

INSEAD

The Business School
for the World

Faculty & Research Working Paper

Extracting Value from Client
Relationships: Competition, Expertise
and Cross-Selling in the UK Corporate
Legal Market

Extracting Value from Client Relationships: Competition, Expertise and Cross-Selling in the UK Corporate Legal Market

by

Olivier Chatain*

January 2007

I thank *Chambers and Partners* and *Legal Business* for having made available to me the data I use in this paper. I also thank the lawyers and executives from several law firms as well as the legal industry journalists and consultants who helped me understand the UK legal market

* PhD Candidate of Strategy at INSEAD, Boulevard de Constance, 77305 Fontainebleau Cedex, France, olivier.chatain@insead.edu , Tel: + 33 1 60 72 25 45

A working paper in the INSEAD Working Paper Series is intended as a means whereby a faculty researcher's thoughts and findings may be communicated to interested readers. The paper should be considered preliminary in nature and may require revision.

Printed at INSEAD, Fontainebleau, France. Kindly do not reproduce or circulate without permission.

Extracting Value from Client Relationships: Competition, Expertise and Cross-Selling in the UK Corporate Legal Market

Abstract

How do suppliers capture the value they create with their clients? In this paper, I empirically examine the role of two drivers of suppliers' value capture for supplier profitability and buyer-supplier relationship stability. The first driver is the distinctiveness of suppliers' expertise compared to what their clients can get from competitors. The second driver is the realization of client-based scope economies through cross-selling. I analyze a unique longitudinal data set from the UK corporate legal market that comprises the client relationships of the largest UK law firms with FTSE 250 corporations, experts' assessment of law firms' capabilities, and law firms' profitability. I find that superior expertise relative to direct competitors and cross-selling, both by a focal firm and by its competitors, are important drivers of supplier profitability and client relationship stability. Moreover, cross-selling appears to be an important source of differentiation that also has a direct impact on competitors' ability to capture value. Overall, these findings contribute to our understanding of how competition and firm heterogeneity interplay to affect firm performance.

INTRODUCTION

How value is shared in a vertical chain has been an important concern for strategy research and practice at least since Porter (1980) stressed the importance of buyer and supplier power for determining an industry's capability. In this paper, I empirically examine two drivers of suppliers' value capture. The first is the distinctiveness of suppliers' expertise compared to what their clients can get from competitors. The second is the realization of client-based scope economies through cross-selling, both by a focal supplier but also by its competitors. I investigate the impact of these drivers on supplier profitability and buyer-supplier relationships stability by analyzing a unique longitudinal data set from the UK corporate legal market. This data set comprises the client relationships of the largest UK law firms with FTSE 250 corporations, experts' assessment of the capabilities of law firms in different legal areas, and law firms' characteristics, including their profitability. I base my theorizing and my measurements on the value-based framework proposed by Brandenburger and Stuart (1996). This framework is particularly appropriate for modeling competition between a small number of heterogeneous firms within a vertical chain, and understanding the drivers of value creation and value capture.

The contribution of this paper is two-fold. Substantively, my study is one of the first to analyze the performance impact of competition among suppliers by taking into account the role of differences in expertise among suppliers and the role of cross-selling. Studies that looked at competition among suppliers for client relationships have either described the evolution of the procurement policies of clients (Baker, 1990) or focused on explaining the dissolution of relationships (Baker, Faulkner & Fisher, 1998), but have not directly addressed the issue of how the value created in a relationship is split. From a different angle, Uzzi and Lancaster's (2004) studied how social embeddedness increases the value created in a buyer-supplier relationship, but did not address the question of how competition would change how

this value is shared. By contrast, I seek to explain the performance implication of competition among suppliers by measuring how suppliers are able to create value for their clients comparatively to their competitors, and how this affects value capture. Methodologically, this paper is the first empirical study that explicitly bases its approach on the value-based framework of Brandenburger and Stuart (1996). This framework has been very influential on a theoretical level (Hoopes, Madsen, & Walker, 2003; MacDonald & Ryall, 2004) but has so far lacked translation into a large sample study. This paper provides an opportunity to check how useful this perspective may be for empirical work.

I test my hypotheses on law firms' relationships with powerful corporate buyers. This is an appropriate setting because in such market the terms of exchange are subject to negotiation and clients are able to evaluate how law firms differ in terms of expertise. I focus on two outcomes of interest: law firm profitability and stability of client-law firm relationships. Law firm profitability is a direct measure of value capture, but is only observed at an aggregated level (i.e., spanning multiple client relationships). Relationship stability is a less direct measure of performance but can be analyzed at a much finer level of observation. Comparing the analyses for these two variables of interest allows to cross-check findings and to strengthen their validity.

My findings support the view that corporate clients are able to foster competition between the law firms that serve them but also suggest that the pressures exerted by clients are of moderate magnitude. My measure of a law firm's added value for legal expertise, measured in each of the law firm's client relationship, is positively and significantly related to the firm's performance and, conversely is negatively related to the probability of the termination of a relationship. This suggests that law firms that work in a given legal area for a client and that lack a distinctive advantage in this area compared to the other law firms working for the same client capture less value than those firms that do have an advantage and

are also more at risk to lose their relationship with the client. Moreover, I find that firms capture more value when they cross-sell. But I also find evidence that they capture less when their competitors are cross-selling with the client as well. I find consistent findings for the stability of client relationships: these are less likely to be terminated when a law firm sells in more areas of service and more likely to be terminated when competitors do the same. This again suggests that value created from cross-selling with a client can only be appropriated when it is truly distinctive, that is when competitors are not replicating it. These findings are consistent with the value-based framework.

The rest of the paper is organized as follows. I begin with background information on law firms and how they create value for their clients. I review the value-based framework and apply it to the client-law firm relationship to derive empirical hypotheses. I then analyze the drivers of the profitability of law firms before moving to the analysis of client-law firm relationships termination. I compare the economic significance of the marginal effects of both analyses before concluding with a discussion of the findings and of their implications for research.

BACKGROUND AND THEORETICAL FRAMEWORK

Legal advice and value creation

Professional firms represent a substantial size of the economy and are quintessential examples of knowledge-based organization (The Economist, 2006). Law firms are one type of professional firms along with accounting firms, consulting firms and architecture firms for instance. These firms use the knowledge of their employees and partners to deliver specialized services to their clients (Maister, 1993), and organize to make sure that their members acquire the relevant expertise while guaranteeing potential clients that this expertise is indeed of the highest level (Gilson & Mnookin, 1989; Levin & Tadelis, 2005; O'Flaherty

& Aloysius, 1996). Law firms therefore primarily create value for their client by virtue of the expertise of their lawyers.

In addition to creating value with their expertise in different legal areas, law firms also create value by providing a “one-stop-shopping” to their client. There are two elements how “one-stop-shopping” may create additional value.

The first is the creation of customer-specific knowledge. The supplier may invest in the relationship and its knowledge of the client’s need, which makes the supplier able to create more value for this client (Anand & Galetovic, 2006). This enable the law firm to increase their baseline ability to create value through expertise, irrespective of the number of line of services they are providing the client.

The second element is the coordination of various services for the client: the work of specialist lawyers in different fields may need to be coordinated as some clients need simultaneous advice in different areas of law. For instance, think of a client patenting many inventions and facing litigation associated with patent infringement. For this client it may make sense to tightly coordinate intellectual property work and litigation work. Moreover, the client-specific knowledge that lawyers can accumulate in their work represents a relation-specific asset that can be more easily shared within a law firm rather than between law firms. According to Nelson (1988), it is the need to share clients across specialties that justifies the existence of generalist law firms. In short, when a law firm manages several related issues for a client, better coordination may result in costs saving, increased quality of work, or both. In each of those cases more value is created. The practice of selling different services to a same client is called “cross-selling” in the legal industry and is very common among law firms.

In this paper, I broadly call “client-based scope economies” the cost savings and additional benefits that can be realized when a single firm provides advice to the same client in different legal areas. Client-based economies of scope differ from the usual concept of

economies of scope (Panzar & Willig, 1981) in that they arise only when different products are made for the same client whereas production economies of scope arise when two different goods are produced by the same firm, regardless of the identity of the buyer. Client-based scope economies are akin to the demand-side economies of scope analyzed by Siggelkow in his study of mutual fund performance (2003). The definition I use in this paper is broader because, to explain the existence of scope economies, it also allows for the possibility of additional benefits to the relationship in addition to the sharing of shopping costs (Klemperer, 1992), i.e. the costs of using more than one supplier.

In summary, law firms create value in two related ways when they deal with clients. They use specialized human capital to provide expert legal advice in different areas of law. They may also create value from client-based economies of scope that result from the provision of legal advice in different areas. Client-based economies of scope may arise due to a combination of better coordination of legal advice and efficient sharing of client-specific knowledge among lawyers of the same firm specialized in different areas.

Value-based framework

The value-based framework developed by Brandenburger and Stuart (1996) provides a natural way for linking value creation and value appropriation when a small number of heterogeneous firms are competing in a vertical chain. I develop this theme in the rest of this section.

Brandenburger and Stuart (1996) base their reasoning on cooperative game theory (Owen, 1995) in order to understand how the value created by buyers and suppliers is shared among them. Their two central concepts are *value creation*, which represents the size of the pie to be shared, and *added value*, which gives indication as to how the pie will be shared. They define the value created by a firm as the difference between the willingness-to-pay of buyers and the opportunity cost of suppliers. They define the added value of a firm within a

vertical chain as the amount of value creation that would be lost if the firm were to withdraw from the vertical chain. The construct of added value measures the distinctive contribution to value creation that a firm brings to a particular vertical chain. Added value is a measure of the distinctive value that a firm is able to bring to its environment of buyers and suppliers. Moreover, Brandenburger and Stuart link value capture and added value by showing that the added value of a firm puts an upper limit on the amount of value the firm can capture. As a consequence, having an added value strictly superior to zero is a necessary condition for capturing value. The final distribution of value depends on the outcome of free form negotiation among the firms belonging to the vertical chain. Such description applies well to business-to-business markets. I consider that markets for legal advice fit reasonably to this description to the extent that fees are typically at least partly negotiated.¹ Moreover, negotiated fees and prices is a feature common to many business-to-business markets.

I apply this logic to the particular piece of the vertical chain that is constituted by one corporate buyer and the set of its suppliers of legal advice. I concentrate on this unit of analysis because the particulars of the legal market make it a relevant area of competition. This assumes that other bargaining problems have already been solved and focuses the analysis on the bargaining happening between a buyer and its suppliers. Figure 1 illustrates the basic unit of analysis where competition between suppliers is considered in this paper. It shows one corporate client that needs legal services in four different areas: corporate, litigation, media and intellectual property (IP). This client is working with four law firms (Firms 1 to 4) that each has different scope of activities. For instance, Firm 2 is a generalist,

¹ Although law firms traditionally use hourly rates, the traditional way of charging hourly rates is more and more challenged by clients on the UK legal market. They may impose new billing schemes such as caps on total fees, flat fees, success fees (e.g., for due diligence work in a competitive acquisition) and volume discounts. There are other ways in which the hourly rates are manipulated: some clients are allowed to pay late, and some work is not billed at all or ends up being written off (author's personal interviews with lawyers and legal market experts, 2005). It can also be noted that the use of hourly rates has not always been the dominant form of billing for legal work. In the US corporate legal market, before World War II, fees for legal work used to be negotiated on a case-by-case basis without reference to an hourly rate (Galanter & Palay, 1991).

able to supply all the services needed by the client, while Firm 4 is a specialist that can only do media work. Applying the value based framework to this unit of analysis enables to understand, for example, whether and how the presence of Firm 2 in the set of suppliers of the client influences the ability to capture value of the other firms.

=====

Insert Figure 1 about here

=====

Clearly, defining the boundaries of the “game” this way gives more power to the buyer than to the suppliers in that the buyer can play suppliers against each other while suppliers cannot. The justification for this choice rests in the observation that bargaining situations in professional service markets rarely seems to include more than one buyer. Trade journals routinely report that buyers of legal service want to increase competition among their law firms, sometime to the effect of setting up reverse auctions.² By contrast, outside of situations of conflict interests in which professional norms are sometimes forcing lawyers to drop clients, there are no reports that law firms are actively playing clients against each other and this is not a concern that clients voice in the professional press.

One reason that can explain why buyers have structurally more power over the structuring of negotiations is that buyers have infrequent needs of professional services. The market may therefore always appear to be “shorter” on the side of the clients. Any time a client needs services, it may be able to start a negotiation including several suppliers, or threatening to include more than one. On the contrary, any supplier involved in the negotiation would not be likely to find another buyer with similar needs. In other words, at

² In December 2006, an end of the year review article in UK weekly *The Lawyer* mentioned: “More than ever before, in-house lawyers used panel reviews as a weapon, driving down hourly rates, setting ever-lower caps and fixed-fee arrangements, consolidating external advisers and increasing the competition between firms.” (*The Lawyer*, 18 December 2006, “In-house interviews round-up of year”, by David Middleton). In January 2005, General Electric Capital’s London offices used an electronic tender process as part of their legal adviser selection (*The Lawyer*, 19 January 2006, “GE completes UK panel review”)

any given point of time, business opportunities are scarcer than firms able to service them. It seems therefore reasonable to assume that there is much more substitutability on the side of suppliers than on the side of buyers.

Moreover, there can be particular reasons that pertain to the wider institutional environment. For instance, in the case of law firms, one reason could be the existence of norms against conflict of interests that in effect limit the ability of individual law firms to exploit the specific information they have about clients. A law firm in a position to play one client against another would actually have to drop one of the clients because of professional rules, as opposed to exploiting this advantage to negotiate better terms. This is a case where norms and rules prevent to include more than one client in the game. Similar norms against conflicts of interest may be working to a certain extent in other professional service industries, such as investment banking or consulting.

Finally, I will make an important simplifying assumption in the forthcoming analysis. I will assume that the opportunity cost of the suppliers is constant, and focus on the variations of added value that come from variations in the willingness-to-pay they are able to command. This assumption is justified when one considers that the main driver of opportunity costs is the costs of the inputs necessary to produce the services. In the case of professional firms, input costs consist mainly of salaried lawyers' and support staff salaries, which can be considered fixed in the short term.

Empirical hypotheses for law firm profitability

We have seen that the value a supplier can produce when working for a client is coming from at least two different sources: legal expertise in the areas of law and client-based economies of scope. In the value-based framework, translating legal expertise into the ability to capture value depends on the level of legal expertise of a firm but also on the level of expertise of its direct competitors, i.e., those other firms that also serve the clients of the

focal firm. Those competitors can credibly be used as threats by the client in a price negotiation since they already know the client. I will say that a law firm working for a client in a legal area has *added value* for this client in a given area if its level of expertise in the legal area is strictly superior to the comparable level of expertise of any of the other law firms working for the client. A law firm's aggregated value capture in each client relationship translates into its overall profits and should be related to its aggregated level of added value. The above reasoning suggests the following empirical hypothesis:

Hypothesis 1 (Expertise Advantage): The profitability of a law firm increases with the proportion of its clients for which it has added value in terms of pure legal expertise vis-à-vis the other law firms working for the same clients.

The other driver of value creation in client-law firm relationship is client-based economies of scope. If client-based economies of scope are realized by a law firm, this firm is in turn more likely to have added value. Indeed, by taking a coordinating role or by leveraging its knowledge of the client across different areas of law, it will be differentiating from its competitors. A necessary condition for the realization of economies of scope is that a firm is indeed selling its services to the same client in multiple areas, i.e., a firm is effectively cross-selling. Thus, I hypothesize:

Hypothesis 2 (Cross-Selling): The profitability of a law firm increases with the proportion of its clients for which it cross-sells.

Consider now the impact on a firm's added value with a client when there is a competitor that is realizing client-based economies of scope. This would likely reduce whatever added value the focal firm has in terms of pure legal expertise because now the competing firm would be able to compensate a possible expertise disadvantage due to its ability to bundle work in an area with work in other areas. Moreover, if the focal firm is also cross-selling, its added value from client-based scope economies would also be seriously be

reduced since it would no longer be the only supplier that realizes those economies. I therefore hypothesize:

Hypothesis 3 (Competitor Cross-Selling): The profitability of a law firm decreases with the proportion of its clients for which there is at least one competitor that cross-sells.

Empirical hypotheses for likelihood of relationship termination

The above hypotheses (H1 to H3) are formulated with a metric of value capture, law firm profitability, which is an aggregate measure of the profitability of multiple client relationships. Rather than using aggregate measures, one would ideally like to measure the profitability of each law firm's client relationship and relate it to the characteristics of the relationship. Doing so would avoid introducing unknown biases and error of measurements in the process of aggregating the data. Unfortunately, there is no publicly available data of the profitability of client-law firm relationships. However, instead of focusing on profitability, it is possible to observe and analyze an alternative measure of performance: the lack of termination (i.e., the survival) of the relationship over time.

I posit that client-law firm relationships in which either party is not able to capture enough value relative to alternatives are more likely to be terminated. A law firm may want to terminate a client relationship from which it cannot capture enough value. Conversely, a client may terminate a relationship with a law firm that is not willing to accept terms of exchange favorable enough to the client. Hypotheses 1 to 3 I formulated above can be translated in terms of relationship termination in the in the following way.

One can link the count of the number of areas of law in which the law firm has added value, i.e., areas in which the law firm has higher expertise than competitors, to the risk of seeing the relationship terminated and formulate the following hypothesis:

Hypothesis 4 (Expertise Advantage): The larger the number of areas a law firm sells to the client in which the law firm has added value vis-à-vis the other law firms working for the same client, the less likely the relationship is to be terminated.

To capture the role of cross-selling, the count of the total number of areas of law, including those with and those without an expertise advantage, can be introduced into the analysis. The more areas a firm is selling, the higher the benefits from coordinating among them and the less likely the relationship should be to be terminated. Accordingly:

Hypothesis 5 (Cross-Selling): The larger the number of areas a law firm sells to the client, the less likely the relationship is to be terminated.

When competitors cross-sell, the focal firm should be more at risk lose a client relationship due to the additional competitive pressure. If there is more than one competitor, added value theory suggests that one should take into account the most potent threat to the focal firm, which is represented by the competitor that is selling to the client the largest number of areas of law. Therefore:

Hypothesis 6 (Competitor Cross-Selling): The larger the maximum number of areas sold by a single competitor to the client, the more likely the relationship is to be terminated.

SUPPLIER PROFITABILITY

Sample

Thanks to the high level of transparency of the corporate legal UK market, I was able to assemble a unique longitudinal data set of law firm economic performance, client relationships and independent ratings of law firms' legal expertise. The span of the study is 2001-2005. The base sample for the study is drawn from the annual survey made by *Legal Business*, an industry monthly aimed at corporate lawyers, of the largest 100 UK law firms and of the largest foreign law firms in the UK between 2001 and 2005. This survey provides with headcount and financial performance information about the largest corporate law firms

in the UK as well as similar information for the London offices of a number of US firms. I also used a survey conducted annually by *Client Report*, an industry trade magazine targeted at general counsels. This survey is addressed to the general counsels of the corporations belonging to the top 250 largest market capitalization in the London stock market. In this survey, which enjoys a very high response rate (more than 90%), general counsels give the list of their main legal advisers and the areas in which they use them.

In order to assess annually the level of expertise of law firms in all legal areas, I used the ratings provided by *Chambers and Partners* (also the publisher of *Client Report*) in their annual *Guide to the legal profession*. This directory is the result of six months of work (January to June) by a team of 30 lawyers and legal journalists. This guide has been consistently published every year since 1990 and is acknowledged as one of the two leading provider of information about the UK legal market. The Chambers directory covers over 60 areas of law, divided into further sub-categories, and provides lists of the best firms and lawyers in the UK. Those lists are organized into up to 6 tiers; within each tier firms are deemed to be of comparable expertise level. Some UK law firms now routinely refer to this directory on their web site in order to boast their credentials. Appendix A provides an example of firms rating by Chambers and Partners. In total, I have 453 firm-year observations from 128 firms. The average number of observation per firm is 3.54.

Variables of Interest

Value capture. I use the profit per equity partner (PEP) as dependent variable and measure of the extent of value capture by law firms. Law firms in the sample are organized as partnerships and distribute their profits among the equity partners. Profit per equity partner is the commonly used measure of profits within the UK legal industry and has been used as dependent variable in several academic studies of the performance of law firms in the US

market (Fisher, 1998; Gilson & Mnookin, 1989; Kor & Leblebici, 2005; Samuelson & Jaffe, 1990). This variable is expressed in thousand British pounds.

Added value from legal expertise. I base this measure on information on law firm-client relationships given in the *Client Report* survey and on the firm ratings provided by the *Chambers* directory. I constructed the measure by following the following steps. I first looked at the sets of law firms mentioned by each client in the *Client Report* survey in each year. Within those sets of law firms, I matched the legal areas for which the client used a firm with the corresponding legal area of *Chambers*. I then checked whether each firm had a strictly higher ranking in the relevant area of law of the *Chambers* directory than all the other firms working for the same client. If it was the case, I considered that the firm had added value for the work it was doing for this client in this area of law. I then computed the proportion of added value work out of the total client work. For instance, if a firm was doing work in three areas of law for a client and had added value only in one area, this proportion would be equal to one third. I then calculated the average of this proportion across all the clients of a law firm in a given year in order to create the measure corresponding to added value from legal expertise. The measure takes values between zero (no added value in any work) and one (added value in all works). Appendix B defines this measure in a formal way.

Given that performance and evaluation of the firm's expertise happen simultaneously, it might be that performance is driving the ratings. In order to avoid this problem, I used the rankings from the *Chambers* guide of the preceding year when I checked for added value. For instance, the added value measure for 2001 is constructed with the client-area-law firm data from the 2001 *Client Report* survey but with the ratings given in the 2000 edition of the *Chambers* directory. Moreover, when some categories of work mentioned by some clients were at a level of aggregation higher than those provided by *Chambers* (e.g., "Commercial

law”), I computed corresponding aggregated rankings to be able to compare firms. If I had no information whatsoever on the clients of a law firm, I coded the added value variable as zero.

Cross-selling. For each law firm, I calculated the proportion of its clients for which it was mentioned to work in more than one area of law. This variable takes value comprised between zero and one. I coded this variable as a zero if the law firm was not listed by a single client in the *Client Report* survey.

Cross-selling by competitors. For each law firm, I calculated the proportion of its clients for which there was at least one competitor mentioned as working for the client in more than one area of law. This variable takes value between zero and one and was coded as a zero if the law firm was not listed by a single client in the *Client Report* survey.

Control Variables

I used the following control variables in the analysis:

Level of legal expertise of the firm. I controlled for effects due to the variations in the overall level of expertise of a firm but distinct from variations of competitive pressure at the client level by including a series of variable equal to the average ratings obtained by a firm in the Chambers directory in the 6 areas of legal expertise most cited by clients in the *Client Report* survey. These areas are: Corporate finance, Property, Litigation, Employment, Banking and Capital Markets. It was also reversed in order to facilitate interpretation: higher figures correspond to higher levels of expertise.

Leverage ratio. The leverage ratio of a law firm is the number of associates per lawyer. This ratio has been shown to be important for determining the profitability and the accumulation of human capital in a law firm (Galanter & Palay, 1991; Hitt et al., 2001; Kor & Leblebici, 2005; Sherer, 1995).

Firm size. A firm's size may affect its ability to negotiate with clients and its ability to mobilize resources for clients. I used the headcount of the firm (specifically, the number of fee-earners) as an indicator of firm size.

Firm scope. I used two measures of law firm scope. The first is a count of the number of areas in which a firm is active according to the *Chambers* directory in London and the second is a count of the number of areas in which a firm is active outside of London. The use of two measures takes into account the duality between on the one hand the legal market that exists in the City of London around financial institutions and the other, provincial, legal market.

Number of clients. The number of clients may matter for performance in several ways. On the one hand, it may increase the number of potential conflicts of interests. On the other hand, it also can increase the ability to generate new knowledge. The performance effect is therefore unclear. I included a count of the number of clients from the *Client Report* survey that cited the law firm in a given firm. I also added in a dummy variable taking the value of one if the firm had at least one client in the FTSE 250 and zero otherwise.

Change in Client's General Counsel. The General Counsel is the client's corporate officer in charge of dealing with legal matters and is typically the person managing the relationships with legal advisers. If the person holding this position is changing, the relationship may be affected due to the need to create new personal ties. I coded this variable based on the *Client Report* survey and on the section of the *Chambers* directory that lists the key legal contact of large corporate clients.

Analytical Approach

I tested the hypotheses with a panel data methodology to take advantage of the structure of the data that is both cross-sectional and longitudinal. A Hausman test indicated that the firm effects were likely to be correlated with the other regressors. I therefore chose to

use a fixed effects estimation (including both firm effects and year effects) over a random effects estimation because the fixed effect estimator remains consistent in this case. In order to correct for heteroskedascity, I also used robust estimates of the standard errors (White, 1980), clustered by firm (Rogers, 1993). Table 1 presents the descriptive statistics and correlation matrix. Inspection of Table 1 shows that some variables are highly correlated. I therefore performed checks for the presence of multicollinearity that indicated that it was not likely to be a problem in this data set. Table 2 presents the regression results.

=====
Insert Tables 1 and 2 about here
=====

Results

I first ran regressions that included only control variables (Models 1 and Model 2). Model 1 is a pooled regression that does not include firm dummies, while Model 2 includes the firm dummies. Both models include year dummies. The estimates of the year dummies, as well as of the firm dummies and of the constant term are not reported in Table 2. In both models, and consistent with previous findings (e.g., Hitt et al., 2001; Kor & Leblebici, 2005) leverage has a positive effect on profitability. In Model 1 this effect is strongly significant ($p=.001$), while bordering on significance in Model 2 ($p=.115$). The dummy variable for being located in London is positive and significant below the 10% threshold ($p=.086$) while the coefficient on the dummy variable for being located in the English province (to the exclusion of Scotland) is negative and not significant. This is consistent with the idea that firms located in London have a privileged access to a larger and potentially more profitable market owing to the legal needs of the City of London financial center. Estimates of other coefficients show some notable differences between Model 1 and Model 2.

Model 1 shows a positive and strongly significant coefficient for the number of clients in FTSE 250 while the same coefficient is negative and significant in model 2, which introduces the firm fixed effects. This suggests that not taking into account unobserved heterogeneity creates a spurious link between profitability and number of clients in the FTSE 250. The more profitable firms have a larger number of clients, but, controlling for firm-effect, a larger number of clients is not positively but actually negatively related to profitability. This could be linked to the need to invest resources to create new relationships.

The coefficients of the measures of expertise also show some interesting patterns. In Model 1, the coefficient on Employment is significant and negative, while the coefficient on Capital Markets is significant and positive. In Model 2, the Employment coefficient becomes positive and significant while the Capital Markets coefficient remains positive but loses statistical significance. This also suggests that unobserved heterogeneity may lead to misinterpretation of the effect of expertise: Model 1 shows that firms that are well rated in Employment are less profitable than the others. However, with the fixed effects, Model 2 shows that increase of the Employment rating over the years for a given firm is actually positively associated with profitability. In Model 2, the other coefficients for expertise ratings are positive or very close to zero but not significant. While the positive signs are expected, the lack of significance may have two different origins. The first potential explanation is that there might not be enough variability in the data to allow proper identification. The second potential explanation is that while there may be benefits to getting higher expertise ratings, there are also costs associated to improving the ratings, for instance through paying higher salaries to salaried lawyer and staff.

The variable indicating the proportion of the firm's client based that has been affected by a change of general counsel is negative and bordering on significance at the 10% threshold

($p=.106$). This suggests that turnover of personnel key to client relationship is associated with lower profitability of the relationship.

In Hypothesis 1 I argued that the profitability of a firm is increasing with the extent to which it has added value from legal expertise in its client relationships. I tested the hypothesis by including the variable representing the average across clients of the share of legal work for which a firm has added value due to its expertise (see Appendix B for the formal definition). This variable is introduced in Model 3 in addition to the control variables. In Model 3, the coefficient on the added value variable is positive, as predicted, ($b = 13.87$) but is not significant.

In Hypothesis 2 I posited that the profitability of a firm was increasing with the extent of the added value it creates in cross-selling. I tested the hypotheses by including a variable that is equal the proportion of the clients of a law firm for which the law firm cross-sells. In Model 4, the coefficient of this variable is positive ($b = 44.56$) as predicted by Hypothesis 2, and significant below the 1% level ($p = .005$).

Finally, I tested Hypothesis 3, which stated that the profitability of a firm is negatively affected when competitors achieve cross-selling among the clients of a firm, in Model 5. I introduced in the regression a variable corresponding to the proportion of a law firm's clients for which there is at least one competitor who is cross-selling. Hypothesis 3 predicted a negative sign and this is what was estimated ($b = -24.07$). The p-value is relatively weak however ($p = .117$). In models 3 to 5 only Hypothesis 2 has been supported below the 5% level, although estimates of coefficients for the other variables had the predicted sign.

In Model 6, I jointly tested Hypotheses 1 to 3. The signs of the coefficient estimates are not changed, but their absolute values increased and their significances improved. In particular, the expertise added value variable is now significant at a level close to the 5% threshold ($p = .058$) and the cross-selling variable is significant and below the 1% threshold

($p = .016$). Moreover, the significance of the variable concerning cross-selling by competitors also improved and is below the 10% level ($p = .088$). Overall, the results of Model 6 lend support to Hypotheses 2 and, to a lesser extent, to Hypothesis 1 and 3.

RELATIONSHIP TERMINATION

In this section, I extend the analyses to the level of the law firm-client relationship in order to confirm and test the robustness of the analysis of the profitability of the law firms. In the previous analyses, the dependent variable, profitability, was observed at the level of the law firm, while the independent variables of interest are observed at the level of the law firm-client relationship. Carrying out the analysis at the level of the relationship would have the advantage of avoiding potential biases and measurement errors due to the aggregation of relationship-level information to the level of the law firms.

Data and Variables

I used the *Client Report* survey to identify in which years relationships were terminated. I constructed 1872 yearly spells with 220 termination events. For each spell, I constructed the following variables.

The dependent variable, relationship termination, was coded with a 0 if the relationship is still observed the following year and by 1 if the relationship is not observed the following year. The independent variables of interest were constructed in the following manner. First, I computed a count of the number of legal areas in which the law firm is selling legal advice to the client. Second, I calculated the number of legal areas in which the law firm has a higher level of expertise than any competitor working for the client the same year. I made the same comparisons of ranking positions across competitor as described in Appendix B. Third, I computed the largest number of areas of expertise that a single competitor provides to the client. As control variables I introduced the law firm's average expertise score in the top 6 areas of law as well as measures of scope, size and the number of

clients in the FTSE 250. These controls were constructed in the same way as for the analysis of law firm profitability. I also introduced a dummy variable equal to one if the spell of observation is left censored. Table 3 shows the correlations and summary statistics for these variables.

Methods

As the terminations of relationships are observed at yearly intervals it is appropriate to use a discrete-time transition model (Cameron & Trivedi, 2005). I first estimated a logistic model and allowed for a non-parametric baseline hazard by using a different intercept for each year. In order to correct for the potential presence of heteroskedasticity, I used robust standard errors that are clustered by relationships. Because there may be unobserved heterogeneity making some relationships intrinsically more or less stable, I also estimated gamma-distributed discrete time proportional hazard model (Meyer, 1990). The results are shown on Table 4.

=====

Insert Tables 3 and 4 about here

=====

Results

The results of the logit estimation are reported in Model 1 of Table 4. For conciseness, the coefficients of the variables controlling for expertise level are not reported. They are all non significant. One of the most noticeable results concerning the control variables is that the number of clients is negatively and significantly ($p=.001$) related to relationship termination. This suggests that firms holding many relationships are also especially good at maintaining them. This finding is in stark contrast with the estimate for the same variable in the regression analysis of law firm profitability, which was negative and significant, suggesting that different mechanisms may be at play.

I tested Hypothesis 4 by including in the analysis the number of areas of law served by the law firm in which the law firm had an expertise advantage over the other law firms serving the client. The sign of the coefficient is negative and significant ($p=.001$), showing a negative relationship between the probability of relationship termination and the expertise advantage of the firm. Hypothesis 5 posited that the extent of cross-selling by the law firm, measured by the number of different areas of law it is selling to the client, should be negatively related to the probability of seeing the relationship terminated. The analysis provides results consistent with the hypothesis as the sign of the count of the number of areas of law is negative and statistically significant ($p=.001$). Hypothesis 6 asserted that cross-selling by competitors, measured by the maximum number of areas of law that a single competitor sells to the firm's client, made relationship termination more likely. This relationship is in line with the statistical analysis, where the coefficient estimate is positive and significant ($p=.035$). In summary, in Model 1 the estimates of the coefficients for the three theoretical variables all have the expected sign and are all statistically significant.

In Model 2, I used a gamma-distributed discrete time proportional hazard model as a robustness check. The statistical model assumes that the survival of relationship depends on an unobserved "frailty" parameter, which is relationship specific and assumed to be distributed according to a gamma distribution. In this model, some relationships are intrinsically more prone to be terminated and others are intrinsically less likely to be terminated. A likelihood ratio test rejected the hypothesis that the variance of the gamma distribution is equal to zero ($p=.024$) which suggested the presence of unobserved heterogeneity. The regression results for the theoretical variables are however very similar to those given by the logit regression (Model 1). In particular, they support Hypotheses 4, 5 and 6 with very similar coefficients and statistical significance. Given the lack of substantive

differences between the estimates of Model 1 and Model 2, for ease of analysis, I will refer and build on the results given by Model 1 in the rest of the paper.

MARGINAL EFFECTS AND ECONOMIC SIGNIFICANCE

In this section, I jointly examine and compare the marginal effects and the economic significance of the estimates given by the analysis of the drivers of law firm profitability and of the termination of client-law firm relationships. Panel A of Table 5 presents the marginal effects of the theoretical variables on the predicted Profit per Equity Partner. Panel B of Table 5 presents the marginal effects of the theoretical variables on the predicted probability of relationship termination.

=====

Insert Table 5 about here

=====

Panel A shows the how the predicted profit per partner is changing when the three theoretical variables increase by one standard deviation. The magnitudes of the effects of the change on profitability are similar. One additional standard deviation of expertise advantage is associated with an estimated £ 9,590 (\$ 18,780) increase in profit per equity partner. A similar increase of cross-selling would be linked to an £ 9,610 (\$ 18,820) increase while more cross-selling by competitor is associated with a corresponding drop of £ 9,170 (\$ 17,960) of the profitability. These marginal effects have to be set against an average profit per equity partner of £ 397,000 in the sample. The magnitude of the marginal effects is therefore modest (about 2.5% of the average profit per equity partner) but of economic significance.

Panel B shows the marginal effect of the theoretical variables on the probability of relationship termination. As the logit model is not linear, the marginal effects need to be calculated by assigning values to all variables. Here, all the figures are estimated by setting the variables at their mean, or by changing variables from a level half a standard deviation

under their mean to half a standard deviation above their mean while keeping the other variables at their mean. The marginal effects of expertise added value and cross-selling are similar and are of a large magnitude. *Ceteris paribus*, an increase of one standard deviation of one of these two variables reduces the probability of relationship termination by respectively 3.1% and 3.2%. In both cases, this corresponds to a reduction of a third of the baseline predicted probability of termination (9.3%). As for cross-selling by competitors, an increase of this variable by one standard deviation is associated with an increase in the probability of termination of 1.3%. Given the baseline predicted probability of relationship termination, all these marginal effects are economically important.

The direction of the marginal effects shown in Panel A and B are similar. The size of the effects estimated in the analysis of relationship termination is higher than the effects estimated in the analysis of law firm profitability, but even the latter are of economic significance. The difference in magnitude of the marginal effects between the two analysis could be attributed to how close the dependent variable is to the phenomenon of interest. In one case, the variables were aggregates, while in the other they were measured at a level identical to the phenomenon of interest.

DISCUSSION AND CONCLUSION

How value is shared between buyers and suppliers has been an important theme in strategy research and practice. The aim of this paper was to understand what drives a supplier's ability to capture value from its client relationships? I investigated two drivers affecting the ability to capture value: added value from expertise and client-based economies of scope. The first driver, added value from expertise, means that a supplier is able to demonstrate a level of expertise superior to what any of the other suppliers to a client can provide. In that case the supplier should be able to capture superior value because it is in a

better position to negotiate its marginal contribution to value creation. The second driver is the extent of client-based scope economies that are realized with the client, both by the focal supplier and by the other suppliers working with the client. When the focal supplier realizes client-based scope economies, this should add to its ability to capture value, but this ability may be reduced if competitors realize similar economies. The argument linking these two factors to value capture is rooted in the more general concept of added value put forth by Brandenburger and Stuart (1996). I tested the influence of added value from expertise and client-based scope economies on the profitability of a sample of UK law firms in 2001-2005, and I found support for these mechanisms.

These empirical results have implications for understanding how competition unfolds in a vertical chain and the impact of client-based economies of scope. They also validate the relevance of the value-based framework for strategy research, and complement existing work on competition among professional service firms.

First, this paper contributes to further our understanding of how competition is enacted within a vertical chain. This study sheds light on how a firm's own characteristics and its competitive environment interact. I found that the variables measuring competition at the level of client relationship significantly affected supplier profitability. This suggests that studying the structure of competition at a level as detailed as a buyer and its set of suppliers can be fruitful to understand how the value created by exchange is shared between buyers and suppliers. This also suggests that a supplier's ability to capture value from relationships depends not only on its own characteristics (e.g., level of expertise) but also on how its clients actually enact competition. How clients matter for the enactment of competition can be linked back to Baker's (1990) study of client relationships in investment banking. Although the overall structure of the market puts limits on what bargaining power suppliers and buyers may have, it is ultimately the actions of each firm that enable it to gain or lose

bargaining power. Specifically, buyers can gain power in the value chain by organizing how suppliers compete among each other (i.e., reducing suppliers' added value), while suppliers gain back power by increasing the distinctiveness of their contribution to value creation (i.e., increasing their added value).

Going beyond the analysis of the broader structure of the market to the analysis of each firm's particular set of constraints and opportunities seems a promising avenue of research for understanding how supplier and buyer power impact firms' performance and development. For instance, an interesting question is whether buyers' efforts to organize their supply chain are giving correct incentives to suppliers. There is indeed the possibility that excessively powerful buyers may be stifling suppliers' incentives to compete if suppliers are not able to capture enough of the value they create (Chatain and Zemsky, Forthcoming).

Second, the results contribute to our understanding of client-based scope economies. The empirical results extend what we already know about client-based scope economies. In my sample, I find evidence that scope does not seem to provide benefits outside of the realization of client-based economies. These results mirror Siggelkow's (2003) findings that client-based economies of scope may be a driver of firm scope, even when there are no production-side scope economies. Nevertheless, I find that capturing benefits from client-based economies of scope is contingent on the competitive context in which they are realized. Clients who have several suppliers simultaneously realizing such economies seem to be able to extract the additional value created away from the suppliers.

Third, this paper contributes to an empirical validation of the value-based framework (Brandenburger and Stuart, 1996). My results confirm that the terms of exchange between buyers and suppliers are influenced by the elements suggested by the value-based framework. In particular they provide early evidence that the concept of added value can be fruitfully used to construct theoretically meaningful measures of competition. This also suggests the

extent of potential of cross-fertilization between formal works (e.g., Makadok, 2001; Lippman and Rumelt, 2003; MacDonald and Ryall, 2003; Adner and Zemsky, 2005) and empirical analysis in strategy research.

Finally, this paper contributes to our understanding of competition among professional service firms by showing that the profitability of those organizations could be linked to how competition unfolds at the level of client relationships. Previous studies of competition have taken an ecological approach and concentrated on population level drivers of competition (Pennings, Lee and van Witteloostuijn, 1998; Boone, Brocheler and Carroll, 2000; Jaffee, 2001) with attention only recently given to competition between specific organizations (Philips, 2002). The findings of this paper suggest that a fine-grained understanding of competition can be useful for explaining the performance of these firms.

This study has a number of limitations. The sample is drawn from the UK corporate legal market and there is the issue of generalization of results beyond that specific industry and country. The results could also be strengthened by expanding the temporal scope of the study in order to increase the number of observations available for each firm. Further work is therefore needed to expand this data set. Nevertheless, the question of how value is shared between buyers and suppliers is a feature common to virtually all business-to-business markets and is not specific to law firms. Similarly, although client-based economies of scope are especially salient in professional service markets they also feature in industrial business-to-business markets. Moreover, there are a number of assumptions that were made that could be relaxed. In particular, the assumption that competition is primarily among firms with existing tie needs to be relaxed to take into account entry of new firms in the set of supplier of a particular client. This question is also connected to the process by which buyer and supplier are matched. Anand and Galetovic (2006) suggest that high value client connect with highly skilled suppliers of services to create strong relationships while letting lower value

clients and suppliers taking part to a transactional market. Explicitly accounting for the endogeneity of this process would strengthen the findings.

A number of other research questions could be addressed by following up on this research. For instance, one could include more information about buyers of services to understand whether there is variation in their ability to manage their relationships with law firms and the consequences for law firm performance. Another avenue for further research is to understand how competition and human capital accumulation interact. As legal expertise is ultimately the product of human capital accumulation and, at the same time, expertise matters for competition and performance, it would be interesting to study in depth the causal links between human capital and competition. A recent paper on interfirm migration of partners of Dutch audit firms by Wezel et al. (2006) is a step in that direction.

In conclusion, this research provides evidence about how competition affects how value is shared between buyers and suppliers of legal services in the UK. It shows that both firm capabilities, in the guise of legal expertise, and client-based scope economies are among of the factors that make those relationships more or less valuable for suppliers. My research has implications for our understanding of competition in vertical relationships and also provides evidence that concepts from formal models of strategy can be successfully applied in empirical studies.

REFERENCES

- Adner, R., & Zemsky, P. 2005. Disruptive technologies and the emergence of competition. *Rand Journal of Economics*, 36(2): 229-254.
- Anand, B. N., & Galetovic, A. 2006. Relationships, competition and the structure of investment banking markets. *Journal of Industrial Economics*, 54(2): 151-199.
- Baker, W. E. 1990. Market Networks and Corporate Behavior. *American Journal of Sociology*, 96(3): 589-625.
- Baker, W. E., Faulkner, R. R., & Fisher, G. A. 1998. Hazards of the market: The continuity and dissolution of interorganizational market relationships. *American Sociological Review*, 63(2): 147-177.
- Boone, C., Brocheler, V., & Carroll, G. R. 2000. Custom service: Application and tests of resource-partitioning theory among Dutch auditing firms from 1896 to 1992. *Organization Studies*, 21(2): 355-381.
- Branderburger, A. M., & Stuart, H. W. 1996. Value-based business strategy. *Journal of Economics and Management Strategy*, 5(1): 5-24.
- Cameron, A. C., & Trivedi, P. K. 2005. *Microeconometrics : methods and applications*. Cambridge ; New York: Cambridge University Press.
- Fisher, M. P. 1998. *Human capital and the professional services: Examining the relationship between structure and performance among law firms, 1986-1995*. Unpublished PhD Dissertation, University of Chicago, Chicago, IL.
- Galanter, M., & Palay, T. M. 1991. *Tournament of lawyers : the transformation of the big law firm*. Chicago: University of Chicago Press.
- Ghosh, R. (Ed.). 2005. *Chambers UK Guide to the Legal Profession*. London: Chambers and Partners.
- Gilson, R. J., & Mnookin, R. H. 1985. Sharing Among the Human Capitalists: An Economic Inquiry into the Corporate Law Firm and How Patners Split Profit. *Stanford Law Review*, 37: 313-392.
- Gilson, R. J., & Mnookin, R. H. 1989. Coming of Age in a Corporate Law Firm: The Economics of Associate Career Patterns. *Stanford Law Review*, 41: 567-595.
- Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. 2001. Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44(1): 13-28.
- Hoopes, D. G., Hadsen, T. L., & Walker, G. 2003. Guest Editors' Introduction to the Special Issue: Why Is There a Resource-Based View? Toward a Theory of Competitive Heterogeneity. *Strategic Management Journal*, 24(10): 889.
- Jaffee, J. 2001. *The Resource Partitioning of Corporate Legal Markets: The Competitive Dynamics of Generalist and Specialist Corporate Law Firm Strategies in Austin and Silicon Valley*. Unpublished PhD Dissertation, University of California, Berkeley, Berkeley, CA.
- Kor, Y. Y., & Leblebici, H. 2005. How Do Interdependencies Among Human-Capital Deployment, Development, and Diversification Strategies Affect Firms' Financial Performance? *Strategic Management Journal*, 26(10): 967-985.
- Lippman, S. A., & Rumelt, R. P. 2003. A bargaining perspective on resource advantage. *Strategic Management Journal*, 24(11): 1069-1086.
- MacDonald, G., & Ryall, M. 2004. How do value creation and competition determine whether a firm appropriates value? *Management Science*, 50: 1319-1333.
- Madsen, T. L., Hoopes, D. G., & Walker, G. 2003. Guest editors' introduction to the special issue: why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24(10): 889 - 902.

- Maister, D. H. 1993. *Managing the Professional Service Firm*. New York: The Free Press.
- Makadok, R. 2001. Toward a synthesis of the resource-based and dynamic-capability views of rent creation. *Strategic Management Journal*, 22(5): 387-401.
- Meyer, B. D. 1990. Unemployment Insurance and Unemployment Spells. *Econometrica*, 58(4): 757.
- Nelson, R. L. 1988. *Partners with power: The social transformation of the large law firm*. Berkeley: University of California Press.
- Owen, G. 1995. *Game theory* (3rd ed.). San Diego: Academic Press.
- Panzar, J. C., & Willig, R. D. 1981. Economies of Scope. *American Economic Review*, 71(2, Papers and Proceedings of the Ninety-Third Annual Meeting of the American Economic Association): 268-272.
- Pennings, J. M., Lee, K., & van Witteloostuijn, A. 1998. Human capital, social capital, and firm dissolution. *Academy of Management Journal*, 41(4): 425-440.
- Phillips, D. J. 2002. A genealogical approach to organizational life or chances: The parent-progeny transfer among silicon valley law firms, 1946-1996. *Administrative Science Quarterly*, 47(3): 474-506.
- Porter, M. E. 1980. *Competitive strategy : techniques for analyzing industries and competitors*. New York: Free Press.
- Rogers, W. H. 1993. Regression standard errors in clustered samples. *Stata Technical Bulletin*, 13: 19-23.
- Samuelson, S. S., & Jaffe, L. J. 1990. A statistical analysis of law firm profitability. *Boston University Law Review*, 70: 185-211.
- Sherer, P. D. 1995. Leveraging Human Assets in Law Firms: Human Capital Structures and Organizational Capabilities. *Industrial and Labor Relations Review*, 48(4): 671-691.
- Siggelkow, N. 2003. Why focus? A study of intra-industry focus effects. *Journal of Industrial Economics*, 51(2): 121-150.
- The Economist. 2006. Knowledge and the company. January 21st-27th
- Uzzi, B., & Lancaster, R. 2004. Embeddedness and price formation in the corporate law market. *American Sociological Review*, 69(3): 319-344.
- Wezel, F. C., Cattani, G., & Pennings, J. M. 2006. Competitive Implications of Interfirm Mobility. *Organization Science*, 17(6): 691-709.
- White, H. 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica*, 48: 817-830.

Table 1: Descriptive Statistics and Pairwise Correlations for Regression Analysis of Profit per Equity Partner

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1 Profit per Equity Partner	397.38	247.53																	
2 Leverage	5.60	2.64	0.08																
3 Headcount	368.00	512.56	0.22	0.17															
4 Nbr of Areas in London	9.01	10.1	0.28	-0.02	0.73														
5 Nbr of Areas Outside London	7.34	9.27	-0.39	0.18	0.04	-0.27													
6 Number of Clients in FTSE 250	6.35	11.1	0.33	0.09	0.81	0.75	0.05												
7 At Least One Client in FTSE 250	0.74	0.44	0.09	0.02	0.25	0.32	0.21	0.34											
8 Corporate Finance	0.43	0.36	0.06	0.11	0.45	0.34	0.48	0.54	0.44										
9 Property	0.41	0.36	-0.09	0.11	0.44	0.30	0.58	0.47	0.37	0.72									
10 Litigation	0.41	0.35	-0.14	0.08	0.44	0.26	0.64	0.45	0.38	0.71	0.77								
11 Employment	0.33	0.35	-0.11	0.10	0.36	0.29	0.47	0.40	0.29	0.58	0.58	0.64							
12 Banking	0.29	0.35	0.06	0.09	0.45	0.28	0.52	0.46	0.35	0.73	0.60	0.62	0.56						
13 Capital Markets	0.08	0.20	0.56	-0.03	0.66	0.53	-0.30	0.61	0.12	0.25	0.13	0.14	0.13	0.29					
14 Change in General Counsel	0.14	0.22	0.06	0.09	0.12	0.16	0.04	0.17	0.36	0.19	0.18	0.08	0.11	0.14	0.06				
15 Expertise Added Value	0.23	0.32	-0.03	0.03	0.35	0.21	0.48	0.46	0.43	0.63	0.55	0.58	0.49	0.62	0.15	0.08			
16 Firm is Cross-Selling	0.09	0.18	0.02	-0.01	0.10	0.09	0.09	0.13	0.30	0.20	0.18	0.14	0.17	0.21	0.03	0.16	0.19		
17 Competitors are Cross-Selling	0.27	0.33	0.09	-0.06	0.04	0.09	0.07	0.08	0.49	0.16	0.06	0.14	0.16	0.12	0.07	0.05	0.19	0.19	

Table 2: Regression Analysis of Profit per Equity Partner

Control Variables	(1)	(2)	(3)	(4)	(5)	(6)
Leverage	25.52*** [7.40]	8.92 [5.62]	9.03 [5.60]	9.00 [5.60]	9.09 [5.62]	9.46* [5.57]
Headcount	-0.17*** [0.05]	-0.02 [0.09]	-0.03 [0.09]	-0.02 [0.09]	-0.02 [0.09]	-0.02 [0.09]
Nbr of Areas Practiced in London	-3.41 [2.67]	2.61 [1.57]	2.71* [1.57]	2.71* [1.57]	2.53 [1.58]	2.87* [1.54]
Nbr of Areas Practiced Outside London	-0.96 [3.23]	1.81 [2.12]	1.94 [2.13]	2.04 [2.16]	1.57 [2.13]	2.09 [2.19]
Number of Clients in FTSE 250	7.65*** [1.54]	-3.21* [1.80]	-3.28* [1.80]	-2.96 [1.87]	-3.33* [1.76]	-3.19* [1.86]
Corporate Finance	78.04 [66.25]	23.11 [26.96]	22.56 [27.15]	18.21 [26.72]	19.97 [26.43]	12.53 [25.99]
Property	5.48 [49.72]	37.64 [34.54]	36.74 [34.76]	41.23 [35.14]	31.74 [34.25]	33.4 [35.29]
Litigation	-7.02 [56.25]	20.17 [24.86]	18.8 [25.01]	22.21 [24.79]	13.48 [25.51]	12.16 [25.41]
Employment	-133.65*** [45.79]	41.40** [16.84]	41.03** [16.61]	43.05** [16.87]	41.47** [16.71]	42.66** [16.33]
Banking	68.38 [53.88]	-0.77 [32.35]	-0.77 [32.67]	-7.60 [32.41]	4.20 [32.61]	-3.38 [32.72]
Capital Markets	599.51*** [127.54]	66.71 [113.67]	65.5 [114.05]	70.35 [113.02]	69.94 [111.75]	72.09 [111.00]
Located in English Province	-57.72 [50.61]					
Located in London	142.07* [82.20]					
At Least One Client in FTSE 250		-17.11 [23.44]	-19.74 [24.13]	-19.31 [23.32]	-5.99 [22.13]	-12.96 [23.06]
Change in General Counsel		-31.95 [19.60]	-30.19 [19.45]	-35.40* [19.24]	-34.74* [19.25]	-35.40* [18.51]
Theoretical Variables						
H1: Expertise Added Value			13.87 [15.55]			29.96* [15.66]
H2: Firm is Cross-Selling				44.56*** [15.45]		53.37*** [16.49]
H3: Competitors are Cross-Selling					-24.07 [15.27]	-26.97* [15.68]
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	No	Yes	Yes	Yes	Yes	Yes
R-squared (within for FE regressions)	0.514	0.139	0.140	0.153	0.147	0.168
Observations	453	453	453	453	453	453
Number of Firms	128	128	128	128	128	128

Robust standard errors, clustered by firm, in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%, two-tailed tests

Table 3: Descriptive Statistics and Pairwise Correlations for Analysis of Relationship Termination

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Relationship Termination	0.12	0.32															
2 Leverage	6.01	2.18	0.02														
3 Headcount	1136.34	912.67	-0.05	0.17													
4 Corporate Finance	0.75	0.27	-0.08	-0.03	0.51												
5 Property	0.70	0.26	-0.01	0.17	0.50	0.63											
6 Litigation	0.70	0.26	-0.02	0.18	0.52	0.72	0.68										
7 Employment	0.46	0.33	-0.01	0.15	0.38	0.47	0.44	0.52									
8 Banking	0.54	0.33	-0.01	0.13	0.57	0.58	0.53	0.51	0.45								
9 Capital Markets	0.29	0.35	-0.09	-0.10	0.80	0.56	0.29	0.38	0.28	0.44							
10 Number of Clients in FTSE 250	26.15	18.27	-0.12	0.07	0.69	0.69	0.42	0.55	0.36	0.35	0.68						
11 Nbr. of Areas in London	20.29	12.09	-0.10	-0.05	0.68	0.50	0.33	0.37	0.19	0.22	0.73	0.67					
12 Nbr. of Areas Outside London	7.19	11.12	0.08	0.38	-0.12	-0.08	0.19	0.20	0.28	0.21	-0.50	-0.15	-0.54				
13 Nbr. Areas with Expertise Added Value	0.73	0.92	-0.11	0.07	0.15	0.26	0.20	0.25	0.22	0.22	0.11	0.21	0.03	0.14			
14 Nbr. Areas Sold to Client (total)	1.55	0.9	-0.11	0.04	-0.01	0.04	0.05	0.03	0.05	0.02	0.01	0.02	-0.01	0.03	0.56		
15 Maximum Number of Areas Supplied by a Single Competitor	2.04	1.11	0.02	-0.06	-0.03	-0.08	-0.08	-0.07	0.03	-0.02	0.00	-0.05	-0.05	0.00	0.03	0.22	
16 Left-censored	0.35	0.48	0.06	0.05	0.02	0.02	0.04	0.07	-0.06	0.02	-0.02	-0.05	0.02	-0.01	0.00	-0.11	-0.21

Table 4: Analysis of Relationship Termination

Control Variables	Model 1 Logit	Model 2 Gamma Frailty
Year 2002	-1.706*** [0.506]	-1.587*** [0.569]
Year 2003	-1.700*** [0.405]	-1.560*** [0.484]
Year 2004	-1.297*** [0.407]	-1.027** [0.510]
Left-censored	0.578** [0.290]	0.479 [0.305]
Leverage	-0.022 [0.042]	-0.008 [0.046]
Headcount	0.000* [0.000]	0.001* [0.000]
Number of Clients in FTSE 250	-0.028*** [0.008]	-0.030*** [0.010]
Number of Areas Practiced in London	-0.008 [0.012]	-0.013 [0.015]
Number of Areas Practiced Outside of London	0.014 [0.014]	0.009 [0.015]
Controls for Expertise	YES	YES
Theoretical Variables		
H4: Nbr. Areas with Expertise Added Value	-0.398*** [0.125]	-0.411*** [0.142]
H5: Nbr. Areas Sold to Client (total)	-0.429*** [0.130]	-0.485*** [0.149]
H6: Maximum Number of Areas Supplied by a Single Competitor	0.139** [0.066]	0.154** [0.078]
Number of Spells	1872	1872
Number of Relationships	940	940
Number of Failures	220	220
Log Pseudo Likelihood	-624.95	-623.26

Model 1: Robust standard errors, clustered by relationship, in brackets

Model 2: Standard errors in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 5: Marginal Effects and Economic Significance

A: Marginal Effects on Profit per Equity Partner

Baseline for dependent variable		
Mean Profit per Equity Partner (GBP '000)	397.38	
Variable	Change in predicted Profit per Equity Partner as variable increases by one standard deviation (GBP '000)	Change in predicted Profit per Equity Partner as variable increases by one standard deviation (USD '000)
Expertise Advantage	9.59	18.78
Firm is Cross-Selling	9.61	18.82
Competitors are Cross-Selling	-9.17	-17.96

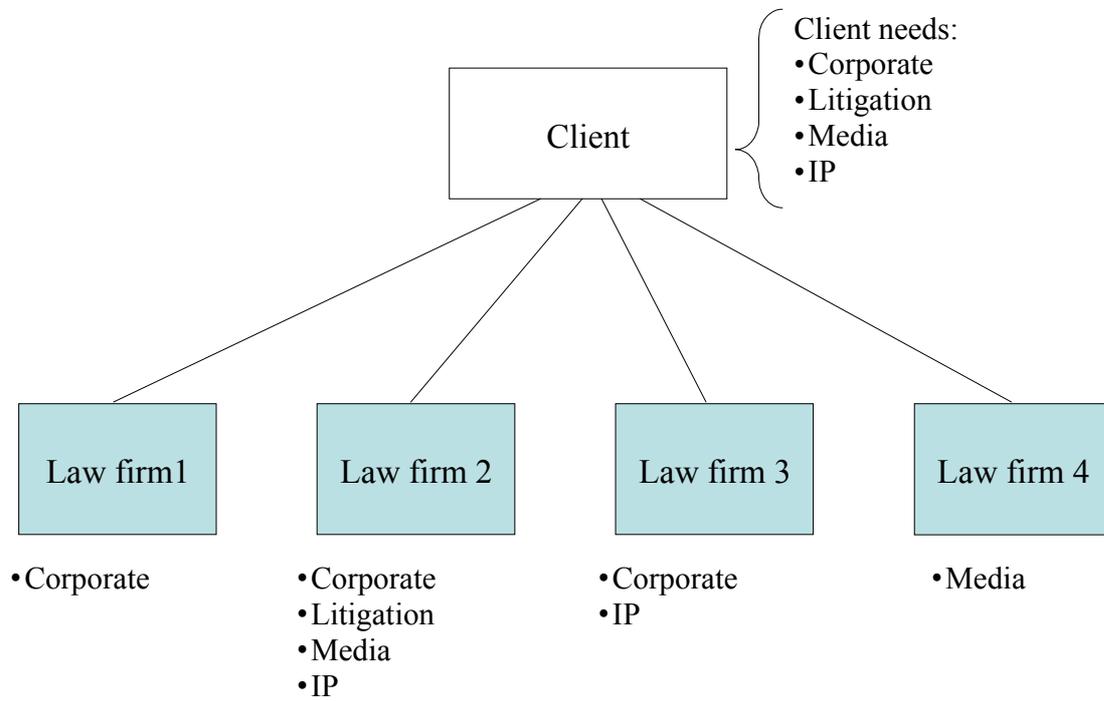
Note: Calculations based on estimates of Model 6 of Table 2, figures in 2005 currency units

B: Marginal Effects on Probability of Relationship Termination

Baseline for dependent variable	
Predicted Probability of relationship termination, holding all variables at the mean	0.093
Variable	Change in Predicted Probability as variable changes from 1/2 standard deviation below base to 1/2 standard deviation above
Nbr. Areas with Expertise Added Value	-0.031
Nbr. Areas Sold to Client (total)	-0.032
Maximum Number of Areas Supplied by a Single Competitor	0.013

Note: All other variables are held at their mean. Calculations are based on estimates of Model 1 of Table 4

Figure 1: Example of client-law firm relationships and law firm scope



Appendix A. Chambers and Partners Ratings

Example of ratings by Chambers and Partners (2004 guide): Acquisition Finance in London

Acquisition Finance	
London	
Leading firms	
1	ALLEN & OVERY LLP CLIFFORD CHANCE LLP
2	ASHURST LINKLATERS
3	FRESHFIELDS BRUCKHAUS DERINGER LOVELLS SHEARMAN & STERLING LLP
4	MACFARLANES WHITE & CASE
5	DENTON WILDE SAPTE HERBERT SMITH LATHAM & WATKINS SIMPSON THACHER & BARTLETT LLP SLAUGHTER AND MAY TRAVERS SMITH BRAITHWAITE
<small>This book is the product of 10,528 1/2 hour interviews. Within each band, firms are listed alphabetically.</small>	

In this example, the best firms are those in tier one (Allen & Overy LLP and Clifford Chance LLP).

The editorial team of Chambers and Partners describe their research and ratings as follows:

Our researchers speak to a vast range of lawyers and clients. Greater weighting is given to the views of the latter, and any biased viewpoints tend to cancel each other out. All interviews are conducted purely for research purposes and are entirely confidential and un-attributed.

We select our sources on the basis of:

- i) Submissions put forward by legal practices;
- ii) Interviews during the course of research; and
- iii) Our own database resources.

Rankings are assessed on criteria that include technical legal ability, professional conduct, client service, commercial awareness/astuteness, diligence, commitment, and other qualities that the client considers relevant.

Law firms and individual lawyers are ranked on a scale of 1- 6.

(Ghosh R (Ed.). 2005. *Chambers UK Guide to the Legal Profession*. Chambers and Partners: London)

Appendix B. Formal definition of the Added Value measure

Denote by indices i a client, j a firm and k an area of law. L_i is the set of law firms working for client i . $L_i / \{j\}$ is the set of law firms working for client i minus firm j . A_{ij} is the set of areas of law in which law firm j is working for client i , while a_{ij} is the count of those areas. C_j is the set of clients for which law firm j is working and c_j is the number of client for which law firm j is working. $Rating_{j,k}$ is the rating of law firm j in area of law k . Higher rating corresponds to higher expertise.

Law firm j is said to have added value in area k for client i if its rating in this area is strictly superior to the rating in the same area of all the other law firms that are working for the same client. Formally:

$$Rating_{ij} > \max_{j' \in L_i / \{j\}} Rating_{ij'}$$

Define D_{ijk} , a dummy variable equal to one if law firm j has added value in the area k for client i and zero otherwise. Then, the proportion of the work of firm j for client i that has added value is equal to:

$$\frac{1}{a_{ij}} \sum_{A_{ij}} D_{ijk}$$

The average of this proportion across all the clients of firm j is the measure (AV_j) of added value from the expertise of firm j used in the paper:

$$AV_j = \frac{1}{c_j} \sum_{C_j} \left(\frac{1}{a_{ij}} \sum_{A_{ij}} D_{ijk} \right)$$

This measure is calculated for every year and for every law firm. It may vary between 0 (no added value in any relationship) to 1 (added value in all areas in all relationships).

If in a year, a firm has no client within the top 250 market capitalization of the London Stock Exchange, then this variable is coded 0.

Europe Campus

Boulevard de Constance,
77305 Fontainebleau Cedex, France

Tel: +33 (0)1 6072 40 00

Fax: +33 (0)1 60 74 00/01

Asia Campus

1 Ayer Rajah Avenue, Singapore 138676

Tel: +65 67 99 53 88

Fax: +65 67 99 53 99

www.insead.edu

INSEAD

The Business School
for the World