

HUMAN RESOURCE STRATEGY AND CAREER MOBILITY IN PROFESSIONAL SERVICE FIRMS: A TEST OF AN OPTIONS-BASED MODEL

STANLEY B. MALOS
San José State University

MICHAEL A. CAMPION
Purdue University

This study provides a partial test of our options-based model of career mobility in professional service firms (Malos & Campion, 1995). After clustering a sample of 117 high-grossing U.S. law firms into two configurations suggested by strategic options analysis, we found internally consistent relationships among career mobility practices and career-related outcomes.

Despite the ongoing growth of professional service industries and emergence of the United States as a service-oriented economy in general (Maister, 1993), professional service firms remain an underresearched organizational form. In particular, the up-or-out promotional system, which continues to prevail in professional service firms engaged in law, accounting, consulting, and other fields, persists as a career phenomenon about which little is known (O'Flaherty & Siow, 1992). Recent research in the professional service firm context has examined early resignation (Robson, Wholey, & Barefield, 1996), perceived advancement opportunity (Wallace, 1995), and firm human capital structure (Sherer, 1995). However, no empirical research has explored overall relationships in these firms among indicators of human resource (HR) strategy such as starting salaries, mentoring and career development, promotional practices such as up-or-out rules, and related mobility phenomena.

In this study, we investigate relationships among indicators of HR strategy and career mobility practices in professional service firms suggested by the options-based model we developed in previous research (Malos & Campion, 1995). We first summarize this theoretical framework and propose an operational model with indicator variables for key constructs. Using a subset of these indicators, we cluster firms into one of two configurations of HR practices consistent with a strategic options approach. Internally consistent relationships among these variables suggest overall support for the model. We also discuss practical implications for HR and career development in professional service and other types of firms.

STRATEGIC OPTIONS THEORY AND CAREER MOBILITY IN PROFESSIONAL SERVICE FIRMS

In our article on career mobility in professional service firms (Malos & Campion, 1995), we pointed out the limited analytic usefulness of previous mobility models from the firm point of view. In particular, we noted the inability of these theories to account for up-or-out promotional systems, through which organizations typically dismiss competent employees who are at least as productive as their replacements. Building on the work of Hurry and his associates (Hurry, 1994; Hurry & Jackofsky, 1992; Hurry, Miller, & Bowman, 1992), we developed an options-based model in which the hiring of associates (salaried professional employees) is viewed as an investment of resources made to acquire options on associates' future partnership potential. The firm then uses training and mentoring, as well as deferred compensation (the promise of possible partnership), to hold these options open by bonding associates to the firm while their professional development is assessed. Disposition of associate options—that is, their exercise (“up”) or their abandonment (“out”)—will depend on partnership qualifications at the end of the apprenticeship period, which firms typically refer to as the “partnership track.”

Although most large professional service firms hire associates regularly, they may differ in their hiring emphases and related career mobility practices (starting salaries, mentoring and career development, length of apprenticeship, promotional opportunities, and strictness of up-or-out rules). A firm “will choose a competitive strategy based on decisionmakers' perceptions of which options are most valuable given its unique configuration of internal resources and external opportunities” (Hurry, 1994: 231). The process can be analogized to a make-

or-buy decision. For example, firms whose partners are competent in training and mentoring may seek to compete by "making" their own partners and will thus emphasize associates' option value, or long-term partnership potential. Such firms would be expected to attract and select associates interested in and amenable to long-term development and to invest in providing large amounts of mentoring, challenging work opportunities, and overall support to hold associate options open while deciding whether to exercise or abandon them. Conversely, firms whose partners are more competent in "rainmaking" or that have achieved ongoing demand for services from long-time clients may seek to compete by "buying" partners if and when a particular expertise is needed (for instance, addition of a new practice area required by existing clients), and they may emphasize associates' project value, or short-term productive capacity. Such firms may see less need to dilute pro rata capital shares by adding new partners via regular promotions, and they may attract and select associates primarily for their willingness and ability to handle routine work assignments with minimal supervision.

This overview provides the basis for an operational model linking prior indicators of HR strategy with career mobility practices and related outcomes in professional service firms. Although the starting point is arbitrary for a going concern, and the precise nature of the causal relationships among particular variables is not addressed, Figure 1 shows how selected measures for which data are available might correspond to the constructs in our conceptual model.

INTERNAL CONSISTENCY AMONG INDICATORS OF OPTIONS-BASED STRATEGY

The extent to which professional service firms engage in comprehensive strategic planning has remained somewhat unclear (Buller, Beck-Dudley, & McEvoy, 1990). However, it is well known that large law firms set target ratios of associates per partner (leverage ratios) and target levels of billable hours that are closely monitored because of their implications for financial performance (Sherer, 1995; Wholey, 1985). These strategic indicators investigated in prior research reflect the extent to which partners' client-getting ability can be leveraged by having salaried associates do a larger share of routine legal work (Galanter & Palay, 1991; Gilson & Mnookin, 1989). Although these indicators are important, we believe that overall HR strategies in professional service firms are more richly reflected by internally consistent bundles of career mobility practices, including hiring, bonding and development, apprenticeship, frequency of promo-

tion, and up-or-out rules, whose relative levels are logically related and mutually reinforcing. Because the limited research in this area has focused almost exclusively on leverage ratios and billable hours, we used options analysis to conceptually relate these indicators to career mobility practices in professional service firms. We then explored in more detail the logical correspondence among hiring, bonding and development, apprenticeship and promotional practices, and career-related outcomes suggested by this approach.

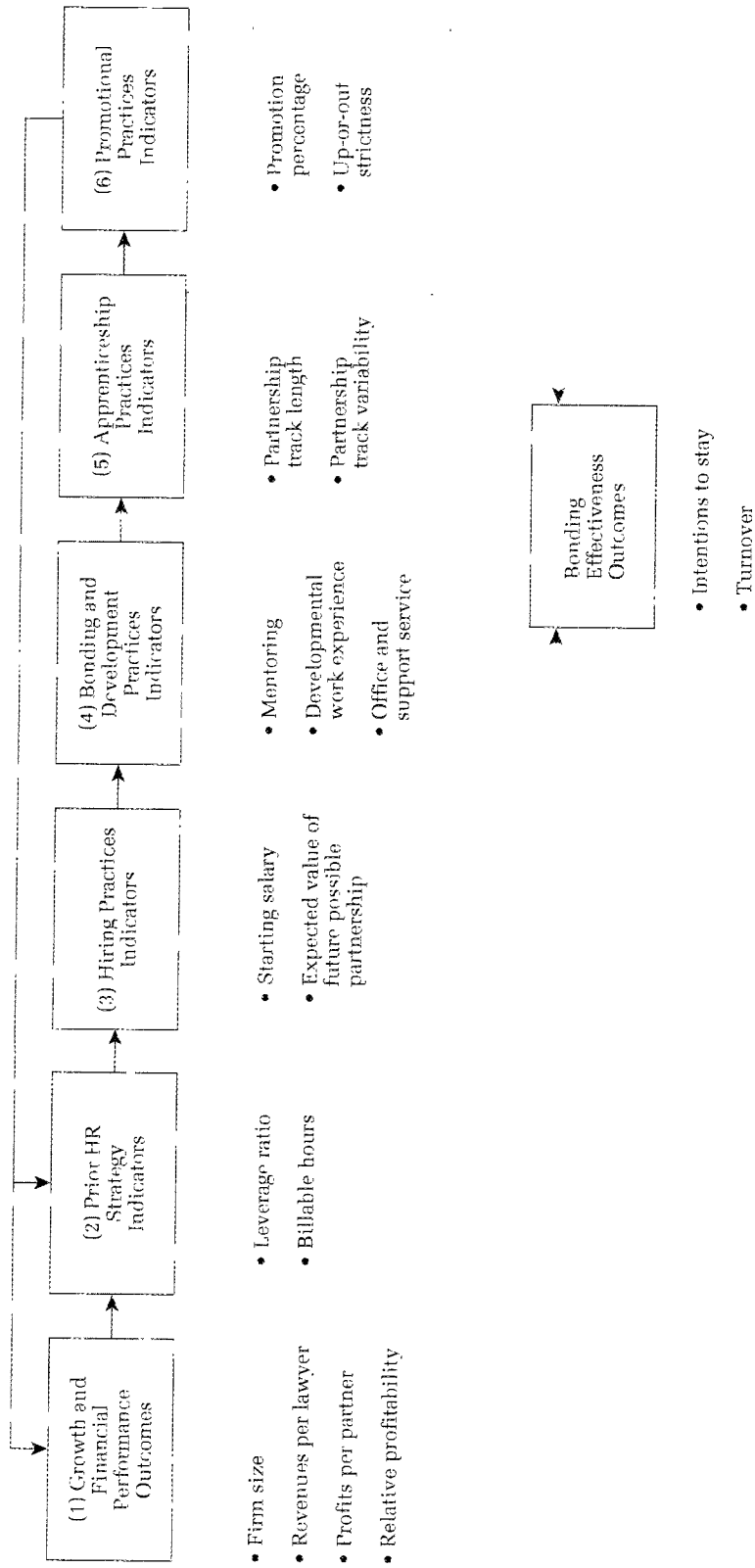
Prior HR Strategy Indicators and Hiring and Promotional Practices

Options-based firms are those that invest in associates' future partnership potential. Such firms are expected to have lower leverage ratios, because promoting an associate both reduces the numerator (number of associates) and increases the denominator (number of partners) of the ratio. These firms should be able to offer lower starting salaries, because they offer greater chances for future promotion to partner status. This emphasis on the present value of expected possible promotion represents a deferred compensation component consistent with the future orientation of options-based firms. In other words, promotion to partnership denotes joint ownership status and a claim to firm assets. Though deferred and uncertain, partner status provides the opportunity for compensation far in excess of that received by salaried employees. Meanwhile, associates are paid only a portion of the revenues generated by their labor, and the difference is retained as surplus by the firm (Wholey, 1985). If an associate develops into "partner material," part of this sum is returned as a residual share of firm profits (Lazear, 1990; Main, 1990).

Conversely, associates in project-based firms, which achieve and maintain higher leverage ratios by promoting fewer associates, would be expected to have accepted these positions only if they were paid more at the outset (Sherer, 1995). Such associates might also be expected to bill more hours to account for their higher salaries, thus affording the firms the benefits of both increased revenues and fewer partners among whom residual profits must be divided. The firms would be expected to retain as rents a substantial portion of the extra revenues generated by these additional billable hours (for general accounts of compensation and promotion systems in professional service firms, see Carr and Matthewson [1990] and Gilson and Mnookin [1989]).

Similarly, project-based firms may have less strict up-or-out practices and may retain a number

FIGURE 1
An Operational Model of Human Resource Strategy, Career Mobility Practices, and Related Outcomes in Professional Service Firms^a



^a Mentoring, developmental work experience, office and support services, and intentions to stay are based on perceptions of midlevel associates. All other measures are based on archival firm reports. Numbered boxes correspond to those of Figure 2 in Malos and Campion (1995), from which this figure is adapted. Dotted lines indicate expected correspondence among the individual measures

of nonpromoted associates (Galanter & Palay, 1991; Siow, 1994). Such a firm is primarily interested in an associate's billable work product and might well allow him or her to remain with the firm indefinitely even if the associate does not make partner. Particularly where associates do routine or specialized work and do not interact much with clients, the knowledge and experience of permanent associates may be useful to a firm, but not useful enough to justify their promotion (Wholey, 1985). Associates in firms with less strict up-or-out rules may thus receive higher salaries, perhaps owing to their greater experience and lower need for supervision, or perhaps of necessity, because extra compensation is not deferred pending possible promotion.

Hiring, Bonding and Development, Apprenticeship, and Promotional Practices

Options theory also helps to paint a picture of internally consistent relationships among career mobility practices that add to prior indicators in describing strategic HR systems in professional service firms. For example, another reason that associates' early salaries could be lower in firms that tend to promote is that such firms would be expected to offer more mentoring, developmental work experience, and overall support than more highly leveraged project-based firms, in which there are more associates for each partner to supervise. Starting salary, training and development, and the expected value of future possible promotion thus may all be thought of as components of a firm's long-term incentive and reward system. In options-based firms, lower starting salaries are offset by mentoring, development, promotional opportunities, and overall support (Gilson & Mnookin, 1989; Malos, 1996). For these reasons, we consider hiring, bonding, and promotional practices to be the key indicators that distinguish options- from project-based firms.

In addition to offsetting lower starting salaries, developmental and promotional opportunities in options-based firms serve as bonding and incentive mechanisms in their own right (Siow, 1994). Developmental opportunities (such as training, mentoring, and challenging work assignments) provide incentives for associates in less leveraged, more options-based settings to remain with their firms while their professional acumen increases, as does their corresponding ability to make partner (Gilson & Mnookin, 1989). The guidance, feedback, and knowledge about partnership that come with higher levels of mentoring provide a vehicle for developing firm-specific human capital such as

knowledge of firm practice specialties, relationships with partners or clients, and shared firm reputation (Carr & Mathewson, 1990; Wholey, 1985). The nontransferrable nature of such capital provides constraints on leaving the firm to which it is specific (Gilson & Mnookin, 1989; Siow, 1994), reducing the odds that associates will depart prior to partnership consideration. This commitment to developing human capital also keeps leverage ratios low, because each partner can devote only so much time to mentoring activities.

As for apprenticeship practices, project-based firms that seek to promote less would be expected to establish longer partnership tracks. It makes sense to expect such professional service firms, which offer associates more money to start with, to require longer periods of service in which associates will "pay their dues" and accumulate adequate "buy-ins" to claim their shares of firm assets if and when they are promoted. Such firms would be expected to allow more variability in their partnership tracks, because they have an incentive to continue to employ associates beyond expiration of a minimum apprenticeship period. These firms are less concerned with clearing the partnership pipeline for new hires with more promotion potential. Here, variability in the time until an associate is considered for partner allows not only a further return on long-time (potentially permanent) associates, but also a profitable extension of the time during which possible late bloomers can make partner (or leave if they do not). The converse would be true for options-based firms. Because such firms give their associates substantial resources with which to develop into partners (by offering higher levels of mentoring, developmental work experience, and overall support), they would be expected to expedite their partnership tracks. Limiting variability in partnership tracks also helps maintain the efficacy of firms' career development systems, facilitates giving resources to associates with the most promotion potential, allows dismissal of associates who do not make partner, and makes way for developing new associates who have the potential to do so.

Furthermore, recipients of mentoring and developmental work experience in options-based firms should be more likely to be promoted, owing to the greater opportunity to achieve positive relationships with mentoring partners and the professional skills needed to fulfill a partner role. Options-based professional service firms whose strategies emphasize making new partners would also be expected to terminate associates who, despite receiving developmental resources, do not appear to have partner qualifications. By maintaining stricter up-or-

out rules, a firm can bring successful associates into the partnership and capitalize on its investments in training and development (Koch & McGrath, 1996), while dismissing others to make way for potentially promotable (and less costly) new hires. Correspondingly shorter, less variable partnership tracks should also provide more condensed, intensified apprenticeship experiences for associates, suggesting both higher percentages of promotable associates and stricter up-or-out treatment (less tolerance of failure) for those who remain unpromotable.

Career Mobility Practices and Related Bonding Effectiveness Outcomes

All of these career mobility practices would be expected to correspond with career-related bonding effectiveness outcomes. For example, less mentoring and more lengthy partnership tracks, as well as the more generic human capital gained from routine work assignments, will likely correspond with lower intentions to stay and higher turnover. Longer delays until possible partnership reduce the expected present value of the potential deferred compensation to be received upon admission to partner status. The same will be true for partnership track variability; firms that do not consider associates for promotion directly upon expiration of an explicit partnership track may be seen as failing to reward associates who deserve to be promoted (Gilson & Mnookin, 1989), further reducing the incentive value of staying with them. Conversely, options-based firms' history of mentoring, developing firm-specific human capital, and promoting a high percentage of associates implies that current associates have similar chances, increasing intentions to stay and lowering turnover prior to possible partnership and recovery of retained surplus. The same is true for stricter up-or-out rules; like explicit partnership tracks, such rules represent a fairness guarantee against the "moral hazard" that a firm could exploit indefinitely as associates those who are in fact partner material (Gilson & Mnookin, 1989).

Hypothesis 1a. Professional service firms like law firms will exhibit options- or project-based strategies based on relationships among indicators of hiring, bonding and development, and promotional practices; specifically, options-based firms will have lower starting salaries but higher levels of mentoring, development, and overall support, higher promotion percentages, and stricter up-or-out rules than project-based firms.

Hypothesis 1b. Options-based firms will tend to be smaller and will have lower leverage ratios, lower target billable hours, higher expectations for future partnership, shorter and less variable partnership tracks, higher intentions to stay, and lower turnover than project-based firms.

METHODS

Data Collection

In order to be able to use objective indicators of career mobility constructs to the greatest extent possible, we obtained data from three archival sources. Data on hiring, apprenticeship, and promotional practices were obtained from the *Directory of Legal Employers*, published annually by the National Association for Law Placement (NALP); data on mentoring, career development, and support were obtained from the American Lawyer Midlevel Associates Survey (ALMAS); and data on financial performance were obtained from the American Lawyer Am Law 100, a summary of information on the 100 highest-grossing U.S. law firms in major metropolitan areas. Use of multiple archival sources also reduced the potential for common method variance and retrospective biases, which might have been of more concern were all data from perceptual sources, such as the opinions or recollections of managing partners.

National Association for Law Placement. The NALP was organized to promote the timely exchange of recruitment information among law schools, employee candidates, and employers in the legal profession. Employers provide standardized information about firm size, demographics, past promotions, and typical time to partnership. Participants' mandate for full and accurate disclosure and the relatively objective nature of the information reduced the potential impact of reporting biases. Data from 1986 to 1992 proved usable; differences in reporting conventions before and after those years precluded the data's use in calculating historical promotion percentages and the strictness of up-or-out rules.

American Lawyer Midlevel Associates Survey. The American Lawyer has investigated perceptions of third- and fourth-year associates regarding training, professional development, and related matters biennially since 1986. Questionnaires sent to the country's largest law firms ask associates to report on how interesting their work is and on their hours billed, client contact, feedback from partners, knowledge about partnership, training and guidance, intentions to stay, and other matters. Each

survey reports aggregated data for firms from which responses are received from at least half the eligible associates, or from which at least ten responses are received. Response rates of 47–50 percent have been typical. Although these data were not available at an individual level, they appear to have been carefully collected on behalf of a respected professional publication and to assess a large number of relevant items, represent a large sample, and permit examination of reliability over time. The data also make conceptual sense at the aggregate level, demonstrating, for example, the amount of mentoring a firm does overall, rather than the amount with respect to a particular partner or associate, and the data show reliable between-firms differences, supporting aggregation (e.g., James, 1992). Surveys from 1986 through 1994 were used.

Am Law 100. The Am Law 100 provided usable information for the years 1990, 1992, and 1994 on revenues per lawyer and profits per partner, as well as a relative profitability index (the ratio of profits per partner to revenues per lawyer) for America's 100 highest-grossing firms in those years. The index provides a measure of effectiveness in using associates to generate profits for a firm's owners and accounts in part for the impact of firm size and market factors, such as the higher billing rates in areas like New York City, on raw revenue and profit figures.

Sample

We investigated 117 of the largest, highest-grossing firms in the United States (names and locations are available upon request). Firms were chosen for geographic dispersion and completeness of data. Because the Am Law 100 selects firms in part on the basis of gross revenues, which tend to be higher in large cities, the sample decreased to 78 for financial performance analyses.

We acknowledge that this sample was one of convenience. In addition, although collected over a substantial period of time, the data were still cross-sectional and could support no inferences regarding causal relationships. Further, although the sample was nationwide, it was biased toward large firms in major metropolitan areas. However, larger firms have a substantial influence on the practice of law in the United States (Wholey, 1985), and they hold an increasing share of the industry's market (Curran & Carson, 1991), factors that support the study's relevance. Furthermore, these firms are the ones that tend to recruit regularly enough to participate in the NALP survey, thus facilitating a meaningful examination of their career practices and emergent HR strategies. Finally, use of this sample allowed us to control for market factors that may

cause large firms in the same city to maintain similar hiring strategies (for instance, with respect to starting salaries) in order to compete locally for new associates. Although systemic differences in HR and career practices across markets may be of interest in their own right, we focused on differences across firms within the same market to avoid overstating our results.

Measures

Each NALP survey contains promotion and related mobility statistics (for instance, the number of individuals hired and the number considered for partnership) for the five previous entering classes (graduating law school classes that had entered the workforce) whose members' tenure had permitted their consideration for partnership by the time the survey was completed. Using this information, we calculated *promotion percentage* as a ratio of the number of promoted associates to the number originally hired into each entering class. *Up-or-out strictness* was calculated as the ratio of the number of nonpromoted associates leaving a firm to the number of associates actually considered for partnership in each entering class. *Partnership track length*, *average starting salary*, and *firm size* (number of attorneys) were determined directly from the data. *Partnership track variability* (variation in the time until consideration for promotion to partner) was calculated as the ratio of the track's range to its lower bound.

ALMAS listings provided perceptual measures of associates' work-related experiences in their firms. Responses were provided on anchored Likert-type scales of 1 to 5 and aggregated within-firm prior to publication. We excluded items worded inconsistently across surveys or not collected in at least four of the five survey years. A total of 14 items (available upon request) were suitable for subsequent analyses. Am Law 100 listings provided the financial performance measures (*revenues per lawyer*, *profits per partner*, and the *profitability index*). The *relative expected value of partnership* was estimated as a firm's average profits per partner, multiplied (discounted) by the historical chances of making partner, divided by the partnership track (longer tracks reduce the present value of future partnership).

RESULTS

Reliabilities, Scale Development, and Simple Statistics

Reliabilities across years of mean values for the ALMAS items, based on one-way analyses of variance (ANOVAs), where the factor was the firm and

variance due to years was in the error term, ranged from .61 to .92 and averaged .79. Because the results indicated good reliability of between-firms differences relative to across-years differences, we considered aggregation across years to be appropriate.

The items were intercorrelated, so we reduced them to scales using exploratory factor analysis. Three items that were interpretable as stand-alone measures (relative compensation, intentions to stay, and target billable hours) were excluded from the factor analysis. The remaining 11 items were submitted to principal components analysis with oblique rotation, which yielded a three-factor solution based on the number of eigenvalues greater than 1.0 and a scree plot. We labeled the resulting subscales *mentoring*, *developmental work experience*, and *office and support services* and used them as indicators of bonding and development practices (see Figure 1). Internal consistency and reliabilities across years were high, and correlations among the subscales suggested their relative independence (Table 1).

Means, standard deviations, and correlations among the measures are presented in Table 2. Many of the relationships that would be expected among the measures for internally consistent firms were present in the sample at the zero-order level. Mentoring, developmental work experience, and office and support services, the bonding and development measures, were positively related to one another and to intentions to stay, negatively related to turnover (except for office and support services),

and negatively related to starting salary. As would be expected, intentions to stay and turnover, the two bonding outcomes, were negatively correlated, and the expected value of partnership was positively related to intentions to stay and negatively related to turnover. Starting salary and the expected value of partnership were not significantly related, nor were partnership track length and variability, but partnership track length was negatively related to promotion percentage and up-or-out strictness, as expected. Historical promotion percentage and up-or-out strictness, the two promotional practices examined, exhibited a moderate, positive correlation, and both were positively related to intentions to stay and negatively related to turnover. The leverage ratio exhibited a strong, positive correlation with firm size, as well as a negative relationship with intentions to stay and a positive relationship with turnover. Firm size and target billable hours were positively correlated, and positively related to financial performance. As in prior research (e.g., Sherer, 1995; Wholey, 1985), the leverage ratio was positively correlated with all three financial performance measures.

Approach to Multivariate Analyses

Drawing on strategic options theory, we hypothesized that internally consistent differences in levels of key indicators of career mobility practices could be used to classify firms as relatively options- or project-based in their exhibited HR strategies. We therefore used the principal hiring, bonding

TABLE 1
Results of Principal Components Analysis^a

Factor and Subscale	Factor Loadings			Internal Consistency	Correlation with Subscale	
					2	3
1. Mentoring				.88	.47**	.28**
Feedback from partners	.96	-.15	-.14			
Knowledge about partnership	.75	.24	-.12			
Treatment by partners	.73	-.01	.31			
Training and guidance	.67	.01	.32			
How interesting work was	.55	.09	.41			
2. Developmental work experience				.81		.17**
Deal-making responsibility	-.32	.89	.14			
Client contact	.13	.75	.08			
Role in client matters	.36	.67	-.04			
Appearances before a judge	.29	.65	-.24			
3. Office and support services				.87		
Office space	-.07	.01	.91			
Support services	.10	-.02	.89			

^a Oblique rotation was used. Bold numbers are significant loadings. Internal consistencies are based on coefficient alpha. $n = 117$.

** $p < .01$

TABLE 2
Means, Standard Deviations, and Correlations^a

Measure	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Mentoring	3.32	0.20	.80																
2. Developmental work experience	3.66	0.32	.57**	.90															
3. Office and support services	3.72	0.42	.38**	.15	.87														
4. Starting salary ^b	60.05	8.78	.54**	-.46**	.29**	.80													
5. Expected value of partnership	16.55	13.01	.60**	.23*	.30**	-.05	.91												
6. Intention to stay	3.29	0.33	.80**	.66**	.25**	-.63**	.41**	.71											
7. Turnover	0.59	0.16	-.39**	-.42**	-.11	.49**	-.37**	-.58**	.75										
8. Partnership track length ^c	7.50	0.75	-.47**	-.36**	-.25**	.25**	-.53**	-.33**	.26**	.96									
9. Partnership track variability	0.06	0.08	.16†	.04	.01	.15	.12	-.14	.19*	-.02	.92								
10. Promotion percentage	0.31	0.15	.55**	.51**	.13	.62**	.50**	.69**	-.79**	.31**	-.21*	.87							
11. Up-or-out strictness	0.89	0.10	.37**	.27**	.17†	-.22**	.31**	.30**	-.16†	-.24**	-.13	.35**	.63						
12. Firm size ^d	207.59	85.80	-.32**	-.15†	.02	.38**	.01	-.27**	.15†	.11	.10	-.25**	-.05	.98					
13. Leverage ratio	1.52	0.64	-.56**	-.39**	-.12	.74**	-.13	-.65**	.52**	.32**	.19*	-.64**	-.13	.54**	.92				
14. Billable hours ^e	1,844.64	103.22	-.05	.06	-.13	.46**	.47**	-.03	.02	-.11	.07	.05	-.01	.30**	.29**	.74			
15. Revenues per lawyer ^b	395.47	121.36	.06	-.12	.25*	.58*	.62**	-.20†	.25*	-.21†	.05	-.24*	.07	.27**	.46**	.49**	.97		
16. Profits per partner ^b	471.56	257.23	.05	-.11	.13	.62**	.50**	-.28**	.30**	-.17	.10	-.30**	.13	.14**	.62**	.57**	.89**	.91	
17. Relative profitability index	1.14	0.28	-.17	-.09	.01	.54**	.30**	-.31**	.26*	.10	.11	-.27*	.15	.39**	.66**	.50**	.57**	.86**	.98

^a $n = 117$, except for up-or-out strictness ($n = 115$), promotion per centage, billable hours, and turnover ($n = 112$); and revenues per lawyer, profits per partner, relative profitability, and expected value of partnership ($n = 78$). Reliabilities over years (in bold on the diagonal) are based on intraclass correlations

^b In thousands of dollars.

^c In years.

^d Number of attorneys.

^e As reported by firms.

* $p < .10$

** $p < .05$

*** $p < .01$

All one-tailed tests.

and development, and promotional practices measures (starting salary, mentoring, developmental work experience, office and support services, promotion percentage, and up-or-out strictness) to cluster the sample into two groups (the expected value of partnership was omitted from the clustering procedure because of its algebraic redundancy with other variables and the small number of firms for which this measure was available). We expected that one group would represent relatively options-based firms and that the other would represent project-based firms. We also noted that "in the absence of statistical tests for the 'right' number of clusters, [cluster analysis results] must be judged primarily on their usefulness in predicting outcomes of variables not used in the clustering procedure" (Arthur, 1994: 667). We were thus prepared to infer support for options analysis only if significant mean differences occurred in the expected directions both for the clustering and the other (validation) variables.

Because the continuous measures used to cluster were from a sample of fairly similar firms (particularly when standardized by city), the data might not have been amenable to replication based on a well-separated cluster structure. We therefore used the *k*-means algorithm (MacQueen, 1967), which has been shown to effectively recover poorly separated clusters in artificial data sets of 100 or more observations (Milligan & Cooper, 1985; Pollard, 1981).

Results of Multivariate Analyses

We clustered firms after standardizing the data by city in order to obtain a more conservative picture of the firms' options or project character compared with other firms in their own markets. This procedure yielded a two-cluster solution with 53 options firms and 64 project firms. The viability of this solution was supported by significant mean differences across clusters on the clustering variables and by linear discriminant function analysis, in which an optimal linear combination of the clustering variables achieved an overall correct classification rate of 97 percent (98 percent for the options firms and 95 percent for the project firms). In addition, canonical discriminant function analysis on the clustering variables, with cluster membership as the class variable, yielded a highly significant canonical correlation of .80.

Table 3 shows the mean differences between clusters on all variables, with the clustering variables shown first and the validation variables shown second. Because each measure was standardized by city to a standard normal distribution,

cluster mean values represent the number of standard deviations from within-market group means (set to zero). As would be expected, significant mean differences occurred in the predicted directions for all six of the variables used to cluster. Most importantly, seven of the eight remaining variables for which differences were predicted (all but billable hours) exhibited significant mean differences in the expected directions. The clustering procedure thus yielded two distinct groups of firms that clearly resembled either options- or project-based firms, providing strong support for Hypothesis 1a.

As also predicted, firms in the group that averaged significantly lower starting salaries but had higher levels of mentoring, development, and overall support, higher promotion percentages, and stricter up-or-out rules—the options-based firms—were also smaller than the other (project-based) firms, and they had lower leverage ratios, higher expected partnership values, shorter and less variable partnership tracks, higher intentions to stay, and lower turnover than the project-based firms. These results provide strong support for Hypothesis 1b; again, only billable hours did not vary significantly across clusters.

DISCUSSION

In this study, we found support for the overall viability of our options-based model of career mobility in professional service firms (Malos & Campion, 1995). Although most firms are probably hybrids that appear somewhere along an options/project continuum, the categorical classification achieved by clustering these firms creates a clear picture of firms that can be considered relatively options- or project-based in their exhibited strategies. That such firms do appear to emerge with one of the two strategic bundles of HR and career mobility practices suggested by options analysis is an interesting finding in and of itself, particularly when the relative homogeneity of this sample of large, high-grossing firms is considered. These results suggest the possibility that the internal consistency exhibited by these highly successful professional service firms could be used as a diagnostic to group personnel practices into one of the desired strategic bundles suggested by options analysis.

Notwithstanding this general support for options analysis overall, the study of course has limitations. First, there are potential limitations in the data. For example, although most NALP information appears relatively objective, this may not be the case for all variables. Promotion statistics for

TABLE 3
Results of Cluster Analysis^a

Variable	Options-Based Firms		Project-Based Firms		t
	Mean	s.d.	Mean	s.d.	
Clustering variables					
Starting salary	-0.46	0.95	0.38	0.88	-4.94**
Mentoring	0.63	1.01	0.52	0.61	7.30**
Developmental work experience	0.68	0.88	-0.56	0.70	8.25**
Office and support services	0.22	0.96	0.18	0.99	2.17*
Promotion percentage	0.61	1.05	-0.48	0.64	6.39**
Up-or-out strictness	0.48	0.72	-0.40	1.03	5.37**
Validation variables					
Expected value of partnership	0.45	1.43	-0.19	0.67	2.07*
Partnership track length	-0.31	1.01	0.26	0.92	-3.17**
Partnership track variability	-0.22	0.92	0.18	1.03	-2.22*
Intentions to stay	0.55	1.06	-0.46	0.66	6.03**
Turnover	0.47	0.93	0.36	0.89	-4.77**
Firm size	0.25	0.98	0.21	0.98	2.56**
Leverage ratio	-0.41	0.94	0.34	0.92	-4.38**
Billable hours	0.01	0.97	-0.01	1.03	0.13
Revenues per lawyer	0.08	1.27	-0.04	0.85	0.45
Profits per partner	-0.05	1.24	0.02	0.88	-0.28
Relative profitability index	-0.13	1.12	0.06	0.94	0.79

^a Clusters are based on data standardized by city; cluster means represent standard deviations from within-city group means. For most variables, options-based firms, $n = 53$; project-based firms, $n = 64$; n 's differ for these variables: promotion percentage, billable hours, and turnover (49, 63); up-or-out strictness (52, 63); and expected value of partnership, revenues per lawyer, profits per partner, and relative profitability (25, 53).

* $p < .05$

** $p < .01$

One-tailed tests.

past entering classes may not always be easy to obtain owing to the passage of time or the difficulty of classifying lateral transfers or former judicial clerks into a particular entering class. Firm representatives may also provide figures that are accepted in good faith as typical of a firm (and perceived as acceptable to potential new associates) but that may be less accurate than a systematic accounting over time. In addition, our data do not disclose whether nonpromoted associates who leave do so because they are explicitly asked to or implicitly expected to, nor do the data indicate whether they could have stayed (perhaps as permanent associates) but chose to seek opportunities elsewhere. Further, a few of the zero-order relationships could have been inflated by common method variance (for instance, the mentoring, developmental work experience, and intention to stay measures were all obtained from ALMAS surveys), although this problem would seem limited because most of the measures came from different sources or were derived from highly objective data. Finally, the operational model developed in this study represents a relatively small subset of indicators for which we had data and that may arguably relate to more than

one conceptual viewpoint. For example, our mentoring composite includes items that assess associates' knowledge regarding partnership, feedback from partners, treatment by partners, and so on (Table 1). It is thus reasonable to speculate that the bundles of HR and career mobility practices suggested by our options-based model evolve and persist over time in the form of elements of firm reputation or culture, as partners and associates with similar values, personalities, and practice styles self-select in and out of the two types of firms and word gets around through recruiting media within local markets. However, although consistent with an options framework, this analysis does not rule out alternative theoretical perspectives (e.g., Judge & Cable, 1997; Schneider, 1987). Comparing other models and examining relational causality remain projects for further research.

Practical Implications for Firm Mobility Strategies and Associate Career Development

The results of this study suggest that there are differing, internally consistent HR and career mobility strategies in professional service firms that

may be equally effective, depending on a firm's market and desired outcomes (Doty, Glick, & Huber, 1993). For example, it appears that firms that prefer to focus greater attention on treating their professional employees developmentally and supportively from an organizational culture or quality-of-life point of view can still manage to succeed financially. In addition, rather than limiting strategic planning to targeting and monitoring leverage ratios and billable hours, as prior research suggests may have been the case in the past, professional service firms might consider that effective configurations tend to take shape in the form of patterns or bundles of career mobility, career development, and related human resource practices. In essence, such configurations, which are consistent with the practices of these highly successful firms, represent strategies that organizations can proactively adopt.

Specifically, we suggest that firms can use these results to match their HR strategies with the strengths, weaknesses, and preferences of firm partners with respect to managing, coaching, mentoring, rainmaking, leveraging, or firm growth (e.g., Wright, Smart, & McMahan, 1995). Even among this relatively homogeneous sample of high-grossing, highly profitable firms, for the 25 options firms (and only those firms) for which we had financial performance data, mentoring and overall support were positively related (all $p < .01$) to both revenues per lawyer ($r = .65$, mentoring, and $r = .55$, overall support) and profits per partner ($r = .45$ and $.50$). For the 53 project firms for which we had such data, firm size was positively related to the same two financial performance measures ($r = .55$, revenues per lawyer, and $r = .33$, profits per partner). These findings suggest that once a firm's managers know what form the firm has—or what form they want it to have—they can reasonably anticipate whether greater investments in mentoring or growth will be associated with desired outcomes. Understanding such factors may help the firm achieve a better correspondence among the skills of its partners, the associates it hires, and the effectiveness criteria it values most.

REFERENCES

- Arthur, J. B. 1994. Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37: 670–687.
- Buller, P. F., Beck-Dudley, D., & McEvoy, G. M. 1990. Competitive strategy and human resource management in a professional service environment. *Human Resource Planning*, 12(4): 27–35.
- Carr, J., & Matthewson, F. 1990. The economics of law firms: A study in the legal organization of the firm. *Journal of Law and Economics*, 33: 307–330.
- Curran, B. A., & Carson, C. N. 1991. *Supplement to the lawyer statistical report: The U.S. legal profession in 1988*. Chicago: American Bar Foundation.
- Doty, D. H., Glick, W. H., & Huber, G. P. 1993. Fit, equifinality, and organizational effectiveness: A test of two configurational theories. *Academy of Management Journal*, 36: 1196–1250.
- Galanter, M., & Palay, T. 1991. *Tournament of lawyers: The transformation of the big law firm*. Chicago: University of Chicago Press.
- 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.
- Hurry, D. 1994. In P. Shrivastava, A. Huff, & J. Dutton (Eds.), Shadow options and global exploration strategies. *Advances in strategic management*, vol. 10A: 229–245. Greenwich, CT: JAI Press.
- Hurry, D., & Jackofsky, E. 1992. *Future potential and option choices in matching career development to organizational strategy*. Paper presented at the 52nd Annual Meeting of the Academy of Management, Las Vegas.
- Hurry, D., Miller, A. T., & Bowman, E. H. 1992. Calls on high-technology: Japanese exploration of venture capital investments in the United States. *Strategic Management Journal*, 13: 85–101.
- James, L. R. 1992. Aggregation bias in estimates of perceptual agreement. *Journal of Applied Psychology*, 76: 219–229.
- Judge, T. A., & Cable, D. M. 1997. Applicant personality, organizational culture, and organization attraction. *Personnel Psychology*, 50: 359–394.
- Koch, M. J., & McGrath, R. G. 1996. Improving labor productivity: Human resource management policies do matter. *Strategic Management Journal*, 17: 335–354.
- Lazear, E. P. 1990. Pensions and deferred benefits as strategic compensation. *Industrial Relations*, 29: 263–280.
- MacQueen, J. B. 1967. Methods for classification and analysis of multivariate observations. *Proceedings of the 5th Berkeley Symposium on Statistics and Probability*, 1: 281–297.
- Main, B. G. M. 1990. The new economics of personnel. *Journal of General Management*, 16(2): 91–103.
- Maister, D. H. 1993. *Managing the professional service firm*. New York: Free Press.
- Malos, S. B. 1996. *Strategic compensation systems in large law firms*. Paper presented at Society for Industrial and Organizational Psychology annual meetings, San Diego.

- Malos, S. B., & Campion, M. A. 1995. An options-based model of career mobility in professional service firms. *Academy of Management Review*, 20: 611-644.
- Milligan, G. W., & Cooper, M. C. 1985. An examination of procedures for determining the number of clusters in a data set. *Psychometrika*, 50: 159-179.
- O'Flaherty, B., & Siow, A. 1992. On the job screening, up or out rules, and firm growth. *Canadian Journal of Economics*, 25: 346-368.
- Pollard, D. 1981. Strong consistency of k-means clustering. *Annals of Statistics*, 9: 135-140.
- Robson, G. S., Wholey, D. R., & Barefield, R. M. 1996. Institutional determinants of individual mobility: Bringing professions back in. *Academy of Management Journal*, 39: 397-420.
- Schneider, B. 1987. The people make the place. *Personnel Psychology*, 40: 437-453.
- Sherer, P. D. 1995. Leveraging human assets in law firms: Human capital structures and organizational capabilities. *Industrial and Labor Relations Review*, 48: 671-691.
- Siow, A. 1994. Hierarchical careers. *Industrial Relations*, 33: 83-105.
- Wallace, J. E. 1995. Organizational and professional commitment in professional and nonprofessional organizations. *Administrative Science Quarterly*, 40: 228-255.
- Wholey, D. R. 1985. Determinants of firm internal labor markets in large law firms. *Administrative Science Quarterly*, 30: 318-335.
- Wright, P. M., Smart, D. L., & McMahan, G. C. 1995. Matches between human resources and strategy among NCAA basketball teams. *Academy of Management Journal*, 38: 1052-1074.

Stanley B. Malos received his Ph.D. in management from Purdue University and his J.D. from the University of California, Los Angeles, School of Law. He is currently an associate professor of Management and Human Resources at San José State University's College of Business, where he conducts research on topics including career mobility, professional service firms, affirmative action, and legal issues in human resource management.

Michael A. Campion is a professor of management at Purdue University. He received his Ph.D. in industrial and organizational psychology from North Carolina State University. His research interests include interviewing, teams, work design, testing, training, turnover, promotion, and motivation.