

Human Resource Configurations: Investigating Fit With the Organizational Context

Soo Min Toh
University of Toronto at Mississauga

Frederick P. Morgeson
Michigan State University

Michael A. Campion
Purdue University

The present study investigated how key organizational contextual factors relate to bundles of human resource (HR) practices. In a two-phase study of a sample of 661 organizations representing a full range of industries and organizational size, the authors found that organizations use 1 of 5 HR bundles: cost minimizers, contingent motivators, competitive motivators, resource makers, and commitment maximizers. In addition, the authors showed that the organizations that use a given type of HR bundle may be distinguished by the organizational values they pursue and their organizational structure, thus suggesting that HR choices are related to the context within which organizations operate.

Keywords: strategic human resource management, context, fit

The study of bundles of HR practices, as opposed to individual HR practices, has been increasingly recognized by researchers to be important. Given that employee performance is a function of both ability and motivation, it has been suggested that emphasizing multiple practices aimed at enhancing both of these aspects would be more effective than having only a single HR practice (Huselid, 1995; Ichniowski, Shaw, & Prenzushi, 1997; Youndt, Snell, Dean, & Lepak, 1996), in part because the effectiveness of a particular practice can be significantly enhanced or reduced depending on the other practices simultaneously adopted (Dyer & Reeves, 1995). For example, if not combined with an organizational bonus system, individual piece-rate pay systems could potentially hurt cooperation and teamwork among employees (Milgrom & Roberts, 1995). Similarly, if accompanied by knowledge-based pay, training activities are likely to be more effective than if such a pay system was not in place. As such, the use of particular HR practices implies the use of other complementary practices. Furthermore, there is some evidence to suggest that considering HR practices as bundles explains greater variance in organizational outcomes than does examining individual HR practices (Ichniowski et al., 1997). Yet, the evidence supporting the importance of complementarities among HR practices and of the particular context has been mixed (Gerhart, 2007; Wright & Sherman, 1999). This lack of support has been attributed to both theoretical and

methodological limitations (Delery, 1998; Martin-Alcazar, Romero-Fernandez, & Sanchez-Gardey, 2005). Nonetheless, it is clear that studying individual HR practices in isolation provides limited insight into a more complex phenomenon (Wright & Snell, 1991).

The present research had two key purposes. First, we sought to develop a comprehensive set of HR bundles that encompass HR practices representing the four key functions of HR: staffing, development, reward, and evaluation. In Phase 1 of our study, we reviewed the literature on HR bundles and systems to hypothesize the range of possible HR bundles that organizations might adopt. Consistent with previous conceptualizations of HR bundles, we expected that each HR bundle would fulfill at least one key HR goal of organizational commitment, skill enhancement, motivation, or cost control. We used a nationally representative sample of organizations spanning different industries and sizes to derive a taxonomy of HR bundles by cluster analyzing these organizations on the basis of the set of HR practices they employ. The classification of organizations according to HR bundles formed the basis for Phase 2 of our study.

In this second phase, we sought to advance current understanding into the contextual factors associated with bundles of HR practices. Research suggests that an organization's context can affect the rate at which certain HR practices are adopted (Jackson, Schuler, & Rivero, 1989; Johns, 1993, 2006; Osterman, 2000; Pil & MacDuffie, 1996). Yet, much less is known about how contextual factors may influence, and be influenced by, the adoption of various systems of HR practices. In Phase 2 of our study, we empirically examined a set of contextual factors proposed by existing models of strategic human resources management (HRM) and how they relate to organizations' HR bundles. We introduce the attraction–selection–attrition (ASA) model (Schneider, 1987) as a theoretical framework to understand how the context, in terms of cultural values and structure, influences and is influenced by the set of HR practices an organization employs. The basic premise of

Soo Min Toh, Department of Management, Joseph L. Rotman School of Management, University of Toronto at Mississauga; Frederick P. Morgeson, The Eli Broad Graduate School of Management, Michigan State University; Michael A. Campion, Krannert School of Management, Purdue University.

Correspondence concerning this article should be addressed to Soo Min Toh, Department of Management, Joseph L. Rotman School of Management, University of Toronto at Mississauga, 3359 Mississauga Road North, Mississauga, Ontario L5L 1C6 Canada. E-mail: soomin.toh@rotman.utoronto.ca

the ASA framework is that through attraction, selection, and attrition, members within an organization tend to exhibit more similar characteristics with each other than with members from different organizations (Schneider, Smith, Taylor, & Fleenor, 1998). ASA proposes that values guide judgments and decisions (Kristof-Brown, 2000) and, accordingly, that the values and goals of organizational founders or decision makers tend to become reflected in the "processes, structures, and culture that emerge to facilitate the achievement of these goals" (Schneider, Goldstein, & Smith, 1995, p. 749). Consequently, the people in the organization will also reflect the broader organizational values and goals. The result is an "organizational logic," or a pull toward internal consistency and a complementary relationship among an organization's culture, structure, and practices (MacDuffie, 1995), as the individuals hired into the organization embody and perpetuate the core values and the practices and processes that support those values. As such, ASA makes clear that when understanding the contingencies surrounding an organization's shape of HR systems, one also needs to consider the organization's strategic values and structure. Hence, in Phase 2 of our study, we proposed that organizations tend to choose HR bundles that fit with their key organizational values as well as with their organizational structure and labor union presence. We expected that certain organizational characteristics, specifically the organization's values and its structure, would distinguish which organizations adopt certain HR bundles.

Phase 1: Defining Human Resource Bundles

A variety of bundles of HR practices have been forwarded in the literature. At least three conclusions can be reached about the past research. First, two opposite types of HR bundles typically are found. Organizations in certain industries adopt either a full spectrum of HR practices or almost none. These include commitment maximizers versus cost minimizers (Arthur, 1992), high-involvement versus weak HRM (Delery, Gupta, & Shaw, 1997), and flexible production versus mass production (MacDuffie, 1995). Second, many organizations focus on a particular HR function, such as training and development, selection, or compensation. Such particularistic bundles can be found in Miles and Snow's (1984) "buy" solution (prospectors), where organizations pay market wages to attract qualified applicants (to minimize training investments), and in the "make" solution (defenders), where recruitment and selection as well as employee development and appraisal, are focused on more heavily than is the provision of externally equitable wages and benefits. Delery et al. (1997) also identified a set of HR practices, "individual incentives," which focused on measuring employee performance and providing individual-based inducements.

Third, the differences in HR bundles may also be distinguished by the HR goal(s) each aims to fulfill. HR bundles have been suggested to fulfill the goals of employee commitment, skill enhancement, motivation, and cost minimization (Arthur, 1994; Delery et al., 1997; Lepak & Snell, 1999; Tsui, Pearce, Porter, & Tripoli, 1997). The HR bundle thought to increase commitment consists of such HR practices as recruitment, socialization, and training (O'Reilly & Chatman, 1996; O'Reilly, Chatman, & Caldwell, 1991; Tsui et al., 1997). Similarly, high-performance HR practices have also been effective in increasing employee commit-

ment (Pfeffer, 1998). To increase skill levels, Delery et al. (1997) suggested that a combination of selective staffing and training would be appropriate. Knowledge- or skills-based incentives become important as well. Tsui et al. (1997) referred to this as the "overinvestment," or "mutual investment," approach. The goal of cost minimization has also been forwarded, whereby investment-intensive HR practices, such as training, are avoided and performance-based incentives are effectively used. Tsui et al. (1997) also identified this approach as the "underinvestment," or "spot contract," approach.

From this research, we can infer that several complementary HR practices act to influence the same HR goal and, at the same time, that a particular HR practice can influence more than one of these goals simultaneously (e.g., selection systems affect employee commitment through the choice of employees but also skill levels by selecting either highly qualified individuals or trainable employees). Undoubtedly these three goals are related in some instances, particularly commitment and motivation. Yet it is also possible that each could be independently affected. For example, it is possible to create a great deal of commitment to an organization (perhaps by acting very benevolently by providing strong benefit packages and seniority-based pay) but not have a very motivated workforce (if the HR practices are not tied to some sort of performance).

On the basis of the above review of the literature, we draw three main conclusions about how HR bundles might be differentiated: (a) by how much is invested in HR, (b) by a specific focus on certain HR function(s), and (c) by the goal or priority to be achieved through HR. Taken together, the research on HR bundles suggests that some organizations may be on opposite extremes with regard to the number of HR practices adopted (i.e., cost minimizers or commitment maximizers). This research also suggests that some organizations focus on fulfilling at least one key HR goal of employee commitment, skill enhancement, motivation, or cost minimization, and thus, their HR systems reflect a focus on one or more specific HR functions. Hence, we expect that the organizations in our sample will also display a similar pattern, revealing organizations that are at either extreme of HR adoption, as well as organizations that focus on specific HR functions to fulfill specific HR goals.

Our review also highlights two major shortcomings in the extant research on systems of HR practices. First, studies uncovering HR taxonomies tend to be focused within a single industry. For example, Arthur (1992) studied steel mini-mills, Delery and Doty (1996) focused on the banking industry, MacDuffie (1995) examined the automobile industry, Batt (2002) studied the telecommunications industry, and Bartel (2004) examined retail banking. Others have examined a particularistic setting, such as a unionized environment (Cutcher-Gershenfeld, 1991). It is not clear whether this research generalizes to other settings. Second, the extant research brings to light the lack of consensus as to what HR practices are, which ones are included in the development taxonomies, and how they are measured (Becker & Gerhart, 1996). In a review of four HR taxonomies, Dyer and Reeves (1995) found that the number of HR practices measured in these studies ranged from 6 to 11 practices and that there were 28 different measures of HR practices. The lack of agreement on the domain of HR practices again makes it difficult to generalize the results and creates con-

fusion. Hence, a more theory-based approach to identifying and defining HR practices is warranted.

Method

Sample

The organizational sample and all of the data used in the current study were taken from data collected as part of the pilot test for the organizational context domain of the Occupational Information Network (O*NET: Mumford & Peterson, 1999), a large-scale research project sponsored by the U.S. Department of Labor. The O*NET was developed to replace the Dictionary of Occupational Titles as a comprehensive occupational information system (Peterson et al., 2001) with a database that “uses a common language for collecting, describing, and presenting valid, reliable occupational information about work and the worker” (Dye & Silver, 1999, p. 9). The project also provided an opportunity to collect information about the use of high-performance practices by organizations in the United States (Arad, Hanson, & Schneider, 1997).

A sample of 661 organizations was obtained through a multi-stage sampling design. First, a probability sample of 80 target occupations was identified. These formed the basis for the sampling of organizations because together they were most representative (more than 45% of the workforce) of occupations held by workers in the United States (Peterson, Mumford, Levin, Green, & Waksberg, 1999). Once the 80 occupations were selected, a list of organizations that were likely to employ people in those occupations was obtained from the Dun and Bradstreet database. A total of 1,240 organizations were screened for eligibility (only those organizations with more than five employees qualified) and, through negotiations with the point-of-contact personnel, 756 organizations agreed to participate in the study. Out of these organizations, 92 of them ultimately refused to do so, resulting in a response rate of 88% at this stage.

A point of contact at each organization was reached prior to the actual interview and provided information about the study, followed by securing of an agreement to participate. The actual interview to collect the measures used in the current study followed a Computer Assisted Telephone Interview (CATI) procedure. Each CATI lasted approximately one half hour and was conducted by professional interviewers from the Occupational Analysis Field Center. The CATI consisted of 70 questions, which generally asked respondents to rate the extent, frequency, or existence of a range of organizational characteristics and HR practices, using Likert-type rating scales, checklists, or yes–no questions (Arad, Hanson, & Schneider, 1999). Interviewers were provided with a protocol detailing the exact content and wording for the interview. The CATI was designed such that the computer would help the interviewers skip irrelevant or unnecessary questions on the basis of the interviewees’ responses to previous items. The system also systematically prompted interviewers to ask follow-up questions or provide clarification when interviewees had trouble with particular questions (Arad et al., 1999). A total of 661 organizational representatives were interviewed, with the majority working in personnel or HR (61%). The remaining respondents were managers or representatives of higher management (Peterson et al., 1999).

The size of the organizations in the final sample ranged from 5 to 6,000 employees (including full-time and part-time) and repre-

sented almost every industry category, as well as private, government, profit, and nonprofit organizations. The service industry was the largest industry category sampled (46%), followed by manufacturing (17%) and retail (9%). The smallest industry categories in the sample were mining (0.5%) and agriculture, forestry, and fishing (0.9%).

Measures

It was important that the HR practices we used fell under the broad definition of HRM provided by the literature (i.e., recruitment and selection, training and development, compensation and benefits, performance appraisal, and participation; MacDuffie, 1995; Wright & Boswell, 2002). Extant research reveals that there is no clear consensus on what practices fall under the HR rubric and how they might be measured (Becker & Gerhart, 1996; Gerhart, 2007). To guide our choice of HR practices to include in our analyses, we drew on recent theory and research on the ability–motivation–opportunity (AMO) model of HR (Boxall & Purcell, 2003; Gerhart, 2007). Some of the HR measures we used have been suggested to be diagnostic of high-performance organizations (Arad et al., 1999) through their influence on workers’ ability, motivation, and opportunity. Many of the HR practices included are considered state-of-the-art by the high-performance literature, the Malcolm Baldrige Award criteria, and a checklist on high-performance practices created by the U.S. Department of Labor. Others are descriptive of typical HR practices and thereby provide a complete range of HR practices that organizations may adopt. The measures in the questionnaire were assessed and revised by two subject matter experts (two individuals with Ph.D. degrees in psychology who worked for two different Fortune 500 companies and had many years of experience in the HR domain). The use of subject matter experts was particularly important because there is no generally accepted taxonomy of high-performance work practices, and these practices are likely to vary in terms of their existence, coverage, and intensity in a given organization (Boselie, Dietz, & Boon, 2005).

The eight-item scale measuring *recruitment technique* and *evaluation practices* was based on the work of Cascio (1987). These items asked whether the organization had a formal recruitment or staffing plan in place, whether six different types of data were routinely collected to aid in evaluating and improving the recruitment process (e.g., total budget for recruiting operations, number of prospects hired for each recruiting source used, success after hire of individuals identified through various recruiting sources), and whether recruiters were trained or instructed to provide realistic information to job candidates concerning available jobs. These items were rated on a checklist, with 0 = *no* and 1 = *yes*. Internal consistency reliability of the scale was .91.

The three-item scale measuring *selection technique* and *evaluation practices* was adapted from Guion (1991). One item assessed whether the organization had any formal selection systems, such as tests or interviews (0 = *no*, 1 = *yes*). Two items assessed the number of selection systems in place that were based on formal job analyses and the number of selection systems used that were made up of procedures that had been carefully researched and shown to be related to job success. These latter two items were measured on a five-point scale, where 1 = *none* and 5 = *all*. Internal consistency reliability of the scale was .72.

Training practices were distinguished into *training methods* and *training evaluation*. The 19-item training methods scale was adapted from the work of Goldstein (1991, 1993) and Lawler (1993). These items asked questions, such as whether the organization offered formal training programs to employees and whether a variety of training programs were offered to employees (0 = *no*, 1 = *yes*). Internal consistency reliability of this scale was .85. Two items assessed training evaluation. Respondents were asked how many of the training programs used incorporated a careful, systematic training needs analysis (1 = *none*, 5 = *all*) and how often training programs were systematically evaluated to determine their effectiveness (1 = *never*, 5 = *very often*). Internal consistency reliability of the training evaluation scale was .83.

The one-item *socialization* measure asked whether the organization had one or more formal orientation programs for groups of new employees (0 = *no*, 1 = *yes*; Van Maanen, 1978). *Mentoring* was also measured with one item that asked respondents whether the organization they worked for had one or more formal mentoring programs (Ellig, 1985).

Performance management was separated into preset annual performance goals and negotiated performance goals (Arad et al., 1997). *Annual performance goals* asked organizations the percentage of nonmanagement employees who set or were given one or more individual performance goals each year. *Negotiated performance goals* asked organizations the percentage of the nonmanagement employees who were allowed to negotiate their own goals with their supervisors. Each of these items was considered separately in the cluster analysis.

Compensation practices were measured with four submeasures that reflected the different types of compensation and benefits programs organizations are likely to use. *Equitable pay* was measured with one item that assessed the percentage of jobs that had their pay rates determined or adjusted on the basis of formal job evaluation studies. *Competitive pay* was measured with one item that assessed the percentage of jobs that had their pay rates determined or adjusted on the basis of comparisons with similar jobs in other organizations (Brown, 1990). *Contingent pay* was represented by six items that were based on the work of several authors. We computed the average percentage of employees having a compensation package that included *profit-sharing or gain-sharing* (Gerhart & Milkovich, 1992; Lawler, 1983), *knowledge or skills-based pay* (Smith, 1989), *individual-based pay* (Luthans & Fox, 1989), *team-based pay*, *customer satisfaction-based pay*, and *job attributes*. Each of these items was considered separately in the cluster analysis. The 8-item *benefits* scale was based on a review of the literature by Gerhart and Milkovich (1992). These items asked the average percentage of employees who had a compensation package that included nonwage benefits, such as life insurance, disability insurance, and daycare. Internal consistency reliability of the scale was .70.

Empowerment practices were measured with five items asking respondents to report the extent to which nonsupervisory employees have the authority on issues such as determining work flow; developing new products, services, and procedures; and selecting new work-group members (Spreitzer, 1992). The internal consistency reliability of this scale was .76. *Use of team practices* was measured with seven items assessing the nature and extent to which the organization uses various types of teams, such as func-

tional teams and project teams to accomplish its goals (Arad et al., 1997). The internal consistency reliability of this scale was .80.

Interrater Reliability Analyses

Recently, there has been increased recognition of the potential measurement error problems of single-source ratings of HR practices, as noted in Gerhart, Wright, and McMahan (2000); Gerhart, Wright, McMahan, and Snell (2000); and Wright et al. (2001). These researchers have argued that managers, and even HR personnel, may not provide accurate information on their organization's HR practices. Although others have also argued that this is only a likely problem when organizations are extremely large (Huselid & Becker, 2000), to determine whether our measures were reliable, we surveyed a subsample of 150 organizations on a subset of the HR practices collected in the CATI survey. The organizations sampled were represented by 819 employees. A range of 1 to 25 employees representing a range of job positions from each organization participated in this survey.

To determine reliability, we correlated the responses of the organizational representatives from the primary sample with those of the employees in the reliability sample on each of the scales for training methods, contingent pay, and benefits, as well as for the available items comprising these scales. We were only able to perform this test on a subset of the HR practices and items on account of limitations in the supplemental data collection. Both the scale-level and item-level correlations are reported in the Appendix.

The interrater reliability for the training practices measure was moderate. Correlations between employee and organizational representative ratings were significant for 67% of the items ($p < .05$). The scale-level correlation was .42 (item-level correlations ranged from .05 to .35). The interrater reliability of the compensation practices was also moderate. Correlations between employee and organizational representative ratings were significant for all of the items ($p < .05$). The scale-level correlation was .42 (item-level correlations ranged from .20 to .46). The interrater reliability for the benefits measure was strong. Correlations between employee and organizational representatives were significant ($p < .05$) for all of the items except one. The scale-level correlation was .62 (item-level correlations ranged from .16 to .60). At the scale level, these interrater reliability analyses indicate moderate to strong convergence between organizational representatives and employees. This provides additional support for the organizational representative reports of HR practices.

Analyses

Consistent with previous research (e.g., Arthur, 1992), we conducted a cluster analysis based on the Ward's method of agglomeration to determine whether organizations could be differentiated by the HR bundles they adopted. Cluster analysis is a multivariate analysis technique aimed at organizing information by categorizing objects on the basis of some measure of similarity to form relatively homogeneous groups, or clusters (Aldenderfer & Blashfield, 1984). This approach allows researchers to derive manageable and meaningful taxonomies by systematically classifying a large amount of information. The Ward's method of agglomeration was selected for the present analysis because it is relatively effi-

cient and the results produced are more interpretable compared with other methods. It has also been effectively applied in similar studies (see Arthur, 1992). The HR practices were standardized to eliminate the effects of different response scales (Arthur, 1992). A positive score indicated that the average level of a variable (HR practice) for the organizations within that cluster was above the mean for the entire sample of organizations and that a negative score indicated the opposite.

Results

Because of missing data ($N = 62$), a total of 599 organizations were included in the cluster analysis. To determine the appropriate cluster solution, we balanced statistical indicators with theoretical considerations (Aldenderfer & Blashfield, 1984). Given our theory that at least four key goals of HR exist (namely commitment, motivation, skills, and cost control), we expected at least four clusters to emerge, where each cluster represents a specific goal or some combination of the goals. The change in the agglomerative coefficient showed a marked increase from Cluster 4 (8,580.19) to Cluster 3 (8,986.48), thus corroborating our expectation that four distinctive clusters may exist in our data. For a more thorough analysis, we also examined the three-, five-, and six-cluster solutions to determine what information we might gain or lose with the alternative solutions. In the three-cluster solution, we found a bundle of organizations that adopted below-the-mean levels for all the HR practices, another that adopted above-the-mean levels for all the HR practices, and an intermediate bundle that focused mainly on nonwage related HR practices, such as recruitment and socialization, mentoring, training, and performance management. Hence, in the three-cluster solution, the priorities of cost control (which we named cost minimizer), commitment maximizing (commitment maximizer), and skill enhancement (resource maker) were represented. The four-cluster solution added a further distinction of a bundle that represented the motivation priority. It consisted mainly of pay practices, namely, market competitive pay and benefits (competitive motivator). In a five-cluster solution, the organizations were further distinguished with an HR bundle that focused mainly on contingent pay practices (which we named contingent motivator). Finally, examining the six-cluster solution, we found that competitive motivators were additionally distinguished in terms of the extent to which contingent pay practices, namely, knowledge-based, team performance-based, and customer satisfaction-based pay were used.

In comparing the different solutions, we felt that the three-cluster solution was too simple and caused us to overlook other meaningful HR bundles. Furthermore, it did not fully represent the four key priorities of HR. Similarly, the four-cluster solution provided less differentiation of the organizations than did the five-cluster solution. The five-cluster solution provided more information about the HR bundles adopted by organizations by distinguishing a bundle that focused on contingent pay practices. When we compared the five- and six-cluster solutions, a clearly distinctive sixth bundle did not emerge. The sixth bundle resembled a market payer, with the exception that organizations in this bundle did not use three of the contingent pay practices (pay based on knowledge, team performance, and customer satisfaction). Taken together, our analysis points toward the five-cluster solution as the most theoretically coherent of all the solutions.

We conducted cross-validation analyses by randomly dividing the sample in half 10 times and cluster analyzing each half sample (i.e., there were 20 subsamples). We did this to determine whether the cluster solution we proposed using the full sample would be replicated across the cross-validation samples. In these analyses, we found that the same clusters identified in the full sample were identified in 10 of the cross-validation subsamples. In the remaining subsamples, there were minor differences in the composition of the HR practices included in the clusters. In all of the subsamples, the five-factor solution was also the most appropriate solution. This finding gave us greater confidence that the five-cluster solution best described our data.

The clusters we found were the following: cost minimizers, contingent motivators, competitive motivators, resource makers, and commitment maximizers (see Table 1 for a summary). The clusters were named to be descriptive of the goals and focus of each, which is consistent with a focus on the function of the bundle in the larger organizational system. Cost minimizers are organizations that are below the mean in adopting high-performance HR practices. As such, these organizations expend the least effort toward motivating, developing, and retaining employees through HR initiatives. The set of HR practices adopted by cost minimizers is consistent with bundles found in previous research, as noted earlier, such as control (Arthur, 1994), System 4 (Ichniowski et al., 1997), and mass production HR systems (MacDuffie, 1995), where organizations are characterized by low investments in human resources and minimal employee participation.

Contingent motivators are organizations that adopt a variety of contingent pay systems to a relatively greater extent, in comparison with other organizations, to motivate their employees. This functional focus is similar to the "individual inducer" organizations found in Delery et al.'s (1997) study. Competitive motivators are an alternative to contingent motivators in that these organizations seek to increase employee motivation by paying employees market competitive wages and benefits. This functional focus is akin to the "buy" approach posited by Miles and Snow (1984), where organizations purchase human capital from the labor market as an alternative to developing them specifically in-house. Paying market competitive wages as opposed to paying at a lower rate for a given pay grade indicates to the market that a fully competent employee is being sought after rather than one who is less qualified and would require more time and investment to become fully competent. The contingent motivators and competitive motivators map closely to the goal of motivation put forward by other researchers (Delery et al., 1997). For example, Gardner, Moynihan, Park, and Wright (2000) suggested that "motivation enhancing HR practices were those designed to affect the motivational forces that energize, sustain, direct, and stop work behavior" (p. 21). They considered practices such as performance evaluation and pay for performance as falling under this category. This suggestion was mirrored in our contingent motivator and competitive motivator bundles.

Resource makers are organizations that engage in rigorous recruitment and selection, as well as training and development, and place less emphasis on using monetary rewards to motivate employees. They also practice empowerment and the use of teams. The emphasis on developing employees in these organizations suggests a skill enhancement or capability focus suggested by previous research (Boudreau & Ramstad, 1999; Delery et al.,

Table 1
Description of Human Resources Bundles (Means and Standard Deviations of Standardized Variables)

Variable	Cost minimizer (<i>N</i> = 192)		Contingent motivator (<i>N</i> = 47)		Competitive motivator (<i>N</i> = 153)		Resource maker (<i>N</i> = 164)		Commitment maximizer (<i>N</i> = 43)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Recruitment	-0.53	0.50	-0.61	0.38	0.48	1.08	0.34	1.07	0.25	1.18
Selection	-0.58	0.87	-0.49	0.87	0.24	0.95	0.57	0.75	0.45	0.73
Training techniques	-0.86	0.84	-0.90	0.79	0.43	0.73	0.67	0.49	0.67	0.86
Training evaluation	-0.79	0.75	-0.61	1.00	0.43	0.73	0.62	0.73	0.45	0.75
Socialization	-0.65	0.99	-0.95	0.83	0.42	0.75	0.53	0.62	0.30	0.86
Mentoring	-0.39	0.65	-0.35	0.71	0.07	1.04	0.43	1.14	0.47	1.15
Annual performance goals	-0.67	0.85	-0.45	0.99	0.61	0.66	0.07	0.99	0.81	0.45
Negotiated performance goals	-0.45	0.84	-0.49	0.82	0.37	0.95	0.01	1.02	0.67	0.86
Internally equitable pay	-0.55	0.83	-0.19	1.01	0.79	0.64	-0.26	0.97	0.54	0.83
Externally equitable pay	-0.43	0.93	-0.48	0.96	0.59	0.75	0.01	1.02	0.22	0.96
Profit/gain sharing	-0.32	0.71	0.61	1.20	0.30	1.12	-0.24	0.81	0.64	1.18
Knowledge or skill-based pay	-0.23	0.79	0.47	1.12	0.10	1.10	-0.16	0.86	0.64	1.22
Individual-based pay	-0.36	0.90	0.73	0.65	0.65	0.76	-0.74	0.71	0.82	0.61
Team-based pay	-0.30	0.42	0.84	1.57	-0.23	0.53	-0.32	0.42	0.84	1.57
Customer satisfaction-based pay	-0.39	0.39	1.15	1.38	-0.02	0.96	-0.35	0.47	1.98	0.82
Job tenure	-0.16	0.90	-0.24	0.90	-0.21	0.92	0.43	1.08	0.15	1.02
Benefits	-0.57	1.09	-0.18	0.95	0.45	0.66	0.11	0.79	0.53	0.99
Empowerment	-0.40	0.94	-0.14	0.91	0.21	0.93	0.16	0.93	0.75	1.22
Use of teams	-0.73	0.88	-0.52	0.97	0.32	0.85	0.42	0.79	0.84	0.64

1997) and is consistent with Miles and Snow's (1984) "make" approach toward HRM as well as Tsui, Pearce, Porter, and Hite's (1995) "investment" employment modes. In Gardner et al. (2000), for example, HR practices that fall under skill enhancing were those "that function to improve the knowledge, skills, and abilities of the collective work group through pre-hire selection and post-hire training" (p. 21). Commitment maximizers are organizations that adopt the full range of high-performance HR practices as a means to gain maximum motivation and commitment from their employees. They select, develop, motivate, and provide opportunities for employees to contribute effectively. These organizations are consistent in nature with those commonly referred to in other taxonomies of HR systems as innovative, high-performance, or high involvement (Delery et al., 1997; Ichniowski et al., 1997; Pfeffer, 1994).

Discussion

Consistent with the existing literature, our analyses found that HR bundles might be differentiated by (a) how much is invested in HR, (b) a specific focus on certain HR function(s), and (c) the goal or priority to be achieved through HR. We found that organizations may be at either extreme of investments in HR, achieving goals of enhancing employee commitment, or minimizing costs (i.e., commitment maximizers and cost minimizers, respectively). They may also focus their HR investments into one or more HR goals or functions. For example, resource makers are most concerned with skill enhancement and motivation and thus tend to be more sophisticated in their use of recruitment and selection, training, and compensation, whereas contingent motivators and competitive motivators specifically rely on contingent and competitive pay practices, respectively, to motivate their employees. This is consistent with previous categorizations of HR bundles. The use of a

large and representative sample of organizations and the full spectrum of HR practices in our analysis helps ensure that the HR bundles found in our study are indeed generalizable to the major subsamples (such as manufacturing, wholesale and retail trade, and services) in our study.

Having determined the domain of HR bundles, we next introduce the contextual factors followed by our rationale and hypotheses of how organizations choose HR bundles that fit with the context. We specifically dealt with internal organizational factors: organizational values (people orientation, innovation, and stability) and organizational structure (structure and unionization) and examine how the HR bundles vary in terms of these factors.

Phase 2: Organization Context–Human Resource Management Fit

Consistent with a general systems perspective (Katz & Kahn, 1978), some scholars have argued that an analysis of HRM should also consider social, structural, and managerial processes (Pettigrew, 1985; Sparrow & Pettigrew, 1988). Such researchers suggest that the content of an organization's human resource (HR) system is influenced by the organization's "inner context," namely, structure, culture, politics, direction, and business outputs (Dyer & Reeves, 1995).

The influence of strategy on the shape of HR systems has witnessed great interest and research (see Chadwick & Cappelli, 1999). Previous research has theorized a linkage between strategy and HR (Buyens & De Vos, 2001; Delery, 1998), even though the empirical evidence showing the effects of fit between strategy and HR systems is relatively weak (Delery & Doty, 1996). There has also been some criticism about research linking strategy and HR with respect to how strategy might be defined, the differences between espoused and enacted strategies, and how organizations

tend not to have a uniform business strategy that is known or pursued throughout the organization (Buyens & De Vos, 2001; Chadwick & Cappelli, 1999; Gratton, Hope-Hailey, Stiles, & Truss, 1999). Furthermore, strategies may change quite frequently and, thus, do not provide much insight as to how HR systems, which are not as easily changeable, are designed as opposed to more enduring organizational characteristics such as the core values and the structure of the organization (Gratton et al., 1999). Accordingly, research needs to examine other explanatory variables, beyond strategy, that shape HR systems. Our study was designed to explore some constructs not previously investigated in the literature.

More recently, Tsui et al. (1995) suggested that internal organizational factors, including strategy, structure, culture (and tradition), labor unions, and job characteristics influence decision makers' preferences for HR systems. As such, an organization's HR system not only should fit its strategy, it should also match the organization's social and structural systems (Devanna, Fombrun, & Tichy, 1984; Sparrow & Pettigrew, 1988; Tsui et al., 1995). Given that the majority of research up to this point has focused on the relationship between strategy and HR, much remains to be understood about how other contextual factors influence and are influenced by HR.

An organization's social system may be defined by its culture. At the heart of an organization's culture is a set of core values. These core values can influence and guide the choices, priorities, commitment, attitudes, and behaviors of organization members (Cable & Judge, 1997; Katz & Kahn, 1978; Schein, 1990). This influence also extends to the HR strategies an organization adopts (Caldwell, Chatman, & O'Reilly, 1990; Truss & Gratton, 1994; Truss, Gratton, Hope-Hailey, McGovern, & Stiles, 1997; Voss, Cable, & Voss, 2000). In the history of human resource management, we see how organizational values have affected HRM. When management prerogative was highly valued, selection techniques were designed to ensure that union membership would be minimized (Zickar, 2001). In the 1990s, when empowerment was given a much greater emphasis by managers, many organizations responded by adopting so-called high-performance HR practices (e.g., Lawler, 1993). These are a set of universal HR practices, such as employment security and training, which are said to lead to higher performance outcomes for the organization. Hence, it is clear that the HR bundles adopted by organizations are influenced by the values of the organization.

We have seen evidence that organizational structure influences HR systems as well. Taylor's scientific management school of thought proposed that efficient organizations should focus on selecting, training, and rewarding workers performing those jobs. In Milgrom and Roberts's (1995) depiction of complementarities, the authors argued that an organization's strategy and structure encourage and are encouraged by its HR practices. The authors case study of Lincoln Electric showed that given the way the organization was structured, it made sense for certain complementary training practices to be carried out as well. Similarly, the piece-rate compensation system in place was complementary to the organization's goal of increasing productivity but also made it necessary for a bonus system based on quality to be implemented. Other companies that attempted to adopt these practices independently without the complementary context were not able to yield the same result. More recent investigations on the influence of

structure included testing the influence of organizational form (Shenkar & Zeira, 1987), the restructuring of work around teams (Ichniowski & Shaw, 1999; Ichniowski et al., 1997), multinational or joint venture structures on HRM (Barney & Wright, 1998; Milgrom & Roberts, 1995; Pfeffer, 1994; Wright & Boswell, 2002), and unionization (Arthur, 1992). Thus, research has indicated that the context can influence the effectiveness of certain HR practices and thus influence their adoption.

Organizational Values

Organizational values form the core and defining element of any organization's culture. Values are the ideological glue that ties people into an organizational system (Sullivan, Sullivan, & Buffton, 2002) and act as primary drivers of motivation and standards against which actions are evaluated (Cable & Judge, 1997; Kristof-Brown, 2000). Research presents a number of ways in which organizational values may be defined. O'Reilly et al. (1991), for example, empirically derived a set of seven organizational values found to be consistent with previous research. Among these, we selected the values of people orientation, innovation, and stability. Organizations that have a people orientation tend to be characterized by collaboration, supportiveness, information sharing, respect, and tolerance. Over the past two decades, there has been an increased recognition by organizations of the importance of "putting people first" and human resources as a potential source of sustainable competitive advantage (Barney, 1991; Pfeffer, Hatano, & Santalainen, 1995; Pfeffer & Veiga, 1999). As a means of sustaining competitive advantage, many organizations also emphasize innovativeness (Kling, 1995). Like the "prospectors" in Miles and Snow's (1984) taxonomy of business strategies, organizations that value innovation support their employees' willingness to take risks, compete, take advantage of potential opportunities, and experiment in the course of their work. In contrast, other organizations emphasize stability, predictability, and continuity (O'Reilly et al., 1991). These organizations may have reached a state of maturity or operate in relatively stable environments and thus look for stability in their operations rather than innovation or change. Miles and Snow (1984) labeled such organizations as "defenders." As such, the organizational values examined in the present study are values identified in extant research as important for survival and, more importantly, for sustainable competitive advantage.

Organizational Structure

An organization may be characterized by how mechanistic it is (Burns & Stalker, 1966). A mechanistic structure tends to be characterized by high levels of work flow standardization, formalization, and hierarchy. Standardized workflow procedures specify how employees are to perform their organizational roles and denote the tasks and responsibilities associated with that role. Formalizing work-flow activities entails using written rules, procedures, and instructions to enable employees to better master their tasks, or coercing employees into compliance and effort (Burns & Stalker, 1966). Finally, hierarchy refers to the extent to which managers are used to monitor, evaluate, and reward employees and the number of formal levels of authority present in an organization's managerial hierarchy to affect direct and personal control

over its members. To the extent that these three elements are highly prevalent in an organization, the organization may be viewed as having a mechanistic organizational structure (Tichy, Fombrun, & Devanna, 1982). Organizations that are less mechanistic (i.e., organic), on the other hand, tend to have fewer standardized activities and formal procedures and more decentralized decision making. An organization may also be characterized by the extent to which it is represented by union membership. The presence of a union places constraints on management's prerogatives, especially in the realm of HRM.

Given that organizational values and structure prioritize and constrain the actions of the organization, we expect that the HR bundles adopted by organizations will tend to fit with these priorities and constraints. As such, in the next section, we hypothesize how organizations that adopt one of the five HR bundles may be distinguished by certain contextual factors. We focus on the factors that would be most salient in determining the HR bundle in question.

Commitment Maximizer–Organizational Context Fit

Commitment maximizers are organizations that adopt the full range of HR practices. Given that not all organizations are willing or able to do so, we expected that only organizations with certain values and organizational structures would adopt HR practices to this extent. Specifically, we hypothesized that commitment maximizer organizations would tend to be more people-oriented, innovative, and mechanistic. People-oriented organizations aim to ensure that the best people are hired into the organization and that their employees are developed and provided with opportunities to achieve their full potential. People-oriented organizations are also more likely to take a longer term perspective on their employees' professional development. Hence, they are more likely to make career mentors available to assist in employee development. Organizations that are people oriented are also more likely to treat their employees fairly by paying equitable wages and attractive benefits (Pfeffer, 1998). Organizations need to reciprocate employee efforts by providing rewards and incentives that are fair, competitive, and contingent on valued criteria, such as individual and team performance and knowledge and skills. With the use of contingent pay comes the need for valid performance appraisal measures. Without these, contingent pay cannot be administered effectively and loses its ability to motivate employees. These practices require great investment.

Similarly, for employees to be innovative, they need relevant knowledge and skills. With a more extensive knowledge and skill set, employees may be more comfortable with experimenting and taking risks (Mumford, 2000). Such organizations seek to ensure that their employees have the necessary information, skills, incentives, and responsibility to make decisions essential for innovation, quality improvement, and rapid response to change (Osterman, 1987) as well as employment security to foster risk-taking and experimentation. Hence, appropriate training programs are made available to employees in such organizations. At the same time, employees are rewarded for displaying innovation. Wages should be attractive to gain the commitment of employees. Research has suggested that reward for competence is appropriate to encourage innovation (Shalley & Gilson, 2004) and, thus, knowledge and skills-based incentives are suitable. Programs that help increase

employees' long-term commitment to the organization, such as profit-sharing, may make them more willing to exert greater effort to be innovative. Regular performance reviews on work progress are carried out so that employees know where they stand relative to important work goals. If organizations actually evaluate and reward employees for innovative behaviors, then it is likely that more behaviors of this nature will follow. It is thus important that these organizations provide both opportunities and incentives for employees to engage in innovation.

Furthermore, the successful HR innovations adopted by the commitment maximizer may be influenced by the organization's structure. A more mechanistic structure should facilitate the process of implementing state-of-the-art HR practices. Although it has been suggested that mechanistic structures might inhibit innovation, they have been found to facilitate their adoption once the innovation is developed (Adler & Borys, 1996). Bureaucratic organizations are conventionally viewed as rigid and ineffective for innovation and change because employees perform routine, specialized tasks and work according to formalized rules and procedures, with little room for experimentation (Burns & Stalker, 1966). Some have argued that because bureaucratic organizations tend not to be concerned with flexibility, they do not need to use sophisticated HR practices to support greater employee participation (Tsui et al., 1995). However, formalized procedures already in place and clear channels of authority allow new procedures and practices to be quickly and smoothly implemented and maintained throughout the organization (Jackson et al., 1989). Hence, mechanistic organizations are more likely to adopt the commitment-maximizing approach to HR.

Hypothesis 1: Commitment-maximizing organizations will be higher than other organizations in terms of people orientation, innovation, and mechanistic structure.

Cost Minimizer–Organizational Context Fit

On the contrary, cost minimizers are the least likely to be people oriented, innovative, and mechanistic. Cost minimizers are organizations that do little in terms of investing in human resources and adopting sophisticated HR practices in the key HR functions. They do not support or reward their employees with training and developmental opportunities or competitive or performance-based compensation. They do little to socialize or mentor their employees and do not have sophisticated means with which to evaluate their performance and provide feedback. Hence, we expected these organizations to be the least people oriented. They are also unlikely to be pursuing innovation in their organization, as such a strategy entails a high degree of investment in human resources development on the organization's part. Cost minimizers do none of these. Furthermore, as noted earlier, mechanistic structures are important for implementing HR innovations (i.e., HR practices that are new to the organization). Without the formal channels and procedures, an organization is less likely to be successful at implementing new HR practices. As such, we expected cost minimizers to be characterized by less mechanistic structures.

Hypothesis 2: Cost-minimizing organizations will be lower than other organizations in terms of people orientation, innovation, and mechanistic structure.

Resource Maker–Organizational Context Fit

Some organizations operate in an environment where stability and predictability in human resource needs are relatively important. One way organizations can achieve this is by providing extensive training and development programs and outlining long-term career paths for their employees. Training and development as well as socialization can help assure organizations of the predictability of employees' work behaviors (Ranson, Hinings, & Greenwood, 1980) and also gain the employees' commitment to the organization. Consequently, these organizations may choose to "make" or develop their own human resources. However, organizations cannot have a stable workforce if employees are paid poorly. Competitive wage and incentive packages that reward performance and satisfy employees' needs can greatly encourage continuation in the organization. At the same time, progressive organizations that value stability realize that for employees to be committed to the organization, their goals and values should fit with those of the organization. As such, in addition to extensive training and development opportunities, organizations that value stability also tend to use rigorous selection techniques to ensure that the employees hired are already predisposed to be committed to the organization and can be trained according to the organization's needs. Given the focus on careful selection, human resource development, and competitive compensation to ensure a stable workforce, we expected organizations that value stability to be resource makers.

The foci of resource makers are also in line with organizations that are unionized. In their study of 356 manufacturing firms on their adoption of 37 HR practices, Ng and Maki (1994) argued that unionization of an organization's employees shocks employers into adopting what they refer to as productivity-enhancing HR practices, such as higher hiring standards and more rigorous selection and orientation practices. Training of skills that are specific to the organization are also more likely to be provided by unionized than nonunionized organizations. The increased training results from labor–management negotiations or from a greater willingness of organizations to invest in employees who are more likely to remain attached to the organization because of the higher wages (see Borjas, 1979). These practices help organizations make more effective use of the relatively higher paid workers that the unionized organizations now have to maintain. In addition to employment security and employee development, another central issue in a union's agenda is to secure higher wages for their members. Through collective bargaining and other labor action, employees who are unionized often have higher than industry-competitive wages and enjoy better benefits than nonunionized employees (Gomez-Mejia & Balkin, 1984a, 1984b; Kaufman & Kaufman, 1987). Given the emphasis of resource development and wages, we expected organizations with a high degree of union representation to be resource makers.

Hypothesis 3: Resource-making organizations will be higher than other organizations in terms of valuing stability and union representation.

Contingent Motivator–Organizational Context Fit

Contingent motivators are organizations that rely mainly on contingent pay systems to motivate their employees. Contrary to

resource makers, the key distinguishing contextual characteristic of such organizations is union representation. Specifically, contingent motivators are least likely to be unionized. Because unions discourage the use of contingent rewards in favor of seniority-based systems (Ng & Maki, 1994), incentive plans, such as profit- or gain-sharing plans or other individual performance-based pay systems, are less likely to be adopted by unionized organizations. As a result, performance appraisals become less important as a tool to determine rewards because pay decisions tend to be based on seniority rather than performance metrics. Given the restricted prerogative of unionized organizations to determine compensation, we expected the HR bundles of organizations with a large union presence to exclude contingent compensation systems.

Hypothesis 4: Contingent motivators will be lower than other organizations in terms of union representation.

Competitive Motivator–Organizational Context Fit

Competitive motivators are organizations that are mainly focused on using competitive pay and benefits to attract the best candidates to the organization and then put them through socialization processes to bring them in alignment with the organization's goals and priorities. This strategy is akin to the "buy" approach proposed by Miles and Snow (1984) or the "inducers" proposed by Arthur (1992). Miles and Snow suggested that organizations adopt such a strategy because they focus on taking risks, on being first—to market, and on adapting to a changing marketplace. As such, buying human resources straight off the labor market allows organizations to adapt quickly to changes without the time investment of training human resources. These organizations lead the market in total compensation to attract the best candidates. Because the cost of human resources is so high, it is imperative for such organizations to utilize sophisticated recruitment and selection practices (Miles & Snow, 1984).

Organizations that value innovation may also pursue innovation by focusing on buying human resources off the market. Whereas some skills training that emphasizes problem-solving skills are required in such organizations (Kling, 1995), it is often more costly and time-consuming to develop needed employee knowledge and skills. It is likely that rather than, or in addition to, investing significant amounts of time and money to train employees up front, organizations that value innovation may prefer to purchase already competent and qualified human resources straight from the market. This allows the organization to make changes quickly and inject new ideas and knowledge into the organization to provoke innovation in a shorter time than if new employees had to be trained. To attract and retain such highly competent and desirable employees, organizations are likely to use market competitive wages and benefits.

Hypothesis 5: Competitive motivators will be higher than other organizations in terms of valuing innovation.

Method

Sample

The sample used in Phase 2 was the same sample as that of Phase 1.

Measures

Organizational values. The scales measuring the three main organizational values were derived from a factor analysis of 28 organizational values identified by O'Reilly et al. (1991). People orientation was measured by an 11-item scale, which included lower order organizational values, such as flexibility, fairness, collaboration, team orientation, sharing information freely, and supportiveness. Innovation was measured by a 7-item scale consisting of lower order organizational values, such as willingness to experiment, risk taking, and aggressiveness. Stability was measured by a 3-item scale consisting of lower order organizational values, such as predictability, stability, and security of employment. Internal consistency reliability was .86, .77, and .66 for people orientation, innovation, and stability, respectively.

Similar to Phase 1, we correlated the responses of the organizational representatives from the primary sample with those of the employees in the reliability sample for each of the organizational values (see Appendix). Because of limitations in the supplemental data collection, however, we were not able to obtain responses on all of the items. For the people orientation items, we were able to obtain employee data for three items. Correlations between employee and organizational representative ratings were significant for these three items ($p < .05$). The scale-level correlation was significant ($p < .05$) at .19 (item-level correlations ranged from .20 to .23). For the innovation items, we were able to obtain employee data for three items. Correlations between employee and organizational representative ratings were significant for only one of these three items ($p < .05$). The scale-level correlation was not significant at .11 (item-level correlations ranged from .12 to .22). For the stability items, we were able to obtain employee data for only one item. The scale-level correlation was $-.03$, and the item-level correlation was .01. Compared with the HR practices, these results indicate much less convergence in organizational representative and employee responses. This is a potential limitation in this study and one we return to in the Discussion.

Mechanistic structure. The extent to which an organization was mechanistic was evaluated with three components: hierarchy, standardization, and formalization (Pugh, Hickson, Hinings, &

Turner, 1968). Hierarchy was measured by one item indicating the number of levels of formal management positions in the organization. Standardization was measured with items indicating the extent to which 14 work activities (e.g., quality control, planning, employee promotion, and job evaluation) were carried out according to specified procedures. Formalization was measured with items indicating the extent to which seven written documents, such as manuals of procedures and regulations, and policy manuals were used to dictate how work was performed at the organization. These items were combined into an overall mechanistic structure scale, with an internal consistency reliability of .66.

Unionization. The extent of unionization was measured by one item asking the percentage of employees at the organization who are represented by a union.

Control variables. We controlled for potential differences in organizational size. The size of the organization was measured by combining two items asking how many full-time and part-time employees were currently employed by the organization.

Analyses

The correlations and alpha values for the study variables are summarized in Table 2. The correlations among alternative HR bundles were negative. The reason is that adopting a particular set of HR practices (i.e., employing one of the bundles of practices) likely precludes the adoption of the set of HR practices characteristic of another (different) bundle. Thus, if an organization is employing a cost-minimizer strategy, the organization is unlikely (by definition) to be high on any of the other bundles, leading to a negative correlation. The eight contextual factors were analyzed separately, so that we could compare HR bundles with each other to test the hypotheses. The small relationships among the organizational structure variables indicates that using a mechanistic structure, the extent of unionization, or being large (or small) in size were essentially independent occurrences. Thus, it is possible to be a large organization with a large union presence or to be without a union or, alternatively, to be mechanistically structured as a large or small organization. We performed analyses of covariance (ANCOVAs) for each of the contextual factors, with the

Table 2
Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8	9	10
Human resources bundles										
1. Cost minimizer	—									
2. Contingent motivator	-.18	—								
3. Competitive motivator	-.35	-.15	—							
4. Resource maker	-.37	-.16	-.32	—						
5. Commitment maximizer	-.17	-.07	-.15	-.15	—					
Organizational value										
6. People orientation	-.25	.00	-.06	.10	.16	.86				
7. Innovation	-.27	-.01	-.15	.04	-.15	.56	.77			
8. Stability	-.10	.05	.05	-.11	-.06	.45	.29	.66		
Organizational structure										
9. Mechanistic structure	-.18	.09	-.02	.10	.10	.15	.16	.08	.66	
10. Union representation	.07	.13	-.10	.28	-.07	-.07	-.06	.08	.06	—
11. Organizational size	-.21	-.12	.07	.15	.03	-.06	.10	-.08	.06	.18

Note. $N_s = 657-661$. Alpha values are presented in boldface on the diagonal. All variables are standardized ($M = 0.00$; $SD = 1.00$). Correlations with absolute values greater than or equal to .08 are significant at $p < .05$. Correlations with absolute values greater than or equal to .11 are significant at $p < .01$.

Table 3
Adjusted Means for Human Resources Bundles

Variable	Cost minimizer		Contingent motivator		Competitive motivator		Resource maker		Commitment maximizer		<i>F</i> (4, 597)	Partial η^2 for organizational size	Partial η^2 for human resources bundles
	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>	<i>M</i>	<i>SE</i>			
People orientation	-.43	.07	-.05 _a	.14	.13 _a	.08	.21 _a	.08	.61	.15	15.83**	.02	.10
Innovation	-.42	.07	-.02 _b	.14	.26 _{a,b}	.08	.06 _b	.08	.55 _a	.15	15.38**	.00	.09
Stability	-.18 _c	.07	.15 _{a,b}	.15	-.05 _{b,c}	.08	.23 _a	.08	-.19 _c	.15	4.36**	.01	.03
Mechanistic structure	-.29 _c	.06	-.30 _c	.12	.04 _b	.07	.18 _{a,b}	.07	.36 _a	.13	10.54**	.00	.07
Union representation	-.05 _a	.07	-.41 _b	.14	-.21 _a	.08	.43	.07	-.28 _{a,b}	.14	13.72**	.03	.09

Note. Group means with the same subscript (in each row) are not significantly different ($p < .05$). Group means are adjusted for the effects of organizational size.

* $p < .05$. ** $p < .01$.

HR bundle category as the independent variable and organizational size as the covariate (organization size had a relatively small effect on the results, with eta squared ranging from .00 to .03). Table 3 summarizes the means for each bundle on the levels of each contextual factor, adjusted for the effects of organizational size. Table 4 summarizes the distribution of HR bundles by across-industry sectors.¹ We also performed a multivariate analysis of variance (MANOVA). The results revealed that the shape of organizations' HR systems is linked to the contextual factors studied, Wilks's lambda $F = 9.97$, $p < .01$, $\eta^2 = .08$. Figure 1 provides a profile of the organizations, according to the HR bundle, on the contextual factors. The results of the specific hypothesis tests are reported next.

Results

Hypothesis 1 suggested that commitment maximizers would be high in terms of people orientation, innovation, and mechanistic structure. Comparison of adjusted means for the different HR bundles found that commitment maximizers possessed above-the-mean values of people orientation, innovation, and mechanistic structure relative to the other organizations. Specifically, they showed the highest people-oriented and innovation values, and these were significantly higher than those of all the other organizations. The only exception occurred with competitive motivators and innovation, where the difference was not significant. Commitment maximizers were also significantly higher, with the exception of resource makers, than all of the organizations in terms of mechanistic structure. Hence, Hypothesis 1 received full support.

Hypothesis 2 suggested that cost minimizers would be low on people orientation, innovation, and mechanistic structure. We found that cost minimizers were indeed below the mean in terms of these three variables. They were also significantly lower on all three variables than the other organizations, with the exception of contingent motivators, where the difference was not significant with respect to mechanistic structure. The results indicate full support for Hypothesis 2.

Hypothesis 3 suggested that resource makers would be distinguished from other organizations by the extent to which they value stability and the degree to which they are unionized. Post hoc pair-wise comparisons revealed that resource makers were more likely than the other organizations to value stability, with the exception of contingent motivators, where the difference was not

significant. Supporting Hypothesis 3, resource makers were significantly higher than all other organizations in terms of the extent to which they are represented by unions. Hence, Hypothesis 3 was fully supported.

Hypothesis 4 suggested that contingent motivators would be distinguished from other organizations by the degree to which they are unionized. Analyses showed that the contingent motivators were indeed least represented by unions compared with all of the other organizations, with the exception of commitment maximizers, where the difference was not significant. As such, the results provide full support for Hypothesis 4.

Hypothesis 5 suggested that competitive motivators would be distinguished from other organizations by the extent to which they value innovation. Analyses showed that competitive motivators were second to commitment maximizers in terms of innovation, although this difference was not significant. Hence, Hypothesis 5 was only partially supported.

Discussion

Our analyses in Phase 2 provide support for the general hypothesis that HR bundles are adopted that fit with the context in which the organizations are embedded. We found that commitment maximizers were most people oriented and innovative and adopted the most mechanistic structures and that cost minimizers were at the other end of the spectrum on these variables. These results indicate that organizations possess HR systems consistent with their values. That is, an organization that values their people and wishes to create an environment that encourages innovation will more likely engage in HR practices that help create such an environment. Similarly, organizations' HR systems can create the impression to employees that certain values are desired and rewarded by the organization.

Furthermore, the results show that the HR systems adopted by organizations are associated with how mechanistic their organizational structure is. In our sample, the more mechanistic the organizational structure is, the more likely that HR innovations are in place. These results provide some evidence that run counter to a

¹ We also tested our hypotheses in each of the different industries represented in our sample. The results were consistent in all the industry sectors.

Table 4
Distribution of Human Resources Bundles by Industry Sectors

Industry sector	Cost minimizer		Resource maker		Competitive motivator		Contingent motivator		Commitment maximizer	
	No. of org.s	% of org.s	No. of org.s	% of org.s	No. of org.s	% of org.s	No. of org.s	% of org.s	No. of org.s	% of org.s
Public administration	5	2.60	12	7.32	0	0.00	0	0.00	0	0.00
Services	78	40.63	93	56.71	67	43.79	21	44.68	18	41.86
Finance	15	7.81	3	1.83	27	17.65	3	6.38	7	16.28
Retail and wholesale trade	33	17.19	15	9.15	21	13.73	12	25.53	5	11.63
Transportation	11	5.73	7	4.27	6	3.92	0	0.00	4	9.30
Manufacturing	29	15.10	31	18.90	28	18.30	8	17.02	5	11.63
Construction, mining, and agriculture	21	10.94	3	1.83	4	2.61	3	6.38	4	9.30
Total	192	100.00	164	100.00	153	100.00	47	100.00	43	100.00

Note. org. = organization.

prevailing view that suggests that because bureaucratic organizations tend not to be concerned with flexibility, they do not need to use sophisticated HR practices to support greater employee participation. Consequently, such organizations are more likely to take a cost minimization HR approach (Tsui et al., 1995). The results of the current study, however, support the view that mechanistic structures may be better able to diffuse and implement new technologies even though organic structures may be better able to create new technologies (Tannenbaum & Dupree-Bruno, 1994).

Similarly, HR technologies tend to require a greater degree of standardization and formalization to ensure that practices are conducted consistently. As such, commitment maximizing organizations that adopt a wide range of HR technologies may also be more likely to be mechanistic.

Our intermediate bundles, resource makers, contingent motivators, and competitive motivators were also distinguished by certain contextual factors. We found that resource makers tend to also value stability and be unionized. They focus on selection, training,

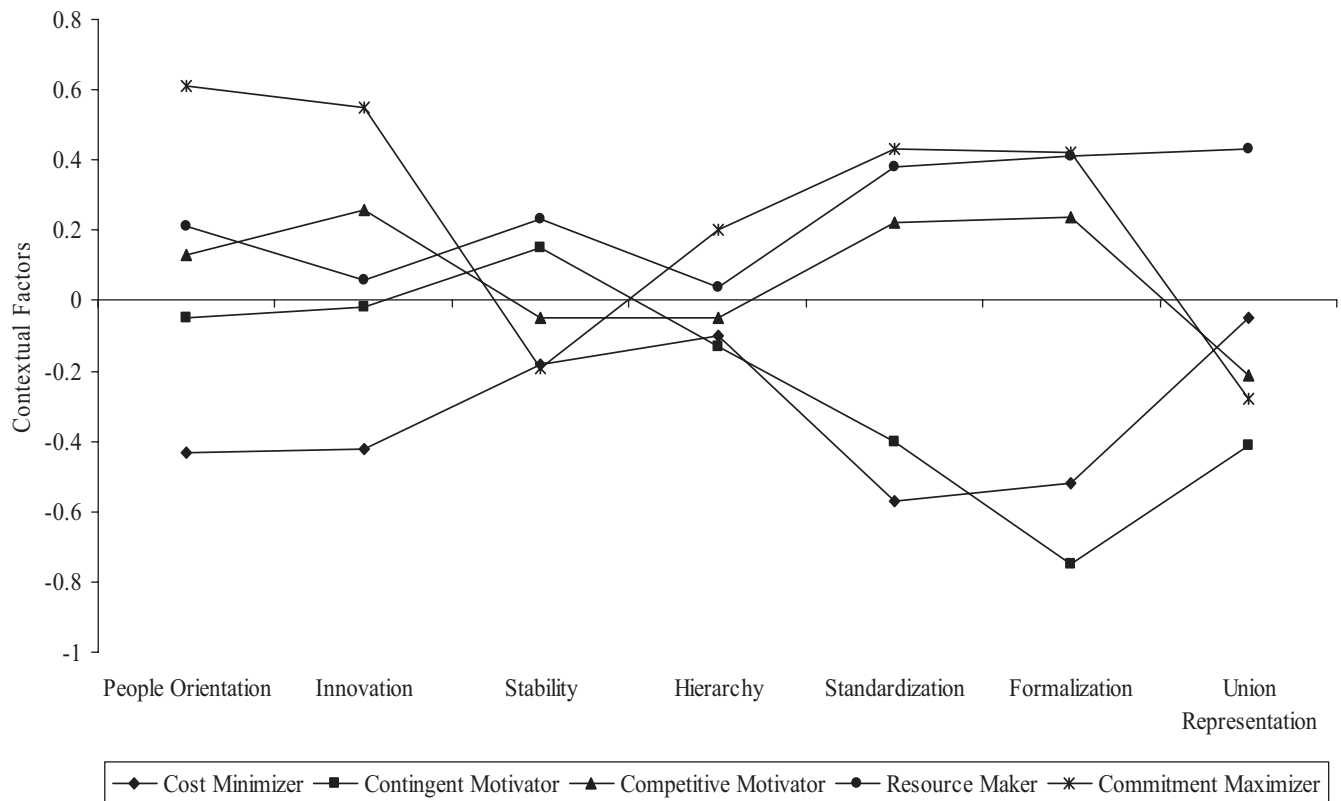


Figure 1. Profile of organizational factors for each human resource bundle.

and competitive compensation, which create an environment that is conducive to a committed workforce and consistent with union goals. On the contrary, contingent motivators are inconsistent with a union's preference for a seniority-based pay system. Accordingly, we found that contingent motivators were lowest in unionization among the organizations surveyed. Finally, competitive motivators, with their main emphasis on paying competitive wages and benefits as well as socialization, fit with an organizational culture that is flexible, values risk taking, and is aggressive. Hence, such organizations are more likely than others to provide externally competitive wages and focus on individual incentives. At the same time, these organizations ensure that the human resources they hire off the market are immediately capable through sophisticated selection and recruitment practices. As such, we found that competitive motivators were also organizations that value innovation.

Nonetheless, it is important to acknowledge that the relationship between context and HR might be more complex than is noted above. As scholars have observed, context has a profound influence on organizational behavior (Johns, 1991, 2001; Rousseau & Fried, 2001), and the contextual factors that we examine in the present study are only one part of a broader context in which organizations are operating. The different elements of the context influence the decisions that are made about HR systems and vice versa. For example, in his theoretical exposition on the influence of the many faces of context on organizational behavior, Johns (2006) postulated that organizational behavior can be influenced by multiple contextual factors that are present across multiple levels (e.g., the institutional environment, the organization's culture and structure, and the characteristics of the job). Hence, even though we suggest a number of organizational contextual factors that might differentiate organizations with respect to their HR systems, aspects of the decision makers' job, such as uncertainty, accountability, autonomy, and resources, could further explain how HR systems are shaped beyond the factors accounted for here (Johns, 2006).

In addition, the directionality of the relationship between context and HR systems is not necessarily unidirectional given opportunities and constraints in the internal and external environment. As HR systems are adopted, they can come to shape the context in which they exist, thereby achieving a balanced state, or what we refer to as fit. Thus, collective structures not only emerge from certain contexts, they can also come to exert an influence on the context within which they reside (Giddens, 1993; Morgeson & Hofmann, 1999). As such, although many existing studies suggest that contextual factors are antecedents of HR practices (Gerhart, 2007; Jackson & Schuler, 1995), we recognize that HR systems can also have a substantial influence on the characteristics of the context itself. Finally, many of the organizations in our sample could be in a state of transition, where their HR systems have not yet caught up with the espoused values or structural elements. It is clear that there are levels of complexity in the relationship between the context and an organization's HR system not accounted for in the current research.

General Discussion

In our study, we have measured a wide spectrum of HR practices and found five distinct sets of HR practices that organizations

adopt. We found two HR bundles representing two ends of the spectrum in terms of the comprehensiveness in HR functions accommodated in the organization's HR design. We found three intermediate HR bundles that focused on a smaller number of HR functions that coincide with previous categorizations of HR bundles.

Organizations were commitment maximizers, contingent motivators, competitive motivators, resource makers, or cost minimizers, reflecting variability in the extent to which they emphasized ability, motivation, and opportunity. Some organizations, such as the commitment maximizers, took the high road and adopted a wide range of innovative HR practices (Arthur, 1994; Cappelli & Neumark, 2001). Others, such as the cost minimizers, took a low-cost, or low road, approach, with fewer sophisticated HR practices, lower investments in human resources, and fewer opportunities for employee participation. In general, although the results are not particularly strong or consistent, previous studies find that commitment maximizers tend to outperform cost minimizers, hence, suggesting that an organization's human resources can be a potential source of sustainable competitive advantage (see reviews by Boxall & Purcell, 2000; Dyer & Reeves, 1995; and Gerhart, 2007). The remaining HR systems found in our study were also consistent with existing models of HR systems that postulate that HR systems may have specific goals or foci of ability, motivation, or opportunity. Our HR systems resemble the make or buy trade-off theorized by (Miles & Snow, 1984). Hence, even though our HR systems were empirically derived, they are very much consistent with existing theoretical models of HR systems.

Research on strategic HRM has made several attempts at forwarding taxonomies of HR systems that organizations use. The present study advances these attempts by utilizing a wider range of HR practices and a large multi-industry sample. Previous attempts have been criticized for using a narrow range of HR practices and including non-HR practices in their analyses (Wright et al., 2001). Much of the existing strategic HR studies have been based on a specific industry or a handful of industries. Even though this resulted in high internal validity, industry-specific studies have limited external generalizability. In the present study, organizations from the private and public sectors, as well as profit and nonprofit industries, were represented. Because we sampled a wide range of industries and HR practices, we can have greater confidence in the external validity of our findings. This also means that the HR systems found in our study reflect, to a greater degree, the kinds of systems organizations adopted across a broad range of industries, lending greater credence to HR systems found in previous studies.

Our study also provided preliminary evidence for the hypothesis that organizations maintain some level of fit between their HR systems and their espoused values and organizational structure, thus extending our knowledge of the factors influencing the kinds of HR bundles organizations use. Organizational values are reflected in how employees are treated and the extent and focus of the organizations' HR systems. With an increasing emphasis on selecting employees who fit with the organization's values, it is imperative that organizations also adopt HR systems that support these values. Previous studies have suggested that an organization's HR system is multidetermined but have yet to examine the

relationship between organizational values and HR systems. Our study addresses this gap in the literature.

Although the contextual factors may explain why some companies choose certain HR strategies, our results suggest that values and structural factors may also influence the types of HR systems an organization may wish to use. It is often assumed that organizations have a free choice of adopting the full spectrum and extent of HR practices. Our results show that this is not necessarily true. For example, an organization may be interested in pursuing a commitment-maximizing HR approach, but because it is a highly organic organization with few formal and specified organizational procedures, it may be more difficult to change its existing HR strategy to a more commitment-maximizing one. In light of our findings, it is clear that any prescriptions for a set of universal HR "best practices" must be informed by the contextual factors that surround their use. Not all organizations may be similarly predisposed or have the supporting organizational structure to implement new HR strategies.

At the same time, the HR system may also influence the elements of an organization's context. For instance, the core processes in an HR system can set the cultural tone of the organization and create a "strong climate" (Schneider, Salvaggio, & Subirats, 2002) by providing members with a collective sense of what is expected, desired, and appropriate (Bowen & Ostroff, 2004; Gelade & Ivery, 2003; Kopelman, Brief, & Guzzo, 1990; Ostroff & Bowen, 2000; Sanders & Looise, 2006). Consistent with the ASA framework, selection, rewards, and training practices ensure that the organization is populated by individuals who share and will likely reinforce and perpetuate the organization's culture. Similarly, HR systems may influence decisions about organizational structure as it shapes members' preferences for how work and employees should be organized. In a similar vein, organizations should be aware of how their HR systems influence the make-up of the organization in terms of individual characteristics, such as values, preferences, and decision-making styles. As such, any organizational change initiatives should involve an examination of the organization's HR system to determine how existing HR practices would need to be adapted to support the change. The mutual influence of HR systems and their context would, over time, create some degree of internal coherence within the organization.

From an organization's perspective, our results indicate that managers need to understand the context of any changes they would like to implement in their existing HR strategy. For example, we find that organizations that have stability values tend not to pursue any coherent HR strategy, except for the cost minimization strategy. Similarly, organizations that value innovation may tend to be more focused on using appealing reward packages to attract and motivate their employees; however, without rigorous selection and training practices, such an HR strategy may not be sustainable. Thus, organizations should be aware of the blinders their espoused values could create that may cause them to overlook other potentially more viable HR strategies. The results also clearly indicate that mechanistic organizations are most amenable to the use of a wide range of high-performance HR practices. Organizations that lack such a structure may face a greater challenge in the use of commitment-maximizing HR practices. As the results indicate, for organizations to change to such an HR strategy, more formalized

and standardized procedures and some degree of centralized decision making may need to be in place to facilitate this change.

Limitations

Despite the positive findings, the current research also has several limitations. First, the cross-sectional research design does not allow us to establish temporal precedence or causal ordering. The present study simply represents a beginning investigation into the contextual factors that are related to different bundles of HR practices and does not draw any conclusions about how values and structural factors act as antecedents or causes of HR practices. Additional research is needed.

Second, the effect sizes found in our study are fairly small, ranging from an η^2 of .03 for stability to .10 for people orientation and innovation. Although such effect sizes are consistent with those found in other strategic HR research (e.g., Delery & Doty, 1996; Jackson et al., 1989; Perry-Smith & Blum, 2000), the findings suggest that there are many other variables that account for the adoption of the HR bundles. Future research should explore what other organizational and environmental factors are related to the adoption of HR bundles.

Third, given past research that has suggested there are problems associated with single-source ratings of HR practices (Gerhart, Wright, McMahan, & Snell, 2000), we sought to provide some additional data that could speak to this issue. For a subset of the measures, we were able to compare organizational representative and employee ratings. We found moderate convergence between these sources for the HR practices but poor convergence for the organizational values. This suggests that single-source ratings of relatively objective features of the organizational environment, such as HR practices, are less likely to be unreliable. For more subjective aspects, such as organizational values, however, there may be some issues associated with single-source ratings.

One reason for differences between organizational representatives and employees is that employees may not be clear on the full spectrum of the organization's HR practices or the organization's values (Posner & Schmidt, 1993). Because the alternate sample of employees included to test the interrater reliabilities did not hold management positions and were not part of HR, they were not experts in the HR systems or strategic directions of the organization like the organizational representatives. It is not surprising, then, that there would be less agreement between the primary and alternate samples on these measures. In fact, some have suggested that interrater correlations greater than .50 are rare (Murphy & De Shon, 2000), and many of the values we found for the HR practices were in fact close to, if not higher than, .50. Another potential reason for differences between the two sources of data is that the interrater reliability tests were performed only on a subset of the organizational items used in the original sample. Hence, the low interrater reliabilities do not necessarily provide definitive evidence that our measures are unreliable. Nonetheless, the potential unreliability in some of our measures could have attenuated the reported relationships.

Fourth, the data were collected from a single organizational representative. Recent research has found that when HR practices are assessed with a single organizational respondent, ratings may contain some common method variance (Wright et al., 2001). Notwithstanding any potential attenuation that may have occurred

as a result of the unreliability mentioned above, HR managers and executives in our sample may have been motivated to inflate their responses to present a more favorable view of the organization's HR practices. Although common method variance may have compensated for the attenuation caused by unreliable measures, our hypotheses were not necessarily obvious to respondents. As such, problems associated with hypothesis guessing and self-generated validity (Feldman & Lynch, 1988) are likely to have been minimized. Taken together, we do not believe that the reliability of our measures or the associated common method bias would have led to the creation of the HR bundles found or invalidate the results of our tests of the hypotheses.

Future Research

Given the contributions and limitations of this study, several avenues for future research are apparent. Future studies should determine whether the extent of the fit between contextual factors and HR bundles affected organizational performance. In addition, we are not suggesting that the HR bundles found in our sample are ideal types (Delery & Doty, 1996) and thus are not suggesting that organizations that adopt these systems in line with contextual factors would perform better than those that do not. We only sought to demonstrate in our sample the configurations that commonly exist among organizations. Previous studies have found modest support for the HR-strategy fit. As suggested by Wright, Gardner, Moynihan, and Allen (2005), investigating the relationship between HR and performance is a major and difficult undertaking by itself, and only by following rigorous methods to establish causality can clear conclusions on the effects of HR systems on firm performance be made. As such, establishing the link between performance and HR configurations is a complex enterprise, one that extends beyond our key focus of understanding HR configurations and their contextual correlates. Clearly, once some of the linkages between HR configurations and context are established, we advise that future research begin investigating the relationship between such configurations and performance.

Finally, our study represents a first step in understanding how major contextual factors relate to the HR strategies pursued by organizations and joins a growing body of research that has explored how context can influence HR practices (e.g., Dierdorff & Morgeson, 2007; Morgeson, Johnson, Medsker, Campion, & Mumford, 2006). As an initial investigation, however, it is likely that other factors may also influence the use of certain HR bundles. More veridical models should continue to be developed and tested to create a more complete picture of the pertinent contextual factors and their relationships with HR strategies and organizational performance.

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Appendix

Interrater Reliability Correlations for Human Resources Practices and Organizational Values

Human resources practices	Correlation
Training methods	.42**
1. Diversity	.32**
2. Team skills	.18*
3. Quality control	.24**
4. Basic business	.07
5. Problem solving	.17*
6. Leadership	.05
7. Customer service	.22*
8. Case study	.33**
9. Conference	.10
10. Lecture	.15
11. Business games	.35**
12. Machine simulator	.10
13. Films/videos	.25**
14. Workbooks	.26**
15. Role plays	.30**
16. CAI	.28**
17. Audiocassettes	.13
18. Interactive videos	.20*
Contingent pay: Pay based on	.42**
1. Profit sharing	.46**
2. Knowledge/skill-based pay	.24**
3. Individual performance	.34**
4. Team performance	.32**
5. Customer satisfaction	.20*
6. Job attributes	.25**
Benefits	.62**
1. Stock	.58**
2. Retirement plan	.60**
3. Medical insurance	.56**
4. Life insurance	.56**
5. Disability insurance	.50**
6. Flexible hours	.33**
7. Daycare	.16
8. Paid leave	.38**

(Appendix continues)

Appendix (continued)

Human resources practices	Correlation
Organizational values	
People orientation	.19*
1. Care about employees	.22**
2. Fairness	.20*
3. Flexibility	.23**
Innovation	.11
1. Taking chances	.16*
2. Innovation	.12
3. Aggressiveness	.22**
Stability	-.03
1. Stability	.01

Note. Items shown are those available for each scale in the reliability sample. Results for the scales are based on the items shown. CAI = computer-assisted instruction.

* $p < .05$. ** $p < .01$.

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