adams*, respectively, by a company incorporated or headquartered in the specified jurisdiction(s). Within a given row, column 3 subtracts the percentage of executive employment agreements with arbitration clauses in column 2 from the corresponding percentage in column 1. Arbitration clause incidence was identified through regular expression-based searches.

Table 3: Potential Anticipatory Effects

Jurisdiction(s):	Table 2 change - Table 1 change
Ninth Circuit	2.02 percentage points
Eighth or Eleventh Circuits	0.73 percentage points
Other circuits	-0.32 percentage points

Notes: The figures in each row were obtained by subtracting the column (3) change for the corresponding row in Table 1 from the column (3) change for the corresponding row in Table 2.

Table 4: Difference-in-Differences Results

Arbitration clause incidence in:	(1) Certiorari as treatment	(2) Decision as treatment
Ninth Circuit	3.69781* (2.00836)	2.22739 (2.32153)
Eighth or Eleventh Circuit	2.98449 (2.44424)	1.68665 (2.37658)

Notes: Each column reports the results from a difference-in-differences regression estimated using a dataset derived from all executive employment agreements filed with the SEC between 1998 and 2005. The first column uses May 2000 (corresponding to the Supreme Court's grant of certiorari in *Adams*) as the treatment date, while the second column uses March 2001 (corresponding to the Supreme Court's decision in *Adams*) as the treatment date. Each regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company. Arbitration clause incidence was identified through regular expression-based searches. All coefficients and standard errors were multiplied by 100. Robust standard errors clustered by state are in parentheses; * significant at 10%; ** significant at 5%.

Table 5: Alternative Difference-in-Differences Results

Arbitration clause incidence in:	(1) Certiorari as treatment	(2) Decision as treatment
Other Ninth Circuit states	6.77984** (2.95776)	4.39589 (3.46012)
California	2.24408 (1.8141)	1.20466 (2.63976)
Eighth or Eleventh Circuit	2.98189 (2.45723)	1.65349 (2.38752)

Notes: Each column reports the results from a difference-in-differences regression estimated using a dataset derived from all executive employment agreements filed with the SEC between 1998 and 2005. The first column uses May 2000 (corresponding to the Supreme Court's grant of certiorari in *Adams*) as the treatment date, while the second column uses March 2001 (corresponding to the Supreme Court's decision in *Adams*) as the treatment date. Each regression includes state- and year-level fixed effects and also controls for the two-digit SIC code of the filing company. Arbitration clause incidence was identified through regular expression-based searches. All coefficients and standard errors were multiplied by 100. Robust standard errors clustered by state are in parentheses; * significant at 10%; ** significant at 5%.

<u>**Appendix**</u>

Machine-Coding Searches and Manual Validation

<u>Part I: Basic Contractual Features</u>

1. Amendments
2. Arbitration clauses
3. Choice-of-forum clauses
4. Choice-of-law clauses
5. Contract type

<u>Part II: Arbitration Clause Customizations</u>

1. Administering institutions
2. "Off-the-rack" sets of procedural rules
3. Specified number of arbitrators
4. Arbitrator qualifications
5. Written opinions
6. Discovery restrictions
7. Time limits
8. Punitive damages restrictions

Part I: Basic Contractual Features

1. <u>Amendments</u>

   a. Rule for identifying amendments:

      • Part 1: identify all contracts with at least one of the following in the first 10 lines: "amendment " / "modification " / "addendum " / "change in term " / "amendatory " / "amending "[1]

      • Part 2: identify all contracts with "this amendment" in the first 50 lines.

      • Part 3: from the contracts identified in parts 1 and 2, identify all contracts with "this amendment and restatement" or "this amended and restated" in the first 50 lines (since the contracts identified in parts 1 or 2 may be amended and restated contracts).

      • Part 4: all contracts identified in part 1 or part 2 but not in part 3 are deemed amendments (and are therefore excluded from the primary sample).

   b. Manual validation:

      • 100 randomly-selected contracts coded as amendments using this rule: 100 out of 100 (100%) were amendments.

      • 100 randomly-selected contracts coded as non-amendments using this rule: 100 out of 100 (100%) were not amendments.

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[1] Since my searching program is not case-sensitive, all of the specified searches in this Appendix are lower-case.

2. Arbitration clauses

   a. Rule for identifying arbitration clauses:

   • Part 1: identify all contracts with at least 1 hit for "arbitration" (these are potential arbitration clauses)

   • Part 2: from the contracts identified in Part 1, isolate all with at least 2 hits from the cumulative results of all of the following searches (which are commonly observed in arbitration clauses):

   arbitration w/5 of binding;[2] arbitration w/5 of cost; arbitration w/5 of expense; arbitration w/5 of fee; arbitration w/5 of demand; arbitration w/5 of procedure(s)?;[3] arbitration w/5 of agreement; arbitration w/5 of place; arbitration w/5 of situs; arbitration w/5 of site; arbitration clause; american arbitration association; arbitration w/5 of rule or rules; sole arbitrator; single arbitrator; three w/5 of arbitrators; arbitration w/5 of provision or provisions; arbitration w/5 of venue; arbitration w/5 of seat; arbitration w/5 of language; arbitration act

   b. Manual validation:

   • 100 randomly-selected contracts coded as having arbitration clauses: 100 of 100 (100%) had arbitration clauses.

   • 100 randomly-selected contracts coded as not having arbitration clauses: 100 of 100 (100%) did not have arbitration clauses.

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[2] Note that "X w/5 of Y" means X occurs 5 or fewer words before Y or Y occurs 5 or fewer words before X.

[3] Note that "procedure(s)?" refers to "procedure" or "procedures".

3. Choice-of-forum clauses

    a. Rule for identifying choice-of-forum clauses:

        • Part 1: identify potential choice-of-forum clauses via at least one hit from any of the following searches:

            Terms: "personal jurisdiction" "state courts" " venue" "be tried" "be brought" "be commenced" "be litigated" "forum non conveniens" "inconvenient forum" "convenient forum" "instituted exclusively" "exclusive forum" "forum" "exclusive jurisdiction" "nonexclusive jurisdiction" "non-exclusive jurisdiction" "exclusive general jurisdiction" "nonexclusive general jurisdiction" "non-exclusive general jurisdiction" "exclusive personal jurisdiction" "nonexclusive personal jurisdiction" "non-exclusive personal jurisdiction" "any forum other than the courts" "brought in the courts" "general jurisdiction" "federal court" "state court" "federal or state court" "state or federal court"

            Regular expressions: consent(s)? w/5 of jurisdiction; court(s)? w/10 of jurisdiction; submit(s)? w/5 of jurisdiction

        • Part 2: from the contracts identified in Part 1, identify a particular state's choice-of-forum clause via at least one hit from the following:

            court(s)? w/15 of *(state in question)*

    b. Manual validation (using a New York choice-of-forum search):

        • 100 randomly-selected contracts coded as having New York choice-of-forum clauses: 98 of 100 (98%) had New York choice-of-forum clauses.

        • 100 randomly-selected contracts coded as not having New York choice-of-forum clauses: 100 of 100 (100%) did not have New York choice-of-forum clauses.

4. Choice-of-law clauses

   a. Rule for identifying choice-of-law clauses:

      • At least one hit from any of the following searches (using New York as an example):

         internal law(s)? of (the state of)? new york(,)?
         enforced under (the)? law(s)? of (the state of)? new york(,)?
         state of new york w/7 choice
         state of new york w/7 conflict
         state of new york, notwithstanding
         a contract under (the)? law(s)? of (the state of)? new york(,)?
         state of new york, regardless
         according to, (the)? law(s)? of (the state of)? new york(,)?
         law of (the state of)? new york
         domestic law(s)? of (the state of)? new york(,)?
         law(s)? of the state of new york shall be applicable(,)?
         state of new york, without
         pertaining in the state of new york(,)
         in accordance with (the)? law(s)? of (the state of)? new york(,)?
         according to (the)? law(s)? of (the state of)? new york(,)?
         governed by (the)? law(s)? of (the state of)? new york(,)?
         procedural law(s)? of (the state of)? new york(,)?
         state of new york without
         substantive law(s)? of (the state of)? new york(,)?
         state of new york notwithstanding
         enforced under, (the)? law(s)? of (the state of)? new york(,)?
         applicable law(s)? of the state of new york(,)
         governing law. the law(s)? of the state of new york
         state of new york regardless
         construed under the law(s)? of (the state of)? new york(,)?
         in accordance with, (the)? law(s)? of (the state of)? new york(,)?
         state of new york, other than
         state of new york, excluding
         under and by the law(s)? of (the state of)? new york(,)?
         governed under new york law(,)?
         interpreted under (the)? law(s)? of (the state of)? new york(,)?
         governing law: the law(s)? of the state of new york
         state of new york w/7 conflicts
         judicial decisions of (the state of)? new york(,)?
         governed by, (the)? law(s)? of (the state of)? new york(,)?
         law(s)? applicable in (the state of)? new york(,)?
         state of new york shall govern(,)?
         law(s)? of the state of new york will apply(,)?
         state of new york excluding

b. Manual validation (using a New York choice-of-law search as an example):

  • 100 randomly-selected contracts coded as having a New York choice-of-law clause: 100 of 100 (100%) had New York choice-of-law clauses.

  • 100 randomly-selected contracts coded as not having a New York choice-of-law clause: 99 of 100 (99%) did not have New York choice-of-law clauses.

5. Contract type

Following Moszoro et al. (2014), I identified contract type via the presence of certain keywords in the first 50 lines of a contract:

  • Employment agreements: "employment agreement"

  • Change-in-control and severance agreements: "change in control agreement" "change of control agreement" "severance agreement" "separation agreement" "termination agreement" "retention agreement"

  • Benefits plans: "award agreement" "bonus plan" "compensation" "director stock" "employee stock" "equity incentive" "executive retirement" "incentive" "indemnification agreement" "management agreement" "management incentive" "non-employee director" "of director" "of executive" "option agreement" "option grant" "option plan" "restricted stock" "retirement plan" "savings plan" "service agreement" "services agreement" "settlement agreement" "stock agreement" "stock award" "stock incentive" "stock option" "stock plan" "stock purchase" "supplemental executive" "term incentive"

  • Commercial contracts: "license" "purchase" "sale" "supply"

  • Finance contracts: "credit" "lease" "loan" "pledge" "promissory note" "revolving"

  • Merger agreements: "merger" "acquisition agreement"

  • Partnership agreements: "partnership"

Part II: Arbitration Clause Customizations

1. Administering institution

    a. American Arbitration Association

        i. Rule for identifying arbitrations administered by the American Arbitration Association:

            • Part 1: for each contract, identify the number of positive results for "aaa" or "american arbitration association"

            • Part 2: for each contract, identify the number of positive results for the following searches: rules w/15 aaa; rules w/15 american arbitration association; aaaa; aaaaa; aaa w/7 of moody; aaa w/7 of poor; aaa w/7 s&p; aaa w/7 rating; aaa w/7 of rated (these are false positives based on aaa rules rather than administration, on contractual lists, or on credit ratings)

            • Part 3: subtract the positive results in part 2 from the positive results in part 1; if the result is positive, count as administered by AAA.

            • Part 4: for all of the remaining contracts not identified as AAA-administered in parts 1 through 3, count as AAA-administered for any contracts yielding at least one hit for any of the following searches:

                file(d)? w/15 of aaa or american arbitration association; "before the aaa"; "before the american arbitration association"; submit(ed)? w/15 of aaa or american arbitration association; auspices w/15 of aaa or american arbitration association; administer(ed)? w/15 of aaa or american arbitration association; "conducted by the aaa"; "conducted by the american arbitration association"

        ii. Manual validation:

            • 100 randomly-selected arbitration clauses coded as being AAA-administered: 96 of 100 (96%) were AAA-administered

            • 100 randomly-selected contracts coded as not being AAA-administered: 99 of 100 (99%) were not AAA-administered

b. JAMS

    i.   Rule for identifying arbitrations administered by JAMS:

    • Part 1: for each contract, identify the number of positive results for "jams", "endispute", or "judicial arbitration"

    • Part 2: for each contract, identify the number of positive results for rules w/15 of jams; rules w/15 of endispute; rules w/15 of judicial arbitration (these are potential false positives based on using JAMS rules rather than JAMS administration)

    • Part 3: subtract the positive results in part 2 from the positive results in part 1; if the result is positive, count as administered by JAMS.

    • Part 4: for all of the remaining contracts not identified as JAMS-administered in parts 1 through 3, count as JAMS-administered for any contracts yielding at least one hit for any of the following:

        filed w/15 of jams, endispute, or judicial arbitration; before jams, endispute, or judicial arbitration; submit(ed)? w/15 of jams, endispute, or judicial arbitration; auspices w/15 of jams, endispute, or judicial arbitration; administer(ed)? w/15 of jams, endispute, or judicial arbitration; conducted by jams, endispute, or judicial arbitration

    ii.   Manual validation:

    • 100 randomly-selected arbitration clauses coded as being JAMS-administered: 100 of 100 (100%) were JAMS-administered

    • 100 randomly-selected contracts coded as not being JAMS-administered: 100 of 100 (100%) were not JAMS-administered

2. <u>"Off-the-rack" sets of procedural rules</u>

a. AAA Employment Rules

i. Rule for identifying AAA Employment Rules:

• Part 1: identify all contracts with at least one hit from any of the following:

> aaa w/15 of employment or vice versa; american arbitration association w/15 of employment or vice versa; national rules for resolution of employment disputes; employment dispute resolution rules; employment arbitration rules and mediation procedures of the american arbitration association

• Part 2: from the contracts identified in Part 1, exclude if there are hits for any of the following:

> "not the national rules for the resolution of employment disputes"; "not the employment arbitration rules"; "not the national rules for resolution of employment disputes"

ii. Manual validation:

• 100 randomly-selected arbitration clauses coded as applying AAA-provided employment rules: 98 of 100 (98%) applied AAA-provided employment rules.

• 100 randomly-selected arbitration clauses coded as not applying AAA-provided employment rules: 100 of 100 (100%) did not apply AAA-provided employment rules.

b. AAA Commercial Rules

    i.   Rule for identifying AAA Commercial Rules:

        • At least one hit from any of the following:

            aaa w/15 of commercial; american arbitration association w/15 of commercial

    ii.   Manual validation:

        • 100 randomly-selected arbitration clauses coded as applying AAA-provided commercial rules: 99 of 100 (99%) applied AAA-provided employment rules.

        • 100 randomly-selected arbitration clauses coded as not applying AAA-provided commercial rules: 100 of 100 (100%) did not apply AAA-provided commercial rules.

c. General AAA rules

    i.   Rule for identifying general AAA rules

        • Part 1: At least one hit from any of the following:

            american arbitration association or aaa w/15 of rules

        • Part 2: Exclude any contracts identified as having AAA-provided commercial or employment rules from the previous searches

        • Part 3: Exclude any contracts with at least one hit from any of the following:

            aaa w/15 of expedited; american arbitration association w/15 of expedited (which is how I code for the AAA's Expedited Arbitration Rules)

            aaa w/15 of international; american arbitration association w/15 of international (which is how I code for the AAA's International Arbitration Rules)

            aaa w/15 of complex commercial; american arbitration association w/15 of complex commercial (which is how I code for the AAA's Procedures for Large, Complex Commercial Disputes)

    ii.   Manual validation:

        • 100 randomly-selected arbitration clauses coded as applying general AAA rules: 100 of 100 (100%) applied general AAA rules.

        • 100 randomly-selected arbitration clauses coded as not applying general AAA rules: 100 of 100 (100%) did not apply general AAA rules.

d. JAMS Employment Rules

    i.   Rule for identifying JAMS Employment Rules:

       • Part 1: Take all contracts with hits for rules w/15 of jams; rules w/15 of endispute, or rules w/15 of "judicial arbitration"

       • Part 2: of the contracts that yielded hits for Part 1, isolate those contracts with employment w/15 of jams; employment w/15 of endispute; or employment w/15 of "judicial arbitration"

    ii.   Manual validation:

       • 100 randomly-selected arbitration clauses coded as applying JAMS employment rules: 100 of 100 (100%) applied JAMS employment rules.

       • 100 randomly-selected arbitration clauses coded as not applying JAMS employment rules: 100 of 100 (100%) did not apply JAMS employment rules.

e. JAMS Comprehensive Rules

    i.   Rule for identifying JAMS Comprehensive Rules:

       • Part 1: Take all contracts with hits for rules w/15 of jams; rules w/15 of endispute, or rules w/15 of "judicial arbitration"

       • Part 2: of the contracts that yielded hits for Part 1, isolate those contracts with comprehensive w/15 jams; comprehensive w/15 of endispute; comprehensive w/15 of "judicial arbitration"

    ii.   Manual validation:

       • 100 randomly-selected arbitration clauses coded as applying JAMS comprehensive rules: 100 of 100 (100%) applied JAMS comprehensive rules.

       • 100 randomly-selected arbitration clauses coded as not applying JAMS comprehensive rules: 100 of 100 (100%) did not apply JAMS comprehensive rules.

f. General JAMS rules

    i.   Rule for identifying general JAMS rules

       • Part 1: Take all contracts with hits for rules w/15 jams, endispute, or "judicial arbitration"

       • Part 2: Exclude all contracts identified as having JAMS-provided employment or comprehensive rules

       • Part 3: Of the contracts that yielded hits for Part 1, exclude those contracts with at least one hit from any of the following:

          jams w/15 of commercial; endispute w/15 of commercial; "judicial arbitration" w/15 of commercial

          jams w/15 of international; endispute w/15 of international; "judicial arbitration" w/15 of international

          jams w/15 of streamlined; endispute w/15 of streamlined; "judicial arbitration" w/15 of streamlined

    ii.   Manual validation:

       • 100 randomly-selected arbitration clauses coded as applying general JAMS rules: 99 of 100 (99%) applied JAMS general rules.

       • 100 randomly-selected arbitration clauses coded as not applying general JAMS rules: 100 of 100 (100%) did not apply JAMS general rules.

3. Specified number of arbitrators

   a. Rule for identifying number of arbitrators:

      • Part 1: Rule for identifying one arbitrator:

> At least one hit from any of: "one arbitrator" / "single" w/5 of "arbitrator" / "sole arbitrator" / "one w/5 of "arbitrator" / "arbitrators" w/5 of "one" (to pick up "the number of arbitrators shall be one" or similar phrasings) / "one-person" / "single arbitrator" / "a neutral arbitrator"

      • Part 2: Rule for identifying three arbitrators:

> At least one hit from any of: "three arbitrators" / "third arbitrator" / "three" w/5 of "arbitrators" / "arbitrators" w/5 of "three" / "three-person" / "three arbitrators" / "arbitrator" w/5 of "third" / "three" w/3 of "person(s)?" / "arbitration panel"

      • Part 3: If one-arbitrator rule yields a positive result and three-arbitrator rule yields a negative result, code as one arbitrator.

      • Part 4: If three-arbitrator rule yields a positive result and one-arbitrator rule yields a negative result, code as three arbitrators.

      • Part 5: If neither rule yields a positive result, code as "not specified."

      • Part 6: If both rules yield a positive result, code as "hybrid."

   b. Manual validation:

      • 99 of 100 (100%) of contracts with arbitration clauses that were coded for a single arbitrator had arbitration by a single arbitrator.

      • 100 of 100 (100%) of contracts with arbitration clauses that were coded for three arbitrators had arbitration by three arbitrators.

      • 99 out of 100 (99%) of contracts with arbitration clauses that were coded as "not specified" left the number of arbitrators unspecified.

      • There are several possible hybrid clauses:

> The arbitration clause could call for either one or three arbitrators based on the parties' agreement or disagreement (e.g., parties can use one arbitrator if they can agree on who the sole arbitrator will be, but must use a three-arbitrator panel if they cannot agree on the sole arbitrator).

Of 100 randomly selected contracts with hybrid clauses, 24 of 100 (24%) called for either one or three arbitrators.

The arbitration clause could call for a different number of arbitrators for different types of claims (e.g., one arbitrator for low-value claims and three arbitrators for high-value claims, or one arbitrator for valuation disputes and three arbitrators for other types of disputes).

Of 100 randomly selected contracts with hybrid clauses, 19 out of 100 (19%) called for a different number of arbitrators for different types of claims.

The arbitration clause could call for a scenario in which each party nominates an arbitrator, and those two arbitrators choose a third arbitrator who acts alone in actually deciding the case.

Of 100 randomly selected contracts with hybrid clauses, 4 out of 100 (4%) called for this scenario.

The arbitration clause could call for three arbitrators (e.g., each party nominates one arbitrator, and the two arbitrators choose a third to complete the panel).

Of 100 randomly selected contracts with hybrid clauses, 45 out of 100 (45%) called for this scenario.

The arbitration clause could call for one arbitrator to be chosen from a panel of potential arbitrators.

Of 100 randomly selected contracts with hybrid clauses, 8 out of 100 (8%) called for this scenario.

4. Arbitrator qualifications

   a. Rule for identifying arbitrator qualifications:

      • At least one hit from any of the following:

> arbitrator(s)? must have; arbitrator(s)? who shall be; arbitrator who is; arbitrators who are; arbitrator(s)? w/7 member(s)?; arbitrator(s)? w/7 experience(d)? or vice versa; arbitrator(s)? w/7 practice(d)?; arbitrator(s)? w/7 licensed; arbitrator(s)? w/7 qualifications and vice versa; retired w/7 judge; arbitrator(s)? w/7 expertise; attorney w/7 licensed; lawyer w/7 practice; licensed w/7 attorney; with expertise; with experience; member w/7 bar; arbitrator(s)? w/10 years; former w/7 judge; retired w/7 justice; former w/7 justice; arbitrator(s)? w/7 skilled; legal professional; arbitrator(s)? w/7 executive(s)?

   b. Manual validation:

      • 100 randomly-selected contracts with arbitration clauses that were coded as calling for arbitration qualifications: 96 of 100 (96%) of these contracts actually called for arbitrator qualifications.

      • 100 randomly-selected contracts with arbitration clauses that were coded as not calling for arbitration qualifications: 99 of 100 (99%) of these contracts did not call for arbitrator qualifications.

5. Written opinions

   a. Rule for identifying written opinions:

      • Part 1: Begin by identifying all contracts with at least one hit from any of the following:

         Terms: "arbitrator's reasoning" "decision is based" "detailed reasoning" "detailed recital" "essential conclusions" "essential findings" "statement of reasons" "written arbitration decision" "written findings" "reasoned award" "detailed findings" "basis for the award" "reasons for the award" "award is based" "reasoned award" "basis upon which the award" "basis on which the award" "written award"

         Regular expressions: reasoned w/7 of decision; reasoned w/7 of determination; arbitrator w/7 of writing; arbitrators w/7 of writing; panel w/7 of writing; arbitrator w/7 of explanation; arbitrators w/7 of explanation; panel w/7 of explanation; arbitrator w/7 of finding(s)?; arbitrators w/7 of finding(s)?; panel w/7 of finding(s)?; arbitrator w/7 of written; arbitrators w/7 of written; panel w/7 of written; award w/7 of writing;

      • Part 2: From these contracts, eliminate contracts where the only hits identified from Part 1 come from:

         arbitrator w/7 written consent; arbitrators w/7 written consent; panel w/7 written consent; arbitrator w/7 written notice; arbitrators w/7 written notice; panel w/7 written notice

      • Part 3: From the remaining contracts, eliminate those with "award" in the first 10 lines of the contract

   b. Manual validation:

      • 100 randomly-selected contracts with arbitration clauses coded as requiring written opinions: 95 of 100 (95%) required written opinions.

      • 100 randomly-selected contracts with arbitration clauses coded as not requiring written opinions: 100 of 100 (100%) did not require written opinions.

6. Discovery restrictions

   a. Rule for identifying discovery restrictions:

      • Part 1: Identify all contracts yielding at least one hit from any of the following: limited w/5 of discovery; reasonable w/5 of discovery; adequate w/5 of discovery; essential w/5 of discovery

      • Part 2: Eliminate all contracts yielding more than 10 hits for "discovery."

   b. Manual validation:

      • 100 randomly-selected contracts with arbitration clauses coded as imposing discovery restrictions: 98 of 100 (98%) imposed discovery restrictions

      • 100 randomly-selected contracts with arbitration clauses coded as not imposing discovery restrictions: 96 of 100 (96%) did not impose discovery restrictions.

7. Time limits

   a. Rule for identifying time limits:

      • At least one hit from any of the following: month(s)? w/10 of arbitrator or arbitration or panel; days w/10 of arbitrator or arbitration or panel

   b. Manual validation:

      • 100 randomly-selected contracts with arbitration clauses coded as imposing time limits: 99 of 100 (99%) imposed time limits

      • 100 randomly-selected contracts with arbitration clauses coded as not imposing time limits: 96 of 100 (96%) did not impose time limits.

8. Punitive damages restrictions

    a. Rule for identifying punitive damages restrictions:

        • Part 1: identify all contracts yielding at least one hit for any of the following:

            arbitrator(s)? w/15 punitive; arbitration w/15 punitive; tribunal w/15 punitive; arbitrator(s)? w/15 exemplary; arbitration w/15 exemplary; tribunal w/15 exemplary

        • Part 2: of the contracts identified in part 1, exclude any with no hits for any of the following:

            no(t)? w/15 punitive; no(t)? w/15 exemplary

    b. Manual validation:

        • 100 randomly-selected contracts with arbitration clauses coded as imposing punitive damage restrictions: 97 of 100 (97%) imposed punitive damage restrictions.

        • 100 randomly-selected contracts with arbitration clauses coded as not imposing punitive damage restrictions: 95 of 100 (95%) did not impose punitive damage restrictions.