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THE CHANGING STRUCTURE OF THE LEGAL SERVICES INDUSTRY AND THE CAREERS OF LAWYERS

GEORGE P. BAKER* & RACHEL PARKIN**

We use the Martindale-Hubbell Law Directory to explore how changes in the nature of the relationship between law firms and their clients may have implications for the structure of the legal services industry, the organization of law firms, and legal careers. We find evidence consistent with a shift toward a commodity relationship and an increased reliance on business-getting. Specifically, we find some evidence of a disappearance of the midsized firm and strong evidence of a rise in the largest firms and multi-office firms. We find that leverage is increasing, though mostly in the smaller and midsized firms. We find that promotion clocks are increasingly longer and that firms are lessening their use of “up-or-out” promotion policies.

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INTRODUCTION

Very rarely do academics get an opportunity to study both the internal operations of firms and the interaction of firms in an industry. Most empirical research follows either a panel of firms over time or the careers of individuals in a single firm. However, the Martindale-Hubbell Law Directory ("Martindale") contains detailed biographical information at both the level of the law firm and the individual lawyer for nearly all law firms and lawyers in America. Having data on firms and individuals across the entire industry allows us to link changes in the organizational structures and policies of individual firms to changes at the aggregate industry level.

In this study of the legal market, we use the Martindale data from 1998 through 2004 to explore, document, and refute some "stylized facts" about the legal services industry.1 Because the

1. "Stylized facts" are observations noted in so many contexts that they are taken as empirical truths. Online Glossary of Research Economics, Stylized Facts, http://www.
Martindale directory contains a near census of the legal services industry, we have the opportunity to determine exactly what changes have occurred in the industry and whether a number of popular beliefs are true. Specifically, we will explore how changes in the nature of the profession may have implications for the structure of the legal services industry, the organization of law firms, and the progression of legal careers.

By the "legal services" industry, we mean the group of private practice law firms that serve the legal needs of individual and especially corporate clients. While this industry is often referred to as "the legal profession," we avoid the use of this term because we wish to focus on those aspects of the profession—the organization and interaction of firms, the structure of these firms, and the labor market that supplies them—that reflect economic and competitive forces rather than issues of professional norms and values. In this sense, this study treats the legal profession like a group of companies competing in an industry, trying to succeed by meeting the needs of its customers and employees.

Perhaps the most significant change in the legal services industry in the last twenty-five years has been the rise of corporate in-house counsels and the accompanying change in the nature of the relationship between law firms and their clients. This transformation, which some have described as "the decline of relationship lawyering," has led to a number of changes in the structure of firms, the structure of the industry, and legal careers. Corporate clients have become less attached to their law firms, and are more likely to "shop" for legal help. They have also brought more work in-house and changed the nature of work referred to outside law firms. The significance of "rainmaking," the process of attracting clients, has increased, leading to higher mobility in the legal labor market and an increase in merit-based partnership pay.2

The consequences of these trends are many and varied. Some commentators have predicted the demise of the midsized, full-service law firm, arguing that this organizational form is likely to lose out in competition with larger firms and smaller, more focused boutiques who tailor the scale and scope of their services to meet the new needs

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of corporate counsel. Firms may also increase their geographic scope as an additional means of creating value for clients. Another consequence of the changing nature of client-firm relationships is a change in the structure of law firms. With partners spending more time on rainmaking, higher leverage is necessary in order to have enough lawyers to actually do the legal work. Along with this change in structure comes a change in the nature of legal careers: lengthening promotion “clocks” and the weakening of “up-or-out” promotion systems are both likely consequences of the increased reliance on business generation.

In this Article, we explore and document these changes in the industry, firm structure, and careers. We find some, though not very compelling, evidence for a decline in midsized firms relative to smaller firms. We find a strong trend toward larger firms, and especially large increases in the number of multi-office firms. We document increasing leverage in the industry, though this is mostly evident in smaller and midsized firms. We find that the average time to promotion is increasing across the industry, and we find some provocative evidence for a decline in the use of up-or-out promotion systems.

The Martindale data is extremely rich and has the potential to address many interesting questions beyond the scope of the current analysis. In future work, we hope to explain the variation in the mechanism by which firms grow and shrink. In addition, we plan to study differences in firms’ choices of human resource policies, including those that govern promotion, recruiting, and training. Having data that tracks both firms and lawyers over time also provides a unique context for addressing questions about legal careers. In particular, we would like to consider how the progression of careers differs with respect to gender, lateral movement, and specialization. Outside of the opportunity to study the legal services industry specifically, we can also use Martindale to shed light on other issues pertaining more generally to professional service firms.

The Article proceeds as follows: Part I documents the development of the data, Part II outlines the methodological approach, Part III presents our empirical results, and Part IV discusses potential extensions.

I. DESCRIPTION OF MARTINDALE-HUBBELL DATA

For our analysis, we are using data from the Martindale-Hubbell Law Directory. The Martindale directory has been published (in print form) for over one hundred years and is widely known as the
legal services industry's most comprehensive professional directory. While there is no requirement that firms list, listing in Martindale has become standard practice for virtually all law firms in America. Martindale offers free basic listings for firms and lawyers, offers premium listings for a fee, and charges subscribers for its directories. While sole practitioners and very small firms may not all list, we are confident that the Martindale directory represents a near census of the legal services industry for lawyers in firms of more than a few people.

A. Primary Data Download

We received quarterly data directly from Martindale starting from the first quarter of 1997, the first year that Martindale retained a

3. Martindale recently sponsored a survey of law firms and corporate law departments to learn more about customers' usage patterns. The findings indicate that 86% of corporate and 90% of law firm respondents use Martindale and 74% of corporate and 81% of law firm respondents express reluctance to hire a lawyer or law firm not listed in Martindale. Of lawyers practicing at large private law firms, 97% consider Martindale to be an important mechanism for delivering detailed information about their firms to buyers of legal services. New Research Shows High Usage of Martindale-Hubbell Law Directory: Results for Corporate Law Departments, http://www.martindale.com/xp/Martindale/AboutUs/DirectoryUsageSurvey/survey-corp.xml (last visited Apr. 15, 2006); New Research Shows High Usage of Martindale-Hubbell Law Directory: Results for Law Firms, http://www.martindale.com/xp/Martindale/AboutUs/DirectoryUsageSurvey/survey_firms.xml (last visited Apr. 15, 2006).

4. In other research on the legal services industry, Garicano and Hubbard use establishment-level data from the U.S. Census which "includes ... 219,033 lawyers ... constituting about ... 50% of privately-practicing lawyers in the United States in 1992." See Luis Garicano & Thomas N. Hubbard, Specialization, Firms, and Markets: The Division of Labor Within and Between Law Firms 12 (Nat'l Bureau of Econ. Research, Working Paper No. 9719, 2003), available at http://ideas.repec.org/p/nbr/nberwo/9719.html. This implies that there were about 440,000 lawyers working in private practice in 1992. Using the same data sample, Garicano and Hubbard find that 62.6% of all lawyers work in law offices of at least five lawyers. See Luis Garicano & Thomas N. Hubbard, Hierarchies and the Organization of Specialization 44 tbl.1 (Sept. 2003) (unpublished working paper), available at http://groups.haas.berkeley.edu/imio/garicano/00203.pdf. Thus, these data imply that 275,000 (or 62.6% of 440,000) lawyers work in law offices of at least five lawyers. Using the 1998 Martindale data, we find that 272,000 lawyers work in law offices of at least five lawyers. Even if we assume that the number of lawyers in law offices of this size grows by 10% over the six-year time period from 1992 to 1998 (the equivalent growth over the observed six-year period starting in 1998), the Martindale data captures over 90% of all lawyers working at U.S. law offices of at least five lawyers.


6. In most of our analyses, we restrict our attention to firms with at least five lawyers.
historical copy of the directory in electronic format, through 2004. Because Martindale could not recover every historical quarter, there are a few missing quarters. Table 1 lists all quarter-year combinations for which we have data. Martindale provided us with the following information on lawyers: name, law firm, office location, title, date of birth, date of admission to the bar, location of admission, law school name and graduation date, undergraduate school name and graduation date, practice areas, and peer rating. We have the following information on firms: name, establishment year, office locations, main office, and practice areas. For firms with premium listings, we also have biographies, profiles, and representative clients. Martindale assigns every lawyer and firm a unique permanent identification number ("ID"). Within each firm ID, offices are assigned a unique ID number.

Table 1. Data Received from Martindale-Hubbell

<table>
<thead>
<tr>
<th>Aggregated Year-End</th>
<th>Included Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>1997 Q1, 1998 Q1</td>
</tr>
<tr>
<td>1999</td>
<td>1998 Q2, 1998 Q4, 1999 Q1</td>
</tr>
<tr>
<td>2000(^1)</td>
<td>1999 Q2, 1999 Q4, 2000 Q1</td>
</tr>
<tr>
<td>2001(^1)</td>
<td>2000 Q2, 2000 Q3, 2000 Q4, 2001 Q1</td>
</tr>
<tr>
<td>2002(^2)</td>
<td>2001 Q2, 2001 Q4, 2002 Q1</td>
</tr>
<tr>
<td>2003</td>
<td>2002 Q2, 2002 Q3, 2002 Q4, 2003 Q1</td>
</tr>
</tbody>
</table>

\(^1\) In 2000 and 2001 Martindale published two versions of the Q1 directory.  
\(^2\) Martindale supplied us with identical data for Q4 2000 and Q3 2001 and patterns in the data indicate that both quarters of data actually represent Q4 2000. Thus, we are not using Q3 2001 data.

7. We are limited to the data range from 1998 to 2004 because this is the only time period for which electronic data is available. The large size of the directory prohibits data entry from earlier print copies of the directory. See infra Part II for further discussion.


9. We have relied on Martindale's internal classification to separate academic, corporate, and government listings from those law firms. Only a handful of firms appear with more than one type of firm and we reassign these cases to a single firm type.
B. Cleaning Up the Data

1. The Consistency of Firm, Lawyer, and Office IDs

Since the Martindale dataset was gathered to be used as a directory, its primary structure is a cross-section rather than a panel. In order to use the data as a panel, we check for and correct cases where IDs are not longitudinally consistent. Our procedure for doing so is detailed in the Appendix.

2. Elimination of Duplicates

Lawyers sometimes appear in the database more than once in a quarter. We eliminate these duplicates (using a procedure documented in the Appendix) so that every lawyer appears at most once per quarter. Missing quarterly entries are discussed below.

3. Assigning Lawyers to Positions

The title information provided by Martindale separates lawyers across twenty-four different positions. Only a small fraction of firms have no information on positions. Using information on the age distributions by position, we standardize Martindale's titles into five distinct categories: partners, associates, off-track attorneys, contract attorneys, and retired attorneys.

4. Aggregating Quarterly Data into Annual Data

For analyzing time trends, it is important to compare data from year to year at the same point in time because the entry and exit of lawyers varies by quarter. While it is possible to use only data from a single quarter for each year, we instead annualize over all quarters in a year so as not to leave out lawyers who may not list in Martindale in every quarter. The major caveat of this method is that if a lawyer

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10. A panel dataset follows a set of respondents over a period of time whereas a cross-sectional dataset only considers respondents at one point in time. If IDs in different cross-sections were longitudinally inconsistent (i.e., if a single lawyer is identified by more than one ID over time), it would be impossible to track respondents through time.

11. The partners category includes the title partner as well as director, hiring partner, junior partner, managing partner, marketing partner, member, principal, senior partner, and shareholder. The associates category does not include any other variants of the title. The off-track category includes lawyers with the following titles: attorney, associate counsel, counsel, consultant, of counsel, senior attorney, senior counsel, and special counsel. If a firm has associates but no partners, we code attorney and senior attorney as partner. If a firm has neither associates nor partners, then we classify attorney as "no distinction." Contract attorneys, employees, and staff attorneys make up the contract attorneys category.
exits the legal services industry before the last quarter in the year, we will assign that lawyer to the last known firm he or she belongs to and, therefore, year-end totals may include lawyers that have actually exited earlier in the year. At worst, we delay exit by a maximum of three quarters. We aggregate the data to end with the first quarter of each year (see Aggregated Year-End Column in Table 1 for annual assignment) because a first quarter year-end allows us to include all available data.\textsuperscript{12} Because we have only one quarter of data for the year ending with Q1 1998, we count Q1 1997 in 1998. Including Q1 1997 helps to account for any lawyers that may have appeared in the missing quarters (Q2, Q3, and Q4 1997) but do not appear in Q1 1998. Relative to all other years of data, we will at most retain lawyers (who really exit the industry) for an extra three months. We have at least three quarters of data in all years other than 1998.

For each year, we convert the quarterly records into a single annual observation. If a lawyer's firm and position information does not change during the year, then this task is trivial. When a lawyer's firm (or position) changes, we use that lawyer's next and last firm (position) to determine which firm (position) appears second in chronological order.\textsuperscript{13} In the event that a lawyer appears in more than one firm (position) in the next or last year, then we order the data chronologically and assign the lawyer to the second firm (position). At the firm level, we keep the last known main office and branch office addresses in each year.\textsuperscript{14}

\textbf{C. Restrictions to the Sample}

Based on our estimates, the Martindale dataset contains records on about 950,000 lawyers per year working in law firms, as sole practitioners, and for government, academic, and corporate organizations globally. However, we are most interested in a subset of these lawyers. In most of our analyses, we restrict the sample to U.S. lawyers working in private practice firms of five or more lawyers.

\begin{footnotesize}
\begin{enumerate}
\item[12.] If we were to use Q4 as the year-end, then we would have to throw away data from Q1 1997 and Q1 2004 since we would have only one quarter of data for both of these years.
\item[13.] This algorithm avoids any problems that might arise from inconsistencies in reporting at a quarterly level—for example, if data are not updated linearly.
\item[14.] In cases where a firm has more than one office marked as the main office, we apply an algorithm similar to the one described above for annualizing quarterly lawyer information. If a firm has no offices marked as the main office, we assume the largest office is the main office.
\end{enumerate}
\end{footnotesize}
1. Elimination of International Lawyers

Although Martindale maintains some data on lawyers globally, we restrict our analysis to the U.S. legal market because we do not have reason to believe that Martindale contains a census of international lawyers. For the small fraction of lawyers listed in U.S. and international offices in the same year, we must make an assumption about which country they actually work in. Because firms frequently list lawyers in multiple offices, we apply an algorithm similar to that used in Part I.C.3 to eliminate duplicate office listings. The simple intuition works as follows: if a firm lists all lawyers in the main office, then we assume a lawyer listed in two offices in different countries works in the nonmain office. Specifically, lawyers listed in one U.S. and one foreign office work in the office that is not in their home country (the international office, if the firm’s main office is located in the United States; the U.S. office, if the firm’s main office is located outside of the United States). Alternatively, some firms list all lawyers in every office and, thus, we assume lawyers listed in more than two offices work in the country where their firm is headquartered.15

2. Elimination of Small Firms

We have chosen to eliminate the smallest firms from our analysis for two reasons. First, because firms and lawyers choose to appear in the Martindale directory, we are concerned that Martindale may not represent a complete census of small firms. Smaller firms are more likely to have localized demand and depend less on referrals, possibly making even a free directory listing not worthwhile. Second, we are concerned that the strategies, policies, and practices of law firms (which are in the end the focus of our interest) may differ between very small firms and larger firms. It may be that very small firms are more like sole practitioners than they are like law firms. By eliminating the tiniest firms and sole practitioners, we rule out any problems that might result from drawing conclusions about law firm practices with data from organizations that are fundamentally dissimilar. Specifically, we choose a minimum cutoff size of five or more lawyers. Table 2 shows the number of lawyers in firms of all

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15. If a lawyer is listed in one office in the home country and many offices abroad, we assume he or she works in the non-home country. Given that these lawyers are selectively listed in almost all non-home country offices (and no other home country offices), we assume that they spend more of their time abroad.
sizes and the number of lawyers in firms of size five or more over time. The firms we exclude from our analysis account for a constant fraction of lawyers, about 30%, in all years. This 30% is a large number, and (because sole practitioners are less likely to list in Martindale) is almost surely an underestimate of the number of lawyers not included in our sample. It is thus important to recognize that our analysis is not really representative of the entire legal services industry, but rather that part of the market served by law firms of five or more lawyers.

Our final dataset contains 2.1 million lawyer-year records and 110,000 firm-year records. Unless otherwise stated, all empirical results from this point forward derive from lawyers working in private practice firms of at least five attorneys.

3. Elimination of Duplicate Office Listings

Before we can calculate office size, we must assign lawyers to a single office in each firm-year combination. It is not surprising that firms may choose to list their lawyers in multiple offices since the function of listing in Martindale is to advertise legal talent, and listing in more than one place makes it easy to find lawyers. For example, some firms list all lawyers in the main office and other firms list their name partners in every office. Some of these lawyers may actually split their time between offices, but because other duplicate listings may be advertisements, we assume lawyers can only be in residence in a single office. We first use a lawyer's own career history to resolve instances where duplication results because lawyers change offices.16

16. We rule out the possibility that one office ID folds into another by further examining all cases where one office ID ends in a year and another begins in the same year (but where the offices do not appear in the same quarter). If more than 75% of the

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Table 2. Number of Lawyers

<table>
<thead>
<tr>
<th>Year</th>
<th>All lawyers</th>
<th>Lawyers in firms of 5 or more</th>
<th>Percent of all lawyers</th>
<th>Lawyers in firms of 5 or more in top 10 cities</th>
<th>Percent of all lawyers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>389,129</td>
<td>278,917</td>
<td>72%</td>
<td>129,781</td>
<td>33%</td>
</tr>
<tr>
<td>1999</td>
<td>398,355</td>
<td>284,729</td>
<td>71%</td>
<td>133,738</td>
<td>34%</td>
</tr>
<tr>
<td>2000</td>
<td>411,228</td>
<td>293,992</td>
<td>71%</td>
<td>138,160</td>
<td>34%</td>
</tr>
<tr>
<td>2001</td>
<td>419,172</td>
<td>300,967</td>
<td>72%</td>
<td>142,156</td>
<td>34%</td>
</tr>
<tr>
<td>2002</td>
<td>421,852</td>
<td>301,758</td>
<td>72%</td>
<td>143,015</td>
<td>34%</td>
</tr>
<tr>
<td>2003</td>
<td>426,015</td>
<td>306,055</td>
<td>72%</td>
<td>145,047</td>
<td>34%</td>
</tr>
<tr>
<td>2004</td>
<td>428,562</td>
<td>307,507</td>
<td>72%</td>
<td>145,966</td>
<td>34%</td>
</tr>
</tbody>
</table>
If a lawyer is listed in two offices in a year, but only one of those offices in the following year, we assume next year’s office is the correct office for the current year.\textsuperscript{17} Next, we apply an algorithm that uses information about how many offices list a lawyer to assign the remaining cases of duplication.\textsuperscript{18} If a firm lists all lawyers in every (or almost every) office, then knowing the selection of offices a lawyer is listed in provides no additional information for assigning a lawyer to a single office. In this case, we assign lawyers to the main office. However, if a firm has many offices, but a lawyer is listed in only two of those offices, we assume the firm follows a practice of listing all lawyers in the main office and assigns such dually listed lawyers to the branch office.

The assignment for cases where a lawyer is listed in both offices of a firm that has only two offices is slightly more complicated. If a firm has only two offices, we do not know whether lawyers are listed in both offices because everyone is always listed in the main office (in which case duplicate lawyers should be assigned to the branch office) or because everyone is always listed in every office (in which case duplicate lawyers should be assigned to the main office).\textsuperscript{19} We assign lawyers who are listed in both offices (consistent with the assignment of lawyers who are listed in every office above) to the main office with a few exceptions. We call any office where office size equals firm size the “equal” office.\textsuperscript{20} If only one office in a firm contains all lawyers, we assume lawyers listed in both offices work in the office that does not list every lawyer, or the “not equal” office.\textsuperscript{21} If a firm has only two offices and neither office size equals firm size, but one office lists all partners in the firm, we assume lawyers listed in both offices work in the office that does not list every partner. Although lawyers in the closing office move to the new office, we treat these offices as if they were the same. We also supplement this list with any cases where 75\% of the duplicated lawyers in an office move to another irrespective of first and last years for each office.

\textsuperscript{17} This method will also resolve cases where firms change their reporting patterns over time—i.e., if a firm lists all lawyers in the main office in some, but not all, years.

\textsuperscript{18} We spot checked small samples of data to inform our algorithm.

\textsuperscript{19} This is not a problem when the firm has more than two offices, because we know that if a lawyer is listed in only two of those offices, it is not the firm’s policy to list every lawyer in every office.

\textsuperscript{20} We actually allow a small window of flexibility to account for any small reporting errors. We treat office size as if it equals firm size as long as the office contains at least 90\% of the total number of lawyers in the firm or at least 80\% of the total number of lawyers in the firm if firm size is less than twenty lawyers.

\textsuperscript{21} In the event that both offices’ sizes equal firm size, we assume lawyers work in the main office. If we identify a partner as a name partner, meaning the partner’s last name matches part of the firm’s name, then we always assume the lawyer works in the main office.
these steps may seem to add an extra layer of complication, in almost every case the main office is the "equal" office and the branch office is the "not equal" office, making this procedure identical to the basic method detailed above. The key difference is that we refine our procedure for two-office firms such that we assign a lawyer dually listed in one office containing all lawyers to the branch office instead of the main office.

4. Elimination of Demotions

There are a few instances in the dataset where lawyers appear to move from partner to associate in the same firm. We assume these are data errors, and that firms do not demote partners—that is, lawyers do not move from the partner position to the associate position while working at the same firm. Generally, we assume a lawyer is an associate until the last year in which he or she appears as an associate. For example, if a lawyer holds the positions associate, associate, partner, associate, and partner in chronological order, we change the position in year three from partner to associate. We do not assume the alternative, that a lawyer is a partner from the first point in time that he or she is listed as a partner, because we find that many instances of demotions are the product of firms that list all lawyers as partners in one or two years, but separate associates from partners in all other years. We do, however, allow for demotions when lawyers move across firms because different firms may have different partnership criteria.

D. Other Lawyer and Firm Characteristics

1. Lawyer Characteristics

Martindale records each lawyer's biographical characteristics, including birth year and graduation year, on a quarterly basis even

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22. We do allow lawyers to move from partner or associate to off-track as this may happen when a lawyer takes a leave of absence but stays on the firm's books.

23. The lawyer's revised position list is then: associate, associate, associate, associate, and partner.

24. "[P]artnership criterias [sic] include culture compatibility, personality, firm needs, practice specialty, credentials, productivity, excellence, leadership, and popularity. . . . [I]t is relatively harder to make partner at firms with higher profits and leverage." Neil Soloman, Timing the Market, LEGAL BUS., June 17, 2002, at 18. Differences in these criteria across firms are made most obvious in law firm dissolutions when lawyers give up partner status to join new firms, as was the case when Proskauer Rose hired former Shea & Gould partners as off-track lawyers, for example. See Vera Titunik, Stripped for Parts, AM. LAW., Apr. 1994, at 68, 69-70.
though this information should not change with time. Because lawyers are sent versions of their current profiles to revise each year, we eliminate inconsistencies in birth year by assuming the information contained in the most recent directory is correct. If a lawyer reports more than one law school graduation year, we assume the graduation year that makes the lawyer closest to age twenty-five at graduation is the correct one.\textsuperscript{25} We calculate age as the current year minus birth year and years out of school as the current year minus law school graduation year.

We only observe the occurrence of promotion for lawyers who get promoted between 1998 and 2004. Ideally, we would like to know how many years each lawyer worked at his or her current firm (and prior firms) before promotion. However, our data are left-censored, meaning that we have no information about the careers of lawyers prior to 1998. Hence, it is not possible to track a lawyer from the beginning of his or her career to the point of promotion. We can calculate years to promotion as the length of time between a lawyer’s graduation from law school and year of promotion. This procedure is consistent with practice in many firms, who calculate a lawyer’s “class” not by time at the firm, but by time out of school, including clerkships, as years that count on the partnership clock.\textsuperscript{26}

Martindale does not track gender for each lawyer, but we are still able to construct a measure of gender using frequencies of names by gender from the 1990 Census.\textsuperscript{27} From the Census data, we calculate for each name the percentage of people with that name who are female. If the percentage of females is greater than 50% for a name, then all lawyers with that name are coded as female. If the percentage of females is less than 50% for a name, then all lawyers with that name are coded as male. For example, 3.1% of females and

\begin{footnotesize}
\begin{enumerate}
\item If a lawyer lists more than one law school, both of which have a graduation year, we first use degree information to select the most advanced law degree and assign any remaining cases to the law school that appears more frequently. If years out of school are less than zero in any year, we assume that years out of school are missing.
\end{enumerate}
\end{footnotesize}
3.6% of males are named Kerry, thus, 46% of people named Kerry are female and all lawyers with the name Kerry are coded as male.\textsuperscript{28} The Census only lists names accounting for 90% of the population, so we use Baby Name Guesser, a web-based tool, to fill in the most likely gender for any remaining names.\textsuperscript{29} There are about 1% of lawyers for which we are unable to identify a gender, either because a lawyer reports only his or her initials or the name is so rare that it does not appear in either of our sources.

2. Firm Characteristics

We build firm statistics by aggregating up from the lawyer level. Since we know each lawyer's office and firm, we can easily compute office and firm size by counting the number of lawyers in each office and firm. A multi-office firm has more than one populated office location. If the office assignment procedure reduces the number of lawyers in an office to zero, we do not include it in the firm's total number of branch offices. We calculate leverage, a measure of a firm's hierarchy, as the ratio of associates to partners. We measure the size of a firm's geographic footprint as the smallest region that contains all of a firm's offices.\textsuperscript{30}

E. Descriptive Statistics

Table 2 shows the total number of lawyers reported in the Martindale data over the time period starting in 1998 and ending in 2004. It also shows the number of lawyers working in firms of five lawyers or more and the number of these lawyers in the top ten legal markets. There is a slight upward trend in the total number of lawyers during this period. Almost one-half of all lawyers working in

\textsuperscript{28} In cases where a lawyer has an unrecognized first name, we use the middle name to identify a gender. If a lawyer's first name is female and middle name is male, we code as female. In all of the cases we checked in this category, the middle name looked to be the lawyer's maiden name. If a lawyer's first name is male and middle name is female, the lawyer is coded as male unless the middle name is 100% female or the middle name is greater than 75% female and the first name is at least a small fraction (5%) female. If a lawyer reports multiple variants of his or her name that have conflicting genders, we assume the gender that appears with greater frequency is correct.

\textsuperscript{29} See Geoff Peters, Baby Name Guesser, http://cgi.sfu.ca/~gpeters/cgi-bin/pear/gender.php (last visited Apr. 15, 2006). Baby Name Guesser uses Google searching techniques to assign a most likely gender. \textit{Id.}

\textsuperscript{30} The Census divides states into four regions (Northeast, South, Midwest, and West) and further subdivides each region into two to three subregions. Geography Div., U.S. Census Bureau, Census Regions and Divisions of the United States, http://www.census.gov/geo/www/us_regdiv.pdf (last visited Apr. 15, 2006). We say a firm has a national footprint if it has offices in all four census regions.
firms of five or more work in the top ten legal markets (as ranked in 1998 by the number of lawyers working at firms headquartered in each metropolitan statistical area ("MSA")), but the top ten markets do not account for an increasingly greater fraction of lawyers over time. Nor has there been very much change in the relative size of the top ten legal markets. Figure 1 shows the actual population of lawyers in each market. New York is the city with the most lawyers and Washington, D.C. is second with about half as many lawyers in our sample. Even though all markets are growing, no top ten city is gaining disproportionately: there has been no change in the ranking of market by size over this period.

Figure 1. Number of Lawyers by Top Ten City

31. We rank legal markets using the number of lawyers by firm (or main office) location rather than individual office location so that when we segment firm level characteristics by city, we choose the MSAs that contain firms accounting for the highest fraction of lawyers. Based on the Martindale data, the top ten legal markets in order of lawyers by main office location are: New York, Chicago, Los Angeles, Washington, D.C., Philadelphia, San Francisco, Boston, Dallas, Atlanta, and Houston. It is not surprising that this ordering differs from that shown in Figure 1. Washington, D.C. likely has many more lawyers who work there than lawyers whose firms are based there because the proximity to government lawmakers may make it a relatively more attractive city for branch offices. If we ranked the top ten legal markets in 2004 rather than 1998, Miami would replace Houston on the list. If we ranked the top ten legal markets based on the number of lawyers working in each of these cities, then Miami would replace Houston regardless of whether we based our ranking on 1998 or 2004.
Table 2 and Figures 2a and 2b together document a particular pattern of industry consolidation. Though the number of lawyers is growing, the number of firms is declining slightly. (See Figure 2a.)

**Figure 2a. Number of Firms and Average Firm Size**

![Graph showing the number of firms and average firm size from 1998 to 2004.](image)

**Figure 2b. Number of Offices and Average Office Size**

![Graph showing the number of offices and average office size from 1998 to 2004.](image)
Thus, the average size of firms is growing. Figure 2b shows that the number of law offices grew until 2000, and has been stable since then. Therefore, firms are growing by starting, and especially acquiring, new offices.

Tables 3a and 3b show that the addition of offices is accompanied by an increase in geographic diversification, showing the number and percentage of lawyers by the size of firm footprints. Firms with a national footprint account for 9% of lawyers in 2004, up from only 4% in 1998. In spite of this trend, the market is still largely local: over 45% of lawyers work at firms whose offices are all contained in a single MSA, with 20% more working in firms with a geographic reach no larger than a single Census subregion.

Table 3a. Number of Lawyers by Degree of National Presence

<table>
<thead>
<tr>
<th>National Presence</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Region</td>
<td>11,808</td>
<td>12,433</td>
<td>16,572</td>
<td>20,494</td>
<td>22,168</td>
<td>22,713</td>
<td>26,309</td>
</tr>
<tr>
<td>3 Region</td>
<td>22,574</td>
<td>25,611</td>
<td>28,995</td>
<td>30,632</td>
<td>33,602</td>
<td>37,386</td>
<td>35,396</td>
</tr>
<tr>
<td>2 Region</td>
<td>36,822</td>
<td>38,283</td>
<td>38,438</td>
<td>38,647</td>
<td>38,835</td>
<td>38,608</td>
<td>38,445</td>
</tr>
<tr>
<td>1 Region</td>
<td>7,216</td>
<td>7,297</td>
<td>7,203</td>
<td>7,948</td>
<td>8,267</td>
<td>9,500</td>
<td>10,923</td>
</tr>
<tr>
<td>Subregional</td>
<td>17,314</td>
<td>18,285</td>
<td>18,858</td>
<td>19,878</td>
<td>19,409</td>
<td>19,153</td>
<td>19,300</td>
</tr>
<tr>
<td>State</td>
<td>31,091</td>
<td>31,709</td>
<td>32,778</td>
<td>33,897</td>
<td>34,085</td>
<td>34,152</td>
<td>33,613</td>
</tr>
<tr>
<td>MSA</td>
<td>152,092</td>
<td>151,111</td>
<td>151,148</td>
<td>149,471</td>
<td>145,392</td>
<td>144,543</td>
<td>143,521</td>
</tr>
<tr>
<td>Total</td>
<td>278,917</td>
<td>284,729</td>
<td>293,992</td>
<td>300,967</td>
<td>301,758</td>
<td>306,055</td>
<td>307,507</td>
</tr>
</tbody>
</table>

Table 3b. Percent of Lawyers by Degree of National Presence

<table>
<thead>
<tr>
<th>National Presence</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Region</td>
<td>4.2%</td>
<td>4.4%</td>
<td>5.6%</td>
<td>6.8%</td>
<td>7.3%</td>
<td>7.4%</td>
<td>8.6%</td>
</tr>
<tr>
<td>3 Region</td>
<td>8.1%</td>
<td>9.0%</td>
<td>9.9%</td>
<td>10.2%</td>
<td>11.1%</td>
<td>12.2%</td>
<td>11.5%</td>
</tr>
<tr>
<td>2 Region</td>
<td>13.2%</td>
<td>13.4%</td>
<td>13.1%</td>
<td>12.8%</td>
<td>12.9%</td>
<td>12.6%</td>
<td>12.5%</td>
</tr>
<tr>
<td>1 Region</td>
<td>2.6%</td>
<td>2.6%</td>
<td>2.5%</td>
<td>2.6%</td>
<td>2.7%</td>
<td>3.1%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Subregional</td>
<td>6.2%</td>
<td>6.4%</td>
<td>6.4%</td>
<td>6.6%</td>
<td>6.4%</td>
<td>6.3%</td>
<td>6.3%</td>
</tr>
<tr>
<td>State</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.1%</td>
<td>11.3%</td>
<td>11.3%</td>
<td>11.2%</td>
<td>10.9%</td>
</tr>
<tr>
<td>MSA</td>
<td>54.5%</td>
<td>53.1%</td>
<td>51.4%</td>
<td>49.7%</td>
<td>48.2%</td>
<td>47.2%</td>
<td>46.7%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
In 2004, the pool of lawyers is still predominantly male, with women increasing as a fraction of all lawyers from 23% to only 26% over the seven-year time period.\textsuperscript{32} (See Table 4.) However, the percentage of women among all lawyers is not representative of the current level of gender equality because the existing stock of lawyers is mostly male. We instead calculate the percentage of women among the flow of entrants into the profession. We find that women have made significant inroads, increasing from 40% of all first year associates in 1998 to 47% by 2004.\textsuperscript{33}

\textbf{II. METHODOLOGICAL APPROACH}

Since this is the first study of the legal services industry using the entire Martindale directory, our primary research approach is to let the data tell the story of the industry from within rather than imposing (and testing for) a specific hypothesis ex ante. In the results that follow in Part III below, we present a series of descriptive statistics that document changes in the industry that may have been brought on by the decline in relationship lawyering. Since we are essentially using a census, we have the opportunity to compare our results with conventional wisdom derived from anecdotes, theories, or small sample analysis.

\begin{table}[h]
  \centering
  \begin{tabular}{|c|c|c|c|c|c|c|}
    \hline
    \hline
    All lawyers & 23.1\% & 23.7\% & 24.3\% & 25.0\% & 25.4\% & 25.9\% & 26.3\% \\
    First-year associates & 40.2\% & 39.8\% & 42.1\% & 43.8\% & 44.6\% & 45.4\% & 47.1\% \\
    \hline
  \end{tabular}
  \caption{Percent of Female Lawyers}
\end{table}

\textsuperscript{32} We exclude the approximately 1\% of lawyers for whom we cannot identify a gender, \textit{see supra} Part I.D.1, from this analysis.

\textsuperscript{33} The fact that entry into the legal services market is just under 50\% female is also a reassuring indicator that our measure of gender is not terribly inaccurate. Our entry estimates are also consistent with graduation rates reported by the American Bar Association. \textit{See} Am. Bar Ass'n, J.D. Degrees 1984–2004, http://www.abanet.org/legaled/statistics/jd.html (last visited Apr. 16, 2006). The percent of women graduating from law school has increased from 44\% to 49\% over the same time period. \textit{Id.} The small differences from our numbers can be explained if our gender assignment makes more mistakes in identifying names that are actually female than male. This might occur if females are more likely to be given gender neutral or male names than males are likely to be given female names. These differences can also be explained if women are less likely than men to enter a law firm straight out of law school (or at all).
An advantage of our data is that we are working with the entire population of lawyers and not drawing inferences from a sample. Ordinarily, empirical research focuses on finding statistically significant differences, attempting to show that a difference in the observed sample is indicative of a difference in the population. But, when we observe a change in a variable over time, we know that this change is the actual difference in the population. For this reason, we almost never report standard errors or statistical significance levels in this Article.\footnote{Our sample size is so large that virtually all of the differences that we report would be statistically significant if we were to calculate such measures.} Our burden is instead to identify whether and where there have been interesting or significant changes in the industry.

We describe each variable of interest using some combination of totals, means, medians, and distributions.\footnote{In some cases, we segment our analysis by subgroups of firms. Disaggregating the data can be helpful in drawing more accurate conclusions to the extent that differences in variation by firm characteristics confound aggregate results.} Means (and other measures of central tendency) can be misleading indicators when the underlying distribution is not symmetric, has more than one peak, or is changing over time. For this reason, we will often try to present results that show the entire distribution of the data, allowing for a fuller analysis of the underlying phenomena.

A serious shortcoming of our data is their short time span. While the Martindale directory has been published for over one hundred years in printed form, the company has only kept its historical files in (incomplete) database form since 1997. For this reason, we have data only beginning in 1998. Clearly, many of the changes that we examine in this Article occurred much longer ago than this, and so many of the trends that we document have been going on for much longer as well. To the extent that we discern changes in the structure of the industry, of firms, or of careers over this short time frame, we believe that it is even more powerful evidence of important changes occurring in the legal profession, over a longer time period. However, failure to find changes over this shorter time period must be viewed with skepticism.

\section*{III. Analyzing the Market for Legal Services}

\subsection*{A. Effects of the Decline of Relationship Lawyering}

In this Part, we analyze four trends in the legal industry: the changing distribution of firm sizes; the rise of multi-office,
geographically-dispersed firms; increasing leverage in law firms; and changes in the nature of legal careers, particularly the lengthening of the partnership "clock" and a possible decline in the use of "up-or-out" promotion systems. We argue that all of these trends may be linked to the changing nature of the relationship between law firms and their clients.

Over the past quarter century, much has been made of the rise of the in-house counsel and the resulting demise of "relationship lawyering." Corporate legal departments have exhibited significant growth since the early 1980s and have continued this trend in recent years. Between 1998 and 2004, the 200 largest in-house legal departments grew from a total of 24,000 to 27,500 lawyers. Armed with more talent and the goal of cutting costs, corporate law departments are performing an increasing share of legal work in-house. General counsel surveyed in 1998 did not anticipate sending more work to outside law firms in the coming year, despite a belief that the volume of legal work would increase. Cost pressures are also leading corporate counsel to reduce the number of outside law firms they use.

One consequence of the increasing size and scope of in-house legal departments has been that corporate clients no longer hire a law firm to "be their lawyer," developing a multifaceted and lasting relationship and giving that firm virtually 100% of their legal work.

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37. This statistic was found by totaling all lawyers working globally in corporate legal departments on the Corporate Legal Times 200 Largest Legal Departments list. See The 200 Largest Legal Departments, CORP. LEGAL TIMES, Aug. 2005, available at http://www.insidecounsel.com/issues/insidecounsel/pdfs/The200Largest.pdf. The number of lawyers in the top 200 legal departments has remained a constant fraction of lawyers in our sample.


41. Pollock details the demise of the longstanding relationship between Milbank, Tweed and Chase Manhattan Bank. "[R]outine legal work that firms like Milbank had
Because corporate clients now do much of their routine legal work in-house, they are more likely to hire outside firms only for large, complex, or specialized matters. These firms are often hired for a specific transaction and corporate clients seek to hire the most capable lawyer for each case. 42 “[I]ncreasingly, clients view their legal counsel as a commodity that can be purchased from a number of sources” and often “shop” their work through a competitive selection process to a broader set of firms. 43 Longstanding relationships between clients and firms have been replaced by a transactional system where clients hire individual lawyers, not law firms. 44

In response to these changes, firms face two possible strategies to compete. As detailed below, they can either expand in terms of size and service offerings, or they can specialize. Lost in this dynamic is the traditional midsized, general practice firm—the demise of which has been predicted for years. 45 In the analysis in Part III.B below, we look for this decline and find only modest evidence of this trend.

Another way that firms can compete with larger in-house legal departments is to increase their geographic diversity. It is unlikely that in-house corporate legal departments can build sufficient expertise in multiple jurisdictions. Thus, firms that can offer this type of expertise will be able to offer clients value. We document the increasing geographic diversity of law firms in Part III.C.

As old relationships become less important, law firms (and lawyers) now must compete against each other for clients in a way that would have been unimaginable in the past. Rather than relying on competent legal expertise and loyalty to the firm to maintain

thrive on was increasingly taken over by in-house counsel—staff lawyers hired by companies to do the work more efficiently and at a lower cost.” ELLEN JOAN POLLOCK, TURKS AND BRAHMINS: UPHEAVAL AT MILBANK, TWEED 13 (1990). “Milbank found itself competing with Chase’s staff lawyers and with other firms, even in New York.” Id. at 123.


44. Roger H. Marks, General Counsel and Secretary of H,0 + (a consumer products company) notes that “[w]hen we seek outside counsel, the law firm in many cases becomes secondary. We often look for an attorney who has good judgment, who can aggressively represent our interests and who has creative solutions.” The Client Speaks, ILL. LEGAL TIMES, Apr. 1999, at 1; see also Jawboning Key To Managing Outside Lawyers: Lateral Hires Are a Two Way Street Now, CORP. LEGAL TIMES, Aug. 1993, at 1.

clients, partners must actively seek out new clients.\textsuperscript{46} Rainmaking is now a necessary tool for a law firm's performance and survival. "As a result, firms—more than ever before—are grappling with how to teach their associates and new partners to be good marketers as well as good lawyers."\textsuperscript{47}

The increased importance of business-getting changes several aspects of legal practice, legal careers, and the structure of law firms. Since the senior members of the firm must spend more of their time getting business, they have less time to actually do the legal work.\textsuperscript{48} This implies that having more associates per partner may be an optimal response to this change in the nature of the legal profession.\textsuperscript{49} We document this trend in Part III.D.

There is another implication of the increased importance of rainmaking to law firms. Associates now must do more than simply show that they are "good lawyers"; they must show they are good business generators if they are to be promoted to partner. This may imply the need to lengthen the amount of time before an associate is elevated to partner. In addition, firms finding that associates are more valuable as associates, but less valuable as partners, may reduce their use of up-or-out systems to keep associates at the firm for longer periods. In Part III.E, we examine changes in promotion rates and systems. We find evidence that promotion clocks are lengthening, and mixed evidence of the reduced reliance on up-or-out career systems.

\textbf{B. Firm Size}

With the expansion of corporate legal departments, the type of work referred to outside law firms has changed and the degree of cost competition has increased. Corporate clients use law firms when they need capacity or additional expertise, as may be necessary in complicated, multidisciplinary, or specialized work. Given the increased competition for business, law firms are altering their scale and scope to best meet the demands of clients.

\textsuperscript{46} Sears, \textit{supra} note 45.


A growth strategy is one means of both solidifying existing client relationships and developing new ones. First, by increasing in size, law firms can meet the capacity needs of corporate clients. Second, by increasing scope, or adding complementary practice specialties, law firms can represent clients in transactional matters requiring legal expertise in several areas. Firms adding scale in every practice area can offer their clients "one-stop shopping," which may build ties to the firm lasting longer than a single legal matter through active cross-selling. Purchasing all legal services from a single firm for a multidisciplinary matter may also be less costly than purchasing these services à la carte from different law firms. Because these moves help to protect client bases, they also keep the most powerful rainmakers (and highest revenue generating partners) from looking for new firms with greater scale or scope.

However, firms need not necessarily get bigger in order to survive. With the demise of relationship lawyering, corporate counsel are inclined to hire the best firm for a specific and likely specialized matter. Boutique firms succeed because they offer highly-specialized and narrowly-focused expertise without the high overhead costs associated with many large firms.

While growth and the expansion—or alternatively reduction—of practice areas are consistent responses of law firms to the competition for clients and the increasingly specialized nature of legal work, firms that do not adapt risk failure. Whereas midsize general practice firms would have satisfied the routine legal needs of clients in the relationship model, they are hard pressed to compete against firms that offer more depth in each practice area in the transactional model. Midsized firms are also more likely to be victims of poaching and exit inertia:

With the proliferation of rapidly growing branch offices and the expansion of existing large firms, rainmakers have an ever-increasing number of lucrative career alternatives. A rainmaker at a midsize firm who now labors under the knowledge that his or her compensation is substantially less than market value and that he or she is, in effect, losing hundreds of thousands of dollars by remaining with the firm, will be hard-pressed to stay. The loss of rainmakers has serious

50. We assume firms increasing scope are doing so by hiring new lawyers. If firms are increasing scope by having existing lawyers specialize, we would be unable to identify this change vis-à-vis a change in firm size.

consequences beyond the loss of business itself.... [T]he loss of key rainmakers undermines the firm's ability to recruit replacements.\textsuperscript{52} The departure of high revenue generating partners will make it even more difficult for midsize firms to attract and maintain clients and lawyers, potentially leading to more departures and eventual dissolution.

In order to identify whether there has been a shakeout of midsized firms, we calculate the distribution of lawyers by firm size. We weight our analysis by lawyers because the largest 15\% of firms account for about 60\% of lawyers. A lawyer-weighted statistic measures the relative dominance of firm size categories in terms of their share of the legal labor market. Tracking the percentage of lawyers rather than firms also allows us to capture both the addition (or deletion) of firms to a size bucket and the continued growth (or decline) of the firms already in that bucket.

As a baseline, we create firm size deciles, setting the minimum and maximum firm size for a decile such that each decile includes roughly 10\% of all lawyers in 1998.\textsuperscript{53} In Figure 3, the thick black line at 10\% indicates the desired baseline value for each size decile. Most deciles in 1998 are very close to or slightly less than 10\%. Only the first two deciles contain more than 10\% of lawyers. The lumpiness in the distribution occurs in the smallest firm sizes because each decile contains relatively few different firm sizes and many firms per size. If we were to, for instance, make the smallest decile those firms with five lawyers (instead of five to six lawyers), this bucket would contain many fewer than 10\% of all lawyers.

\textsuperscript{52} June Eichbaum et al., \textit{Midsize Firms Vie for Rainmakers}, NAT'L L.J., Jan. 19, 1990, at 24.

\textsuperscript{53} Starting from the smallest firms, we group firm sizes together until they count for a cumulative percent of lawyers as close to 10\% as possible. We adjust the 10\% target in each next decile to an equal share of the remaining total percent of lawyers in order to account for the possibility that a decile may not exactly equal 10\% of lawyers. For example, if decile 1 contains 11\% of lawyers, then we set firm sizes in decile 2 such that the percent of lawyers is closest to (100\%-11\%)/9 or 9.89\%. We repeat for this algorithm starting with the largest firms and choose the decile set that minimizes the sum of the squared differences for each decile from 10\%. We do not split equally-sized firms across buckets because the number of firms in each decile and number of lawyers at those firms changes over time. Tracking lawyers from a single firm size in two different buckets would only add an extra layer of complication and make the interpretation of our results more difficult. We calculate deciles as a function of the percent of lawyers rather than the number of lawyers because the size of the industry is growing as a whole and a percentage based calculation enables us to capture the relative growth (or decline) by size decile.
If it were true that midsized is no longer a sustainable firm size, we would observe growth over time in the tails of the distribution and a decline in the middle of the distribution such that the new distribution would be U-shaped relative to the 1998 distribution. A U-shaped distribution implies that more lawyers either work for large firms or for small firms in 2004 than in 1998. The distribution of lawyers by firm size in 2004 (see Figure 3) indicates that this is not the case. It is true that there has been substantial growth in the largest firms. Firms with 389 or more lawyers account for slightly less than 10% of lawyers in 1998, but over 18% of lawyers in 2004. Thus, the largest firms are growing, perhaps in response to the need to offer clients the capacity and the collection of practice areas needed for complex, multidisciplinary legal work. We see no evidence, however, of a corresponding rise in small firms or a larger decline in midsized firms. In fact, it appears that the largest firms have grown at the expense of firms of all other sizes. Figure 4a displays the net change in the percentage of lawyers by firm size, or the difference between the distribution of lawyers in 2004 and 1998 as shown in Figure 3. From this viewpoint, it is again apparent that a higher percentage of lawyers work at the largest firms, but also that the losses at midsized firms do not account for relatively more of the decline.
Before we can rule out a decline in the midsized firm, we must reconsider our definition of midsized. The analysis above aggregates firms nationally and effectively assumes that similarly sized firms are the same, irrespective of their size, relative to other firms in their local markets. So, the largest firm in Boise, Idaho may be lumped together with a midsized firm in New York, potentially clouding aggregate results. If the market for legal services is more local in nature or is at least more local for midsized firms, then an analysis by market allows the definition of a midsized firm to vary by location. We repeat the size distribution analysis limiting the data to the top ten legal markets. We use the same size deciles as before, but instead calculate the fraction of lawyers in the top ten markets working at firms in each decile. Since size is a firm-level characteristic, we include all lawyers working at firms headquartered in the top ten legal markets even if the lawyer actually works outside of the top ten markets. We find some evidence (in Figure 4b) that firms in the
middle of the distribution are exiting (at least relative to the smallest firms), but there is still no obvious growth in smaller firms.

Even looking at only the top ten legal markets, the fact that we do not observe an increase in small firms could still be a result of aggregation. What counts as a small firm in Houston may differ from what is considered small in Boston. And certainly this is true for New York. We calculate the net change in the percentage of lawyers by size decile for each of the top ten legal markets. In Figures 4c and 4d, we present only the results for New York and San Francisco. (We present the data for all ten markets in tabular form in Table 5.) We find an even more pronounced decline of the midsized firm and now see some growth in smaller firms. This is especially true in San Francisco, where the boom in boutique firms serving start-ups and practicing intellectual property law may show up in the data as growth in most of the smallest five deciles. The results are similar

<table>
<thead>
<tr>
<th>Size Decile</th>
<th>Firm Size</th>
<th>New York</th>
<th>Atlanta</th>
<th>Boston</th>
<th>Chicago</th>
<th>Dallas</th>
<th>Houston</th>
<th>Los Angeles</th>
<th>Philadelphia</th>
<th>San Francisco</th>
<th>Washington, D.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-6</td>
<td>-0.8</td>
<td>-1.6</td>
<td>-0.5</td>
<td>0.1</td>
<td>0.1</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-2.9</td>
<td>1.6</td>
<td>-2.4</td>
</tr>
<tr>
<td>2</td>
<td>7-9</td>
<td>-0.1</td>
<td>-3.0</td>
<td>-0.4</td>
<td>-1.3</td>
<td>-3.7</td>
<td>-1.0</td>
<td>-1.7</td>
<td>-1.3</td>
<td>0.3</td>
<td>-2.1</td>
</tr>
<tr>
<td>3</td>
<td>10-13</td>
<td>-0.7</td>
<td>-2.3</td>
<td>-2.7</td>
<td>-0.5</td>
<td>-0.3</td>
<td>2.2</td>
<td>-1.8</td>
<td>-1.3</td>
<td>-0.9</td>
<td>-1.8</td>
</tr>
<tr>
<td>4</td>
<td>14-20</td>
<td>-1.0</td>
<td>-0.6</td>
<td>-1.8</td>
<td>0.2</td>
<td>-1.6</td>
<td>-2.8</td>
<td>-0.3</td>
<td>-1.9</td>
<td>1.0</td>
<td>-2.9</td>
</tr>
<tr>
<td>5</td>
<td>21-33</td>
<td>-0.4</td>
<td>-2.3</td>
<td>0.2</td>
<td>-0.1</td>
<td>0.6</td>
<td>2.3</td>
<td>-1.0</td>
<td>-1.8</td>
<td>1.3</td>
<td>-2.0</td>
</tr>
<tr>
<td>6</td>
<td>34-61</td>
<td>-1.5</td>
<td>-1.4</td>
<td>0.6</td>
<td>-2.6</td>
<td>-1.4</td>
<td>-2.5</td>
<td>-2.9</td>
<td>-0.9</td>
<td>-0.2</td>
<td>-3.2</td>
</tr>
<tr>
<td>7</td>
<td>62-117</td>
<td>-2.1</td>
<td>-1.1</td>
<td>-1.9</td>
<td>-2.2</td>
<td>0.0</td>
<td>-1.0</td>
<td>-0.3</td>
<td>-1.3</td>
<td>-2.6</td>
<td>2.3</td>
</tr>
<tr>
<td>8</td>
<td>118-224</td>
<td>0.2</td>
<td>-0.2</td>
<td>-5.5</td>
<td>-1.1</td>
<td>-7.4</td>
<td>-5.9</td>
<td>0.0</td>
<td>-5.1</td>
<td>-0.9</td>
<td>-4.3</td>
</tr>
<tr>
<td>9</td>
<td>225-388</td>
<td>-4.7</td>
<td>-3.0</td>
<td>-4.4</td>
<td>0.1</td>
<td>2.4</td>
<td>-2.8</td>
<td>2.5</td>
<td>-6.8</td>
<td>-4.0</td>
<td>-7.1</td>
</tr>
<tr>
<td>10</td>
<td>389+</td>
<td>11.1</td>
<td>15.3</td>
<td>16.5</td>
<td>7.4</td>
<td>11.4</td>
<td>12.5</td>
<td>6.2</td>
<td>23.2</td>
<td>4.4</td>
<td>23.5</td>
</tr>
</tbody>
</table>

54. The same pattern holds in Boston, where the biotech boom is likely to have a large impact, but to a slightly lesser extent.
when looking at the remaining top legal markets, though not all markets exhibit growth of smaller firms.

C. Geographic Diversification

In addition to increasing their practice area scope, firms may also increase their geographic scope (and regional expertise) as another means of filling a void in in-house capabilities. As business is increasingly more global (and certainly more national), having offices located across the country enables law firms to offer representation in geographic areas where corporate counsel are less familiar with local laws. A large regional presence also may help law firms maintain client relationships as corporate counsel push not only to hire the best firm for a transaction, but also to reduce excessive legal costs associated with hiring a different team of lawyers in every geographic locale.

The observed growth of the largest firms is not inconsistent with an expansion of geographic locations, since firms can grow both by adding lawyers within their existing network of offices or by extending their network (e.g., by opening or acquiring new offices). Over this period, average firm size grew by 13%, while average office size grew by only 6%. Since office size is not increasing by as much as firm size, it must be the case that law firms are adding new offices to their network. An increase in the total number of law offices over time with a decrease in the number of law firms (see Figures 2a and 2b) implies that the number of branches per firm must have increased on average. However, the average (unweighted) number of branches per firm has only increased fractionally over the past seven years. (See Figure 5.) This average is misleading because although multi-office firms account for just 20% of firms in 2004, almost 60% of lawyers work at multi-office firms. An average that weights the number of branches per firm by the number of lawyers who work at each firm instead represents the number of branches in the average lawyer's firm. Hence, the average number of branches per firm is 1.3 in 1998, but the average lawyer works at a firm with 2.8 branches. As we can clearly see in Figure 5, the average lawyer works at a firm with increasingly more offices over time.

We calculate the distribution of lawyers by the number of branch offices per firm in Figure 6a.\textsuperscript{55} In 1998, 50% of lawyers work in multi-

\textsuperscript{55} We perform the same analysis using a firm's original number of offices, including offices that may have zero lawyers after eliminating duplicate office assignments. The results are similar to those based on the number of "populated" offices.
office firms and over time the percentage of lawyers working at firms with at least five offices has increased. By 2004, 57% of lawyers work in multi-office firms and over 10% of lawyers work at firms with ten or more offices. More lawyers work for the law firms with the most offices, another indication that firms are adding scale in every geographic area in order to better compete for corporate clients.

Figure 6b repeats the branch distribution analysis for firms based in the top ten legal markets. Firms with the most offices gain an even higher percentage of lawyers relative to firms with less than ten offices than compared to the analysis including all cities. For almost every possible number of branches per multi-office firm, a higher percentage of lawyers in the top ten cities work at those firms than compared with the same distribution for all cities. Thus, geographic expansion is especially prevalent for firms most likely to be serving the needs of global corporations.

D. Leverage

With the demise of longstanding client relationships, partners are spending an increasingly larger fraction of their time generating business. As a direct result, law firms need more lawyers to spend
Figure 6a. Percent of All Lawyers by Number of Offices

Figure 6b. Percent of All Lawyers in Top Ten Cities by Number of Offices
time doing legal work. Not wanting to dilute the rainmakers' earnings, which may result in the loss of business-finders, firms are likely to add business-minders at a nonpartner level. With the addition of associates and a constant number of partners, leverage will increase. However, the increased emphasis on rainmaking and number of competitors competing for the partnership "prize" reduces the likelihood that associates are promoted. A smaller expected prize may discourage associates from working long billable hours and, as a result, firms may have to increase leverage even more to counteract a reduction in hours per associate.

Increased leverage may not only be a consequence of increased rainmaking. A high leverage ratio ensures that firms have a supply of relatively cheap labor to meet the short-term capacity needs of large clients. Optimal leverage is also connected to the level of complexity and specific specialty of the legal work.

We calculate the average leverage ratio of all firms and firms based in the top ten legal markets. We exclude in our analysis of leverage those firms for which leverage is zero in every year. A zero value of leverage implies that a firm consists of all partners and no associates. This may either occur because a firm really has no associates or because the firm chooses to only list its partners in Martindale. Many smaller firms likely have no associates, but this is less plausible for larger firms. If a firm ever lists associates, we assume that in a year where that firm does not have associates, it is the case that they really do not have associates and not that they choose not to list their associates. If a firm never has associates, we cannot differentiate between the two possible explanations, and we err conservatively by omitting all firms in question from our analysis. Table 6 shows that both the average leverage for all firms and firms based in the top ten legal markets move in tandem, but the average leverage for firms in the top ten cities is higher than the

56. See infra Part III.E.
58. DAVID MAISTER, MANAGING THE PROFESSIONAL SERVICE FIRM 4-9 (1993).
59. We implicitly assume that firms do not change their listing policies. We check firms in deciles 6 and higher by hand and omit any firms where this is not the case.
60. For example, Cravath, Swaine & Moore has about 90 partners and over 300 associates, but lists only its partners and off-track attorneys in the Martindale directory. Although Cravath is quite large, almost all of the omitted firms are much smaller in size. Only 2% of firms in deciles five and higher are omitted. Overall, only 15% of firms are omitted; the implication of these omissions, if firms actually contain zero associates (as might be expected in the smallest firm sizes), is that we overstate the level of leverage for the smallest size deciles. Provided that the number of these firms does not vary significantly over time, their omission should have little impact on the trends.
leverage for all firms. Median leverage is less than the mean leverage. (See Table 6.)

The value of average leverage seems surprisingly low. One explanation is that our definition of a partner is based on what firms report to Martindale, which likely includes both equity and nonequity partners. It would not be surprising if firms add lawyers to do legal work at the nonequity partner level. Nonequity partners have significant experience useful for representing clients in complicated legal matters, but do not dilute the earnings of the highest revenue earning equity partners. According to the chairman of Duane Morris, "nonequity partners fill a very important role at a firm. You need business generators, but you also need people to do the work."61 To the extent that firms use nonequity partners as an additional form of leverage, leverage is higher than indicated in our analysis. In addition, if the use of nonequity partners is increasing over time, as suggested by Henderson, then we understate the increase in leverage that may be occurring.62 We have also omitted off-tracks, a title that was historically reserved for semiretired partners but is increasingly being given to permanent associates, from our leverage calculation. This omission also leads us to underestimate the level and any increasing trend in leverage.

We segment our analysis by size decile to test whether larger firms are indeed more leveraged and determine whether the increasing trend in leverage results directly from the increase in

<table>
<thead>
<tr>
<th>Table 6. Average and Median Leverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Average leverage</td>
</tr>
<tr>
<td>All firms</td>
</tr>
<tr>
<td>Top 10 cities</td>
</tr>
<tr>
<td>Median leverage</td>
</tr>
<tr>
<td>All firms</td>
</tr>
<tr>
<td>Top 10 cities</td>
</tr>
</tbody>
</table>


62. See Henderson, supra note 49 at 1695–96; see also Edward H. Wesemann, The Nonequity Tier, LEGAL TIMES, Feb. 3, 2003, at 40 ("Nonequity partnerships have become increasingly popular with law firms as an alternative partnership tier.").
lawyers working at large firms. We present results for both the means and the medians since there are several large leverage outliers in the middle size deciles. (In Figure 7a, the average leverage in decile seven jumps in 2001 because a single highly-leveraged firm has two

Figure 7a. Average Leverage by Size Decile

Figure 7b. Median Leverage by Size Decile
partners in 2000 and only one partner in 2001, thus doubling its leverage.) As both Figures 7a and 7b show, leverage is higher at larger firms, increasing almost monotonically across the size range. However, leverage appears to be increasing through time in the small- and medium- sized firms, but not in the largest firms. This pattern is not entirely consistent with the argument that the increasing demand on senior lawyers to bring in new clients is forcing firms to hire more junior-level lawyers. If this was the reason, we would expect to see at least as much increase in leverage at the large firms as at the small.

We also segment our analysis of leverage by firm types in order to separate law firms by the kinds of clients they might serve. (See Table 7.) Firms that have an office (including branch offices) in New York are more leveraged on average than firms without a New York office. Multi-office firms are also more leveraged on average than firms with only a single office.63 To some extent, this may be true because firms with a New York office or multiple offices are more likely to be larger and the largest firms are the most leveraged.

In order to disentangle the effects of size, location, and structure from the time trend in leverage, we perform multiple regression analysis attempting to explain leverage ratios in our firms. We run the following regression:

\[
\text{Leverage} = \alpha + \beta_1(\text{NYC office}) + \beta_2(\text{multi-office}) + \beta_3(\text{year}) + \sum \beta_d(\text{size decile dummies}).
\]

The results of this analysis (presented in Table 8) indicate that some of the results shown in Tables 6 and 7 and Figures 7a and 7b continue to hold, while others do not. There is a highly significant time trend of increasing leverage. Firms with New York offices are more leveraged, as are multi-office firms. However, the multiple regression analysis suggests that the effect is not as strong as expected.

<table>
<thead>
<tr>
<th>Table 7. Average Leverage by Firm Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>1998  1999  2000  2001  2002  2003  2004</td>
</tr>
<tr>
<td>All Firms  0.82  0.84  0.87  0.89  0.89  0.92  0.95</td>
</tr>
<tr>
<td>Single-Office Firm  0.79  0.81  0.83  0.85  0.84  0.88  0.92</td>
</tr>
<tr>
<td>Multi-Office Firm  0.93  0.97  1.03  1.06  1.09  1.11  1.07</td>
</tr>
<tr>
<td>No NYC Office  0.78  0.80  0.83  0.85  0.85  0.89  0.92</td>
</tr>
<tr>
<td>NYC Office  1.11  1.14  1.15  1.19  1.15  1.17  1.16</td>
</tr>
</tbody>
</table>

63. The same relationship holds for median leverage.
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC Office</td>
<td>0.282**</td>
<td>0.0130</td>
</tr>
<tr>
<td>Multi-Office</td>
<td>0.119**</td>
<td>0.0120</td>
</tr>
<tr>
<td>Year</td>
<td>0.020**</td>
<td>0.0021</td>
</tr>
<tr>
<td>Size Decile 2</td>
<td>0.093**</td>
<td>0.0112</td>
</tr>
<tr>
<td>Size Decile 3</td>
<td>0.200**</td>
<td>0.0129</td>
</tr>
<tr>
<td>Size Decile 4</td>
<td>0.186**</td>
<td>0.0142</td>
</tr>
<tr>
<td>Size Decile 5</td>
<td>0.146**</td>
<td>0.0168</td>
</tr>
<tr>
<td>Size Decile 6</td>
<td>0.149**</td>
<td>0.0220</td>
</tr>
<tr>
<td>Size Decile 7</td>
<td>0.200**</td>
<td>0.0293</td>
</tr>
<tr>
<td>Size Decile 8</td>
<td>0.033</td>
<td>0.0394</td>
</tr>
<tr>
<td>Size Decile 9</td>
<td>0.135*</td>
<td>0.0531</td>
</tr>
<tr>
<td>Size Decile 10</td>
<td>0.311**</td>
<td>0.0591</td>
</tr>
<tr>
<td>Constant</td>
<td>-40.011**</td>
<td>4.1440</td>
</tr>
</tbody>
</table>

R² = 0.0132

** Statistically significant at the 1% level.
* Statistically significant at the 5% level.

results indicate that, after controlling for the effects of New York City and multiple offices, the smallest and the largest firms are more leveraged than are midsized firms. The leverage of firms in the eighth and ninth deciles is almost always lower than that in smaller firms.

Although the overall increase in leverage is broadly consistent with a trend towards greater division of labor between senior and junior lawyers, and an accompanying need to hire more junior lawyers, some of the patterns (particularly looking across firms of different sizes) are not consistent with this story.

E. Legal Careers

As the importance of soliciting business increases for partners in law firms, current partners may find it more difficult to make new partner decisions. When clients were tied to firms by history and a network of relationships, a young lawyer could succeed in his or her career by simply serving the specific needs of one or a small number of clients: this was grounds enough for promotion. However, since clients are now more likely to shift firms, associates must prove that
they can also develop business if they are to be promoted to partner. Law firms are reluctant to admit new partners unable to generate business because rainmakers are highly mobile and any dilution of partner earnings might cause important partners to depart. In response to this difficulty, firms may extend the promotion track to allow more time for associate evaluation and decrease the likelihood of making promotion mistakes that might dilute earnings. Firms are effectively lengthening the promotion clock to full partner by creating permanent nonpartner positions: through the addition of nonequity partnership tiers, reducing the use of up-or-out promotion policies, or creating off-track positions. Since the jobs of associate and partner are now more different, moves that aim to keep associates at the firm, in any capacity, are also consistent with the need for more lawyers to do actual legal work.

Two-tier partnerships enable firms to distinguish between promising newcomers and senior rainmakers.... Firms can test out these prospective equity partners and reap the benefit of the thousands of hours per year that these ambitious young lawyers bill. Their advance to the more prestigious level of senior partnership will depend on their legal skills and their ability to generate business.

As we have already stated above, the Martindale data does not enable us to distinguish equity partners from nonequity ones, but the increase in the number of two-tier partnerships is well-documented. The Martindale data does allow us, however, to measure the timing of promotions and to examine whether firms are relying on up-or-out promotion systems.

Table 9 shows that, despite an increasing number of associates, the number of promotions has not increased. Since the number of associates is increasing during this time period, the percentage of associates promoted must have decreased. Table 9 shows that years to promotion have increased over the same time period from an

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64. See Eichbaum et al., supra note 52; see also Susan Beck, Gibson, Dunn's Tough Cut, AM. LAW., Jan./Feb. 1991, at 82, 85–86 (citing fear of decreased profit share as one reason why many associates did not make partner).


66. Longer promotion clocks are also consistent with the need for increased leverage.


68. See supra notes 61–62 and accompanying text.

69. The number of promotions in 1998 is the number of lawyers who are promoted between 1998 and 1999.
Table 9. Promotion Statistics

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of promotions</td>
<td>6,739</td>
<td>7,265</td>
<td>6,881</td>
<td>5,265</td>
<td>5,829</td>
<td>6,079</td>
</tr>
<tr>
<td>Promotion rate</td>
<td>6.7%</td>
<td>6.9%</td>
<td>6.3%</td>
<td>4.6%</td>
<td>5.0%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Average years to promotion</td>
<td>9.13</td>
<td>9.13</td>
<td>9.28</td>
<td>9.59</td>
<td>9.64</td>
<td>9.65</td>
</tr>
</tbody>
</table>

average of 9.1 to 9.6 years.\(^70\) A longer time to promotion is consistent with the fact that "associates need more time to hone rainmaking and practice skill."\(^71\) The average time to promotion is increasing across all size deciles, but is slightly longer at the smallest firms than the largest firms. Perhaps this results because lawyers who fail to make partner at the largest firms move laterally to smaller firms where they attempt to make partner again. These new firms likely evaluate associates’ abilities in their own firm for several more years before making a partnership decision. Table 10 suggests that partnership clocks are also affected by the firm’s market: the average time to promotion is slowest in New York and the average time to promotion is the fastest in the high growth cities—Atlanta, Dallas, and Houston.

If a firm follows a strict up-or-out policy, then there simply would not be any associates beyond the year in which associates are eligible for promotion. Figure 8a shows what a strict up-or-out policy might look like in the data. A softer up-or-out policy would look more like Figure 8b, with some associates leaving the firm (or getting promoted) before the promotion year and some staying on as associates after the promotion year. Irrespective of associate exit patterns before promotion, a strict up-or-out policy implies that at the point in time where the firm evaluates associates (the “promotion year”) they are either promoted or let go. Thus, the firm would have no associates of tenure greater than the promotion year. A weakening of the up-or-out system implies that firms retain associates

---

70. The median number of years to promotion has fluctuated over the same time period between eight and nine years.
Table 10. Promotion Statistics by Top Ten City

<table>
<thead>
<tr>
<th>City</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta</td>
<td>6.3%</td>
<td>8.8%</td>
<td>6.2%</td>
<td>4.6%</td>
<td>6.1%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>8.96</td>
<td>8.14</td>
<td>8.57</td>
<td>8.31</td>
<td>8.78</td>
<td>9.00</td>
</tr>
<tr>
<td>Boston</td>
<td>5.9%</td>
<td>5.9%</td>
<td>6.6%</td>
<td>3.6%</td>
<td>4.9%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>9.64</td>
<td>9.38</td>
<td>9.27</td>
<td>9.88</td>
<td>8.76</td>
<td>10.04</td>
</tr>
<tr>
<td>Chicago</td>
<td>7.8%</td>
<td>7.7%</td>
<td>6.5%</td>
<td>6.1%</td>
<td>6.0%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>8.96</td>
<td>8.73</td>
<td>8.88</td>
<td>8.94</td>
<td>9.22</td>
<td>9.08</td>
</tr>
<tr>
<td>Dallas</td>
<td>9.2%</td>
<td>7.2%</td>
<td>6.4%</td>
<td>5.1%</td>
<td>5.4%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>8.52</td>
<td>8.42</td>
<td>9.06</td>
<td>9.31</td>
<td>9.99</td>
<td>8.67</td>
</tr>
<tr>
<td>Houston</td>
<td>7.2%</td>
<td>6.3%</td>
<td>6.3%</td>
<td>4.1%</td>
<td>4.3%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>8.51</td>
<td>8.53</td>
<td>8.23</td>
<td>8.96</td>
<td>9.00</td>
<td>9.27</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>5.4%</td>
<td>5.3%</td>
<td>4.5%</td>
<td>4.0%</td>
<td>3.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>9.41</td>
<td>9.33</td>
<td>10.26</td>
<td>10.92</td>
<td>9.82</td>
<td>10.45</td>
</tr>
<tr>
<td>New York</td>
<td>4.1%</td>
<td>3.8%</td>
<td>3.7%</td>
<td>2.9%</td>
<td>2.7%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>10.48</td>
<td>10.14</td>
<td>10.16</td>
<td>10.62</td>
<td>10.32</td>
<td>10.66</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>5.8%</td>
<td>7.2%</td>
<td>6.7%</td>
<td>3.7%</td>
<td>4.6%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>10.14</td>
<td>9.83</td>
<td>10.06</td>
<td>10.59</td>
<td>10.17</td>
<td>10.36</td>
</tr>
<tr>
<td>San Francisco</td>
<td>5.5%</td>
<td>4.7%</td>
<td>5.3%</td>
<td>3.5%</td>
<td>3.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>9.65</td>
<td>9.36</td>
<td>9.41</td>
<td>9.22</td>
<td>9.50</td>
<td>10.14</td>
</tr>
<tr>
<td>Washington, D.C.</td>
<td>5.2%</td>
<td>5.9%</td>
<td>5.3%</td>
<td>3.4%</td>
<td>3.7%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Avg. years to promotion</td>
<td>9.14</td>
<td>9.36</td>
<td>9.16</td>
<td>9.54</td>
<td>9.20</td>
<td>8.86</td>
</tr>
</tbody>
</table>

whose peers have already been promoted.\(^72\) In short, existence of a tail to the right of the promotion year is evidence that the firm is not strictly following an up-or-out policy.

In order to measure the extent to which the industry follows an up-or-out rule, we plot the total number of associates by years out of school. (See Figure 9.) The slow increase in the early years indicates that lawyers move into the industry (possibly from clerkships or other government jobs) up until about year four or five. Rather than a vertical drop, the number of associates declines slowly but steadily over time. The lengthy tail, well beyond the median promotion age, indicates that not all firms follow a strict up-or-out policy. To some extent the slope of the line, especially around the median promotion age measures the degree to which firms follow an up-or-out policy.

\(^72\) If a firm pushes back the promotion clock for all associates, in a class, but maintains a strict up-or-out policy, the curve in Figure 8a would shift horizontally to the right.
The steeper the slope, the more closely firms apply an up-or-out rule. The slope does not appear to have changed much over time, indicating that up-or-out is actually still the predominant practice. The horizontal shift from 1998 to 2004 is consistent with a lengthening of the promotion clock.

Figure 8a. Strict Up-or-Out Policy

Figure 8b. Soft Up-or-Out Policy
One problem with the analysis above is that it treats all firms as if they have the same promotion policies. But, in reality, the timing of the promotion decision (as well as the use of an up-or-out policy) varies by firm. Analysis of the sort performed in Figure 9 is again confounded by aggregation problems. To see this, imagine that all firms used strict up-or-out policies, but some promoted at Year 9, some at Year 10, some at Year 11, etc., then it would appear (at the industry level) that up-or-out was weak or nonexistent.

A potentially better way of measuring up-or-out policies is to attempt to discern whether individual firms are using the policy. We do this in the following way. We calculate, for each firm in each year, the median years to promotion (the "promotion year"). We then ask what percentage of associates at least as tenured as the promotion year but not yet promoted in that year are still associates at the firm two years later. We aggregate this ratio across firms and look to see whether, through time, it appears that firms are less strict in their up-or-out policies. We find some evidence for the weakening of up-or-out at the individual firm level. In 1998, on average, 44% of those not promoted by the promotion year are still at the firm as an associate two years later. By 2004, this percentage had risen to 50%. Thus, firms may be weakening up-or-out policies in response to the increased reliance on business generation for a successful partnership.
As an alternative to the permanent associate position some firms may instead weaken up-or-out with the use off-track positions. These firms are essentially retitling lawyers who are not promoted to other permanent nonpartner positions. We calculate the number of off-track lawyers by years out of school in Figure 10. There are more off-track lawyers in 2004 than in 1998 across all years out of school and this holds in the range of years around which a lawyer might have been passed over for promotion. If we repeat this analysis at the firm level, we find in 1998 that, on average, 4% of associates at least as tenured as the median promotion age remain at the firm in off-track positions two years later, and this percentage is constant through time. Thus, while we find some evidence that firms are using off-track positions as an alternative to the up-or-out model, they are not actually increasingly using these titles over time for associates beyond the promotion age.

IV. FUTURE RESEARCH

The Martindale directory is a rich dataset, ripe with possibility. The analysis presented in this Article is merely suggestive of the kinds of questions that could be answered. Having developed a basic understanding of how law firms are structured both at the firm level

Figure 10. Number of Off-Track Lawyers by Years out of School

![Figure 10. Number of Off-Track Lawyers by Years out of School](chart.png)
and at the industry level will provide context for addressing a broader set of industry and organizational issues in the future.

While we have emphasized that the largest firms are getting larger, we have not yet attempted to explain the process by which these firms are growing. Some firms may make acquisitions and others may grow organically. Not all firms are growing; some are clearly downsizing too. The Martindale data presents us with the opportunity to study both how firms expand and shrink. We would like to establish what strategies firms follow and address how variation in growth strategies affects their choice of human resources ("HR") policies.

In addition to the impact of growth on HR policies, we can also study more generally why firms vary in their choice of HR programs. Some have argued that firms invest more in young associates than they recoup in return. Why then do some firms choose to hire straight out of law school (and train their lawyers) and others do not? Why do some firms hire lawyers only from the elite law schools while other firms hire from a broad array of schools? Why do firms vary in the length of their associate tenures? In the strictness of their up-or-out policies?

There are also a series of interesting questions to ask related to legal careers and how lawyers' career paths differ. We can identify how gender affects the career progression of associates and partners. And, we can determine what kinds of firms do more to promote gender equality. Lateral movement is also thought to be much more common than it used to be, even at the associate level. Again, we can examine how the career paths of lateral movers differ from those who never move, and compare the careers of lawyers who move as individuals to those who defect in groups. We can also ask whether the career progression of lawyers who are narrowly specialized differs from those with a general practice area and whether the point in time at which a lawyer begins to specialize matters for promotion.

Without data on economic performance, it is difficult for us to make normative statements about the success or failure of particular firm strategies. We can look at organizational growth or longevity as signals of success, but these are imperfect measures. Integrating some economic performance data like the Am Law 200, for example, may

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at least enable us to answer normative questions about successful strategies.

CONCLUSIONS

In this Article we examine empirically a number of possible implications of the increase in corporate in-house legal departments and the consequent decline of relationship lawyering for the structure of the legal industry, the structure of law firms, and the nature of legal careers. We find weak evidence of the demise of midsized firms at the expense of large firms and small boutiques, though significant evidence that the largest firms have grown substantially. We also document a significant increase in the number and geographic diversity of multi-office law firms. These trends are consistent with a move by firms to compete with in-house legal departments by offering a broader range of services, with greater depth, across multiple jurisdictions.

We also document how and where leverage—the number of associates per partner—has increased over the past seven years. Overall leverage has increased, though not among firms of all sizes or in all locations. Leverage is highest for the largest firms and smaller firms, and slightly lower for midsized firms. It is also significantly higher for multi-office firms and firms with New York City offices. Leverage has been growing over the past seven years in small firms, but not in the large firms. While the overall increase in leverage is consistent with the need for firms to retain younger lawyers to do the legal work that cannot be done by more senior lawyers, the patterns of leverage changes are not entirely consistent with this story. We would have expected to see this increase in leverage be at least as great in large firms as in small ones if the reason was the need to do the work that the rainmakers were bringing in.

Finally, we document changes in the nature of legal careers. We show that the average time to promotion—the amount of time between graduating from law school and being promoted—has increased by about half a year in the past seven years. We also present some weak evidence for a decline in the use of up-or-out promotion systems by law firms. There has been a modest increase in the likelihood that an associate, if not promoted by the average time to promotion in her firm, will still be at the firm two years later. In addition, there has been some increase in the use of “off-track” lawyers in our sample of firms. Once again, these trends are broadly consistent with an increasing divergence between the job of a partner (rainmaking) and that of an associate (legal work), and an attempt on
the part of firms to retain productive associates without promoting them to partner.

Despite some weaknesses in these data (the short time frame, our inability to distinguish between income partners and equity partners, the lack of data on economic performance), we believe that we have provided new data and some new insights on the possible effects of changes in the nature of firm-client relations. Our findings are broadly consistent with conventional wisdom about the effects of the decline of relationship lawyering, though there are some pieces of the puzzle that do not fit the overall picture. Of course, this may be because we are not looking over a long enough time period, or our data are insufficiently detailed. But we believe that we have at least opened up some new avenues for exploration.
APPENDIX

A. Assigning Consistent IDs

1. Assigning Consistent Lawyer IDs

We assume each ID refers to only a single lawyer and look for instances where the same person has more than one ID.\footnote{Because lawyers may change names over time (perhaps due to marriage), checking whether a single ID refers to two different lawyers is considerably more difficult.} We identify a list of lawyers that may potentially have more than one identifier by finding lawyers with the same name and birth year, but two different IDs. Because some name and birth year combinations may be relatively common (e.g., John Smith, 1950) we use a lawyer's school information to determine whether potential duplicates are indeed a single individual. If two potential duplicates list the same undergraduate and law schools, then we treat them as one person and assign a single ID.\footnote{In cases where potential duplicate lawyers list multiple schools, we first rule out the possibility that two lawyers have simply switched IDs. We classify the remaining duplicate cases as a single person as long as the potential duplicates have some overlap in their schools and do not appear in the same time period for more than three quarters.}

2. Assigning Consistent Firm IDs

Similarly, we pinpoint all firms with identical names and two different firm identifiers. From our list of potentially duplicated firms, we automatically rule out cases where neither the lawyers nor the time period overlap. We count firms as the same and assign a single ID in cases where: (1) 100% of the lawyers from firm ID "a" appear in firm ID "b," (2) less than 100% of the lawyers overlap, but the location matches, or (3) less than 100% of the lawyers overlap, but the time period overlaps. If both firm listings appear in the same quarter and if any lawyers appear in both firm IDs, we can be reasonably confident that they represent two different offices of the same firm.\footnote{If there are any cases where two different offices of the same firm have different firm IDs but no lawyer is dually listed then we will not be able to identify these offices as the same firm.} Because firms change names with some frequency (perhaps because they add a named partner, merge, or splinter), we group duplicates under a single ID for the time period over which the exact firm name (and not the firm ID) appears in the directory.\footnote{For a handful of firms where the firm ID changes with only a slight variant (i.e., from Smith & Smith LLP to Smith & Smith) or one firm name clearly folds into the other,}
Since the current scope of our analysis studies firms by cross-section rather than longitudinally, we need only ensure the consistency of firm IDs within and not across years.\textsuperscript{79}

3. Assigning Consistent Office IDs

Within firms, Martindale assigns a sequence number or office ID to each separate office location.\textsuperscript{80} In order to incorporate the reassignment of duplicated firms above and correct for any errors, we apply the following criteria to establish consistent office IDs. First, we assign any offices with the same zip code but different office IDs to the same ID and also ensure that this ID refers to only one zip code.\textsuperscript{81} Although a firm may have more than one office in the same zip code, most zip code areas are fairly small, and we think it is reasonable to treat any of these cases as a de facto single office. Second, we ensure that every office ID refers to only a single Metropolitan Statistical Area ("MSA").\textsuperscript{82} Third, we check cases where multiple office IDs refer to the same MSA. We do not combine these cases under a single office ID because MSAs are quite large and many firms have multiple offices in the same MSA. A firm in the Washington, D.C. MSA may have offices in both Washington, D.C. and Fairfax, Virginia, for example. Therefore, we combine only the cases where the street location matches. Last, we check instances where a single office ID points to more than one street location in the same quarter and separate these locations into different office IDs by combining duplicate firms into a single firm ID for the entire range over which the original IDs appear.

\textsuperscript{79} Firm IDs are largely consistent across years because Martindale reuses the same ID when it sends out update forms that allow a firm to revise its profile, including the firm name. If a firm's ID changes within a year but not all lawyers are listed under the new ID, we identify two different firms, when in reality there is only one. However, the fraction of lawyers not listed in the new firm ID and not listed in any other firm is likely to be small and thus, will not have a large impact on our analysis. In future work, we will establish consistent firm IDs across years by coding as the same all firms where the percentage of lawyers moving from one firm to the next is large.

\textsuperscript{80} Martindale records the main office as the first office in each firm. We retain the original office IDs for the purpose of assigning a main office. See supra Part I.C.3.

\textsuperscript{81} Because data are both self-reported and historical, we use the current zip code for each city-state-zip combination to account for any errors or changes over time. In cases where the firm reported only a city-state combination and not a zip code, we use the zip code for the center of that city-state combination. We use both the reported zip code and the current assigned zip code to find cases where office IDs should be combined.

\textsuperscript{82} We use Metropolitan and Micropolitan Statistical Areas defined by the Office of Management and Budget as of November 2004 to identify city hubs. See Geography Div., U.S. Census Bureau, State-Based Metropolitan and Micropolitan Statistical Areas Maps, http://www.census.gov/geo/www/maps/stcbsa_pg/stBased_2004_nov.htm (last modified July 8, 2005).
zip code. If office IDs do not overlap in time, different street locations (or zip codes) simply reflect the relocation of an office.

B. Eliminating Quarterly Duplicates

1. Assigning Lawyer to Quarterly Position

Using the standardized positions, we identify all lawyer-firm-quarter combinations with more than one position. For each lawyer in this list, we calculate the time range, or the minimum and maximum quarter-year for each position and assign the lawyer (in the duplicated quarters only) to the position which appears second in chronological order from the first point in time that the new position appears. Suppose a lawyer is listed as an associate from Q1 1997 through Q4 1998 and also as a partner from Q3 1998 through Q3 2002. Thus, the lawyer appears in two positions in Q3 and Q4 1998 and the algorithm specifies that we assign the lawyer to the partner position in these quarters because the partner position is second in chronological order. For cases where one position's time range completely envelops the other, we assume that the enveloped position is erroneous. If the ranges are identical, we first assume the lawyer is a partner if partner is one of the possible positions, then an associate if associate is one of the possible positions, and last an off-track lawyer if off-track is one of the possible positions.

2. Assigning Lawyer to Quarterly Firm

Although it may be possible that lawyers listed in more than one firm in a quarter actually work in both firms, we assume that a lawyer must spend more of his or her time at one of those firms and the following algorithm assigns dually listed lawyers to a single firm. Because some lawyers list themselves both as individual practitioners and as members of firms, we first assume that if a lawyer is listed at one firm of at least five attorneys and one firm of less than five attorneys then the lawyer actually works at the larger firm. Next, we address the cases where a lawyer's position differs across duplicated firms. If a lawyer is a partner in one firm, but not the other, we delete the firm record in which the lawyer is not a partner. We repeat the same procedure for the associate position relative to all other remaining positions and then for the off-track position relative to all

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83. By tracking the flow of lawyers from one office ID to another, we will identify cases where two separate office IDs should actually be treated as one. See supra Part I.C.3.
other remaining positions. For the remaining cases of duplication, we calculate the time ranges for each firm and assign lawyers to the firm that appears second in chronological order from the first point in time that the new firm appears. If the time ranges overlap entirely we assume the lawyer works at the larger firm.84

84. In the rare instance that both firms are of the same size, we assign the lawyer to the firm with the lowest firm ID number.