

# IT HRM Practices: Best Practices vs. Configurations

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## ABSTRACT

The management of information technology (IT) professionals is an important managerial concern. The way that IT organizations manage their IT professionals is essentially manifested in their implementation of human resource management (HRM) practices, such as those related to career development, pay, and job security. Ferratt et al. (2005) describe two contrasting modes of theorizing about how HRM practices should be combined to yield desired outcomes: universalistic (or “best-practices”) and configurational. They call for an examination of the assumptions underlying these modes of theorizing. Our examination yields the following proposition: The complex configurational mode of theorizing has value in explaining a success criterion (such as turnover) beyond that of the simple universalistic mode. We collected data from members of a national professional organization of IT employees on a number of IT HRM practices and a success criterion. Analysis of variance allows us to test the proposition. The independent variables are the IT HRM practices plus a profile variable representing various configurations of practices. A significant profile variable indicates that the variance in the success criterion explained by configurations is significantly greater than the variance explained by the individual IT HRM practices acting independently, thereby supporting an inference of synergism in combining the practices. The results of these tests, when completed, will be used to suggest directions for managing IT professionals and future IT HRM theory development and testing.

## Categories and Subject Descriptors

K.6.1 [Management of Computing and Information Systems]: Project and People Management – *staffing*.

**General Terms:** Management.

## Keywords

Configurational Theory, Universalistic Mode of Theorizing

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## 1. INTRODUCTION

The management of information technology (IT) professionals is an important managerial concern (Luftman, 2005; Luftman and McLean, 2004). Researchers have found that the way that IT organizations manage their IT professionals is related to important outcomes, including productivity, turnover, and satisfaction (Ferratt, Agarwal, Brown, and Moore, 2005; Ang and Slaughter, 2004; Ferratt and Short, 1988; Goldstein and Rockart, 1984). The way that IT organizations manage their IT professionals is essentially manifested in their implementation of human resource management (HRM) practices, such as those related to career development, pay, and job security.

Two contrasting modes of theorizing – one simple and the other complex – offer both managers and researchers insights into how HRM practices should be combined to yield desired outcomes. Ferratt et al. (2005) characterize these two contrasting modes as the universalistic (or “best-practices”) and the configurational modes of theorizing and call for an examination of the assumptions underlying them. The results of such an examination should reinforce the value of the more complex configurational approach or suggest how to simplify our theoretical models.

Our purpose is to conduct such an examination. We begin by starkly presenting contrasting characteristics of these two modes of theorizing. The contrasts are presented in a manner that highlights essential differences. These differences allow us to identify underlying assumptions, whose validity we can test empirically. Since this paper is research-in-progress, the results of these tests are yet to be completed. When completed, they will be used to suggest directions for managing IT professionals and future IT HRM theory development and testing.

## 2. THE SIMPLE UNIVERSALISTIC MODE OF THEORIZING

This mode of theorizing basically views each IT HRM practice as independent of all the others. We place those who advocate “best practices” within this mode of theorizing. An example of a criterion for judging the success of an HRM practice is productivity. In this mode of theorizing, the relationship between an HRM practice and the criterion for success is independent of any other HRM practice and, generally, more of a practice is desirable. For example, more training leads to greater productivity independent of the effects of any other practices, such as job security. Consequently, a “best practice,” such as extensive training, leads to the greatest productivity. This

independent relationship holds across situations, making the theory universally applicable.

“High performance work systems” are those that combine several HRM “best practices.” For example, Pfeffer (1998) argues that best practices include, among others, high employment security, comparatively high pay, and extensive training. Some proponents of this mode of theorizing may argue that organizations that adopt a best practice tend to adopt other best practices, suggesting that there is some consistency in how organizations implement a set of IT HRM practices (e.g., see Huselid, 1995).

We suggest that a simple theory of “best practices” is one in which the IT HRM practices are viewed independently, allowing IT managers and researchers to independently consider each IT HRM practice. IT managers in a given organization may choose to implement a set of best practices, but they may also choose to implement such practices selectively. In this simple universalistic mode of theorizing, each practice contributes independently to the criterion variable, such as productivity. More of a given practice leads to more of the criterion, and more “best practices” lead to more of the criterion. Note, however, that more of a criterion (e.g., greater retention) may not always be desirable. For instance, a firm may encourage some turnover as a way of achieving organizational renewal. In such a case, the relationships implied by the universalistic mode of theorizing would suggest that a lower level of a given practice and fewer best practices be utilized to achieve the desired outcome.

### **3. THE COMPLEX CONFIGURATIONAL MODE OF THEORIZING**

The essential difference between the two modes of theorizing is that the complex configurational mode does not view IT HRM practices as being independent in their effects on a success criterion. According to this mode, more of a given practice will lead to more of a criterion only if it is consistent with specified levels of other relevant practices. Such consistency is variously referred to as internal fit (Baird and Meshoulam, 1988) or horizontal fit (Wright and McMahan, 1992). A set of practices that display such fit represents a coherent configuration that has synergistic effects on the criterion beyond that which may be expected from each practice acting independently. Such success on a criterion may be achieved by alternative coherent configurations of practices, thus enabling the possibility of equifinality. If a configuration lacks coherence, however, the result will be worse than the sum of the independent effects of each constituent practice. Thus, configurations may vary in their effectiveness, as demonstrated by Ferratt et al. (2005), who identified five configurations with differing turnover rates. For example, consider the two extreme configurations that emerged from their cluster analysis. One configuration had high emphasis on several IT HRM practices (e.g., practices related to employee development, job security, community building, and incentives). The other had low emphasis on these practices. Consistent with prior research, organizations having high emphasis on IT HRM practices had lower turnover than organizations having low emphasis. However, another configuration with relatively low emphasis on most IT HRM practices but high job security had relatively low turnover, suggesting that job security in conjunction with other practices has a synergistic effect.

This mode of theorizing is complex because of synergy among the practices. The synergy can be conceptually identified based on theoretical or normative considerations (e.g., Baron and Kreps, 1999; Delery and Doty, 1996) including the judgment of expert panels (e.g., Arogyaswamy and Byles, 1987). As we know from the literature on fit (e.g., Venkatraman, 1989), this synergy can be operationally specified in alternative forms of fit, such as moderation, mediation, and matching. This complicates any empirical analysis and research on the effectiveness of configurations. For managers, complexity arises in the identification of synergistic configurations. Identifying combinations of practices that have similar effects, i.e., configurations characterized by equifinality, is challenging. The effectiveness of some configurations may not be easily predicted, i.e., the fit among practices may be somewhat emergent and not just intentional (Snell, 1996). While it is simpler for researchers and managers to consider each practice as independent, the literature on configurational theory suggests that it may be worthwhile to view configurations from this complex perspective (Baird and Meshoulam, 1988; MacDuffie, 1995). However, it must be noted from this literature that the additional merits of this more complex mode of theorizing have not been conclusively demonstrated in empirical studies (e.g., Huselid, 1995; Delery and Doty, 1996).

In part, the lack of empirical support may be due to the difficulty of determining the appropriate model of fit that should be used in empirical tests. For example, some research (e.g., Delery and Doty, 1996) has operationalized fit as matching some normative profile of the practices, while other research (e.g., Huselid, 1995) has modeled fit as moderation or interaction among the practices. Each approach has its problems. Fit as matching requires an operational definition of a normative or theoretical profile which is then typically the reference point for constructing various indices to assess the extent of fit. These indices typically measure the difference between a particular case and the reference point. However, such difference measures suffer from well-known problems (e.g., see Edwards, 1994). Fit as moderation requires the introduction of multiplicative interaction terms in statistical analysis, which raises issues of loss of power and multicollinearity. These problems are exacerbated when higher order (i.e., beyond two-way) interactions among practices are required.

The literature on configurations has a preponderance of conceptual arguments for the benefits of the configurations. However, empirical support for those arguments is lacking. Thus, we propose to contribute to this literature by responding to the call for an empirical examination of the relative power of the simple and complex modes of theorizing (Ferratt et al., 2005). Our research investigates the following proposition:

P1. The complex configurational mode of theorizing has value in explaining a success criterion (such as turnover) beyond that of the simple universalistic mode.

We propose to avoid the problems of specifying the exact form of synergy or fit. Instead, we identify configurations that are either predefined (Ferratt et al., 2005) or are emergent based on cluster analysis (Miller, 1992) as explained in the Methodology section. In this way, we are able to study the effects of these configurations without explicitly identifying the relationships (i.e., nature or extent of fit or synergy) among their constituent practices.

## 4. METHODOLOGY

### 4.1 Measures

This research study required the development of a survey instrument. Instrument development consisted of examining the literature to determine if existing instruments with good measurement properties could be used or to generate ideas about what would be appropriate for this research. This part of the development required an iterative process similar to the procedure described by Churchill (1979). An initial instrument for measuring candidate IT HRM practices was developed. This instrument was pilot tested with two organizations. Further refinements of the instrument and constructs were then made. For example, we added new IT HRM practices suggested by those involved in the pilot tests, and we discarded items that did not demonstrate good measurement properties (e.g., their reliabilities were low). The instrument ultimately used measures a number of practices, such as security, social support, pay, and career development. These practices reflect a number of employment practices found in studies of IT professionals as well as the broader population of workers (Ferratt et al., 2005; Rousseau, 1995).

*Perceived IT HRM practices.* Multiple 5-point Likert-scale items, ranging from 1 (*Low*) to 5 (*High*), measured the extent of each of the IT HRM practices perceived to be provided by the employer. Directions for these items asked participants to rate the “Actual current situation.” An example of the social interaction and support items is shown below:

The extent of social support at work (e.g., inviting me to a retirement party).

The scale value for an actual IT HRM practice is the mean of the responses to the multiple items measuring that practice.

*Job Search Behavior.* Job search behavior has been found to be an effective predictor of turnover (Griffeth, Hom, and Gaertner, 2000). This outcome variable was measured using three items based on 5-point scales, ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). An example item used was:

I am currently searching for an organization other than this one to work for.

### 4.2 Sample

Individual organizations may follow different IT HR strategies which could lead to a tendency to hire IT employees that only fit a certain profile. To avoid the effects of such strategies or other potentially idiosyncratic hiring practices, it was not desirable to draw the sample from only one organization. Also, competitive practices within an industry or organizational culture may lead a given organization to offer only selected characteristics of employment arrangements leading to a non-representative sample. A national sample from multiple organizations would address this limitation. Therefore, we sought a representative, broad-based sample of IT employees which we were able to obtain through a national professional organization of IT employees using a web-based survey. Members were encouraged to participate through an email message from the organization’s Executive Director.

Of the organization’s 3,369 members, 613 (18%) voluntarily completed an on-line survey that had a standard and an optional

set of questions. Of the 262 respondents who answered the optional survey questions relevant for this research, 71.4% reported they were men and 26.0% women; 2.7% did not report gender. For race/ethnicity, 88.2% reported they were white, 2.3% Black/African-American, 2.3% Hispanic, and 1.9% another category; 3.4% selected more than one category, and 1.9% did not select any category. The average age was 49.2. The average years worked in a full-time IT position was 21.6 and the average number of years with their current organization was 8.6. These respondents came from 41 states and the District of Columbia. The sample of 262 respondents used in this research was about 2 years older than the 351 respondents that did not answer the optional questions and had worked in a full-time IT position about 3 years longer. On other characteristics (i.e., geographic origin, gender, race, and tenure with their current organization), there were no significant differences.

### 4.3 Analysis

Prior to the analysis of the proposition, the scales will be analyzed to ascertain their psychometric properties using factor analysis and scale reliability analysis. Following that, the IT HRM practices will be used to classify individuals into configurations. This classification takes place using two approaches. In one approach, individuals are classified into IT HRM profiles based on profiles theorized and empirically confirmed in prior studies. In the second approach, the individuals are classified into profiles empirically derived via cluster analysis (e.g., see Ferratt et al., 2005; Miller, 1992).

The statistical test of the proposition for each approach to identifying configurations is based on analysis of variance. The independent variables are the IT HRM practices plus the profile, which is a nominal variable. Interdependence of IT HRM practices is indicated if the profile variable is significant in explaining the dependent variable, job search behavior, when the IT HRM practices are taken into account. A significant profile variable indicates that the variance explained by the profile, i.e., the set of IT HRM practices, is significantly greater than the variance explained by the individual IT HRM practices acting independently, thereby supporting an inference of synergism in combining the practices. Independence of the IT HRM practices is indicated if one or more of the IT HRM practices are significant but the profile variable is not.

## 5. RESULTS AND DISCUSSION

Guided by the analysis proposed above, we will analyze the data and discuss the results within the limitations of our methodology.

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