CAREER SYSTEMS AS A CONFIGURATION
OF CAREER MANAGEMENT ACTIVITIES

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ABSTRACT

Up to now studies investigated the career management by describing career management activities one by one instead of describing the configuration of these activities. The purpose of this research is to bridge this gap by proposing a taxonomy of career systems. Based on a sample of 254 organizations, three types of career systems were empirically derived using cluster analysis. This taxonomy was validated against external variables not used in cluster analysis. Then these three types of career systems were named and discussed.

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Up to now studies investigated the career management field by describing career management activities one by one instead of describing the configuration of these activities. The purpose of this research is to bridge this gap by proposing a taxonomy of career systems. Based on a sample of 254 organizations, three types of career systems were empirically derived using cluster analysis. This taxonomy was validated against external variables not used in cluster analysis. Then these three types of career systems were named and discussed.

Career management has recently emerged as a new area in human resource management. Managing employees' careers is a powerful tool with which to overcome critical challenges faced by modern organizations. It is a new way to mobilize professionnals (Raelin, 1987), to fight obsolescence (Guérin, 1991), to create a better balance between work and family (Hall, 1989) and to develop human potential. Therefore it is not surprising that several authors consider career management as a strategic competitive weapon (Stumpf and Hanrahan, 1984; London, 1988).

Indeed career management is important because it serves as a link between strategic and operational levels. (Guérin and Wils, 1992). Career management makes it possible to relate human resource planning to other human resource management activities by translating the global human resource plan into a multitude of individual career plans whose implementation depends on an appropriate alignment with operational human resource activities such as training.

FROM CAREER MANAGEMENT ACTIVITES
TO CAREER SYSTEMS

The domain of career management activities is not clearly defined. Some authors have a broad definition that includes not only internal staffing but also external staffing, outplacement and even training (Sonnenfeld, 1984; Walker, 1980). Others prefer a narrow definition that focuses on managing internal mobility (Milkovich and Anderson, 1982). In our study, a narrow definition was chosen because career management is believed to be a

crucial link between human resource planning and all operational human resource activities such as external staffing or training.

All in all, 20 career activities were identified in the literature. Given that several career activities are closely related (for instance, fast-track program and high potential management program), we can reduce the list to 14 career activities. These activities are as follows: job posting, promotion-from-within, lateral mobility, career paths, succession planning, data collection on employees, high potential management, data collection on future jobs, mentoring, job matching, communication, career planning, career counselling and managers' training in career.

In the literature, most studies surveyed only some of the 14 career activities (Griffith, 1980; Gutteridge and Otte, 1983; Walker, 1990). Furthermore, these activities were described one by one, focusing mainly on their frequencies. These results showed that some activities were widespread while others were not. Obviously every organization was not involved in all career activities. What is missing in these studies is the way in which the career activities implemented by each organization fit together. In other words, we need to know the organizational configuration of career activities.

A career system is a subset of career activities managed by a given organization. Theoretically, a large number of combinations could exist. However, a few configurations are likely to be more frequent than others and should therefore emerge.

METHODS

Data were collected through a mail survey. Although the questionnaire focused mainly on the 14 career activities, other variables such as employee relations philosophy were included for validation purposes. A questionnaire was sent to the entire population consisting of all organizations having at least 250 employees in Quebec. From the 1061 questionnaires sent, 259 were returned (response rate of 23.9%). In this sample, 73% of respondents were in charge of the personnel/human resource function. The profile of the sample is as follows: 57% private firms, mean size of 600 employees, mean unionization of 69%.

SAS and SPSS for microcomputers were used to analyze data. Our data strategy consists of three steps: (1) principal component analysis to get homegeneous sets of career activities, (2) cluster analysis to arrive at a taxonomy and (3) discriminant analysis to validate types.

RESULTS

Taxonomy of Career Systems

Before using cluster analysis, the 14 career activities were factor analyzed (principal component analysis). Such a step was necessary because some career activities should have more affinity than others (e.g. succession planning and high potential management). Using the scree test criterion, three career dimensions emerged and accounted for 43% of the total variance. Although this percentage is not very large, the factors were interpretable. Most

items loaded highly on only one factor. For subsequent use in cluster analysis, we used all career activities that loaded on one factor with loadings above .55 to build career scales. The three career dimensions could be labelled as: impersonal career, organizational career and individual career. The first factor was called "impersonal career" because it focused on three internal staffing activities (job posting, promotion-from-within and lateral mobility). The second factor was labelled "organizational career" and consisted of five organization-oriented activities (succession planning, high potential management, data collection on employees, job matching and data collection on future jobs). The last factor was called "individual career" because it subsumed two individual-oriented activities (career planning and career counselling). These factors were used as variables in cluster analysis by counting the number of career activities. Consequently, the three career scales may vary from zero to three, five and two activities respectively.

Cluster analysis (Ward method) was chosen. Given that this method is sensitive to outliers, 10% of the sample was discarded. Furthermore, the three career scales were standardized to give an equal weight to each career dimension. Subjective criterion (dendrogram) as well as objective ones (fusion coefficients) were applied to determine the number of clusters. As shown in Table 1, both a three-cluster solution and a four-cluster solution indicated a jump in the values of fusion coefficients. As suggested by Aldenderfer and Blashfield, these heuritic rules "should be used in conjunction with an appropriate validation procedure" (1984:58). The three-cluster solution was selected because discriminant analysis using external variables showed better results.

Insert Table 1 about here

As shown in Table 2, the three career types are very distinct. The first type, found in 44% of organizations (99/224), is a career system which focuses mainly on both impersonal career and organizational career. The second type, found in 39% of organizations (87/224), tends to be weak an all career dimensions. The last type, found in 17% of organizations (38/224), is a career system which focuses on both individual career and impersonal career.

Insert Table 2 about here

Validation

Discriminant analysis was used to predict clusters' membership using variables not used to generate the cluster solution. Based on literature review, three categories of contextual variables were assumed to be related to career systems. First, the contingency theory states that career systems should be related to contextual characteristics such as size, sector, unionization, planning culture and business strategy (Granrose and Portwood, 1987; Jackson, Schuler and Rivero, 1989; Miles and Snow, 1978). Second, career systems should also be linked to the human resource management variables such as employee relations philosophy, importance of human resource management, mobility culture, integration of human resource

management activities (Sonnenfeld and Peiperl, 1988; Walker and Gutteridge, 1979). Third, career systems should differentiate among themselves on variables such as the lack of mobility opportunities as a reason for implementing such systems, the objectives of career management and the focus (organization vs individual) of career management (Stumpf, 1988).

These external variables used for validation were measured as follows: (1) size was operationalized in terms of number of employees, (2) sector was measured by one question (one dummy variable was created for identifying the private sector), (3) unionization rate was measured by one question, (4) planning culture was measured by four items on a six-point scale (Cronbach alpha = .89), (5) business strategy was identified by using the Miles and Snow's Typology (three dummy variables were created for identifying the defender, prospector and analyzer types), (6) employee relations philosophy was measured by seven items on a six-point scale (Cronbach alpha = .76), (7) importance of human resource management for achieving organizational success was measured by four items on a six-point scale (Cronbach alpha = .70), (8) mobility culture was measured by four items on a six-point scale (Cronbach alpha = .66), (9) the integration of career management with other human resource activities was measured by six items an a six-point scale (Cronbach alpha = .83), (10) the lack of mobility opportunities as a reason for implementing career management was measured by one item, (11) the objective of creating a mobility culture was measured by four items on a six-point scale (Cronbach alpha = .80), and (12) organizational vs individual focus of career management was measured by averaging the foci of all career activities that

were implemented by each organization (each focus being measured by one question on a six-point scale).

For validation purposes, the split-sample approach was selected. The total sample of respondents was divided randomly into two groups. About 75% of observations were used to develop the discriminant function (analysis sample), while about 25% of observations were used to test the discriminant functions (hold-out sample). The analysis sample had a larger number of observations to ensure the stability of the coefficients. A stepwise procedure was used to select the most useful discriminating variables. The two functions are statistically significant. The first one (eigenvalue = .53; $p \leq .0001$) accounts for 70.78 percent of variance. The second function (eigenvalue = .22; $p \leq .05$) accounts for 29.22 percent of variance. Table 3 shows that the discriminant functions are valid. The hit ratio for the analysis sample is

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Insert Table 3 about here

66.33%, while the hit ratio for the hold-out sample is 55.56%. Based on the maximum chance criterion (64/143 = 44.75%) and on the proportional chance criterion (37.6%), our results are satisfactory. Ultimately, 10 external variables out of 14 entered at the final step. Table 4 presents the centroid means of these variables for the three derived types.

Insert Table 4 about here

CONCLUSION

The objective of this research was to identify organizations in terms of their career types. The results suggest that it is possible to empirically derive three types on which a taxonomy of career systems can be built. The most basic career system (type #2) is labelled "starting building block model" because it consists of only a few career management activities. This model is found in small organizations without a strong tradition in human resource management. The most frequent career system (type #1) is labelled "organizational model" because it is strongest on organizational career. This model prevails in large organizations pursuing a defensive strategy. The last career system (type #3) is labelled "club model" because it focuses on employees. The employee relations philosophy is strong and an individual career block has been implemented. This model is found mainly in large private organizations where there is a lack of mobility opportunities. Interestingly it is to be noted that a strong impersonal career is associated with either a strong organizational career (type #1) or a strong individual career (type #3). In the former, organizations are involved in managing careers while in the latter, career management seems to be left to individuals.

The results of this research shed some light on how career activities may combine with each other in shaping career systems. However, this attempt to build a taxonomy of career systems has to be taken with caution. First, this study identified career types in Quebec where the unionization rate is relatively high and stable (in comparaison with the U.S.A.). Other studies need to be done in different contexts. Second, nothing was said about the effectiveness of these career systems. Managing more career activities (type #1 and #3)

implies an additional cost that has to be compared with the expected benefits. Finally, this taxonomy was built without distinguishing the different kinds of employees. As mentionned by Jackson, Schuler and Rivero (1989), this factor may influence the type of human resource activities. Despite these weaknesses, this is the first study which attempts to describe career management activities as a whole instead of describing them one by one.

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TABLE 1

History of Fusion Coefficients

Number of clusters	Clusters joined	Frequencies	SPRSQ*	RSQ*	PSF*
5	19-14	49	.044	.800	220
4	10-5	87	.054	.746	216
3**	9-7	99	.161	.585	156
2	3-4	186	.255	.330	109
1	2-6	224	.329	.000	---

*   SPRSQ :   Semipartial squared multiple correlations

     RSQ :   Squared multiple correlations

     PSF :   Pseudo F statistic

**   The chosen three-cluster solution.

TABLE 2

Types of Career Systems

(in terms of number of career activities)

Career Dimension	Career System		
	Type #1 (n=99)	Type #2 (n=87)	Type #3 (n=38)
Impersonal career	3.00	1.84	2.60
Organizational career	1.16	.75	.89
Individual career	0	0	1.00

TABLE 3

Classification Results

Actual group	Predicted group					
	Analysis sample			Holdout sample		
	Group 1	Group 2	Group 3	Group 1	Group 2	Group 3
Group 1	33	10	4	14	1	2
Group 2	11	22	1	9	8	4
Group 3	6	1	10	4	0	3
Hit ratio	65/98 = 66.33%			25/45 = 55.56%		

TABLE 4

Centroids of the Three Career Systems in Means

External variables	Career systems		
	Type #1	Type #2	Type #3
Size (# employees)	1309	601	1426
Unionization (%)	71.33	64.62	67.07
Importance or HR management*	4.21	3.59	4.30
ER philosophy*	3.02	2.67	3.20
Defender (dummy)	.69	.69	.20
Analyzer (dummy)	.09	.09	.07
Sector (dummy)	.53	.75	.80
Lack of mobility *	2.56	2.06	3.07
Planning culture*	3.91	3.61	4.00
Mobility culture*	3.69	3.01	3.75

*   Six-point scale