# Information Technology Systems in the Human Resource Area

A Cross Culture Approach

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**Abstract**

Using two independent large databases of 5,991 organizations in 21 countries, this study explored (a) the influence of national values on human resource (HR) information system practices (type of HR information system and information system communication design) adopted by organizations; and (b) the contribution of the level of fit between national values and these HR information system practices to two key organizational performance indicators: absenteeism and turnover. Results showed that national values explained HR information system practices and supported the hypothesized interactive effects of national values and HR information system practices on absenteeism and turnover. The results have strong implications for organizations concerned with how to maximize the fit between particular cultures and HR information system practices as a basis to enhance organizational performance indicators.

**Keywords:** Human resource management, cross culture, information system

## Introduction

In an era striving for excellence, human resource management (HRM) has become a crucial source of competitiveness. An important development in improving the effectiveness of HR in organizations is the incorporation of information technology systems for the purposes of collecting, organizing, and disseminating HR-related information to users and decision makers (Lin, 1998). However, at this point, the factors that contribute to the successful implementation and use of information technology systems in the human resource area remain to be identified and examined (cf. Leidner & Kayworth, 2005; Kossesk, Young, Gash, & Nichol, 1994).

In today's increasingly global economy, one important factor that may affect the implementation of information technology in HRM is national culture (Leidner & Kayworth, 2006). There is a clear need for more research on the effect of national (societal) values on HR-related information technology systems and on individual reactions to such systems in different cultures.

To address this need, we conducted a comprehensive study across 21 nations and 5991 organizations that focused on two complementary questions. First, we investigated how societal values affected two characteristics of HR-related information systems: (a) whether the HR information system was independent of HR versus integrated with a wider management system (e.g., ERP approach); and (b) whether communication regarding the HR information system was

used in a one-way direction from the organization to the employee(s), versus in an interactive way that enabled users to make personal selections (e.g., in benefits) in a computerized system.

Second, we examined how the level of fit between societal values and these two characteristics of the HRIS contributed to the two organizational outcomes of absenteeism and turnover. Absenteeism and turnover are key organizational performance indicators, a as they are very costly behavior (e.g. Griffeth, Hom, & Gaertner, 2000; Johns, 2001; 2006). For example, it is estimated that annual dollar costs in the U.S. and Canada are 46 billion and 10 billion respectively (Lu, 1999). In view of the costs of absenteeism and turnover and the lack of research in understanding cross-cultural aspects, it is imperative that the paucity of cross-cultural research in absenteeism and turnover is addressed. As such, this paper attempts to fill the "gaping cross-cultural hole".

In the following chapters we will briefly discuss the role of information technology in HR systems, the nature of societal culture, and the rationale for our hypotheses relating societal culture and HRIS.

## Human Resource Information System (HRIS)

The Human Resource Information System (HRIS), also called HR Technology or HR modules, refers to the systems and processes at the intersection between human resource management (HRM) and information technology. The HRIS is a software or online solution for data entry, data tracking, and data information needs of Human Resources, payroll, management, and accounting functions within a business**.** An effective HRIS provides information on nearly everything the company needs to track and analyze about employees, former employees, and applicants (Kossek et al, 1994).

Decisions by an organizations concerning whether and how to implement a successful HRIS is naturally contingent on organizational support factors (Lin, 1998). These factors include top management support (Wong et al, 1994), support of information system staff (Kinnei and Arthurs, 1993), involvement and support of human resource staff (Pitman, 1994), computer knowledge on the part of human resource staff, and HRIS training (Kossek et al, 1994). However, equally important for decisions associated with the successful implementation of HRIS are environmental factors, among which societal culture may play a major role (Leidner & Kayworth, 2006). As we discuss below, societal culture can determine the type of HRIS an organization chooses to implement, the involvement level of the users with the system, and the effect of fit/misfit between the societal culture and the characteristics of the HRIS on performance-related reactions such as absenteeism and turnover.

## National Values and HRIS

Numerous studies have established the impact of cultural values on managerial behavior and actions. Within the theoretical framework offered by Hofstede (1991) and Project GLOBE (House, Javidan, Hanges, & Dorfman, 2002), societal values, often described as national values, have a strong impact on organizations that can override other organizational (e.g., size, sector) and environmental (e.g., market) influences. A particular organization is nested in a particular national culture and is inevitably influenced by it. Studies provide some support for this influence (e.g. Lee & Barnett, 1997). In their thorough review of information systems, Leidner and Kayworth (2006) argued that variation across cultural values may lead to different approaches to the development of information systems. Drawing on this evidence, we expect that societal values influence the

likelihood that organizations will adopt advanced HRIS, and the characteristics of these systems, if they do adopt them.

In this study, we rely on four widely-studied cultural values at the national level: power distance, future orientation, individualism/collectivism, and uncertainty avoidance (Hofstede, 1991; House et al., 1999, 2002, 2004). Empirical studies have shown that these national values predict organizational processes and managerial practices (Communal & Senior, 1999; Hofstede & Peterson, 2000). We will first discuss how societal values are expected to affect the type of HRIS and HRIS Communications Design organizations implement in nations differing on such values. We will then discuss how the level of fit between societal values and these HRIS practices contribute to the performance-related outcomes of absenteeism and turnover.

**Power distance** is the degree to which members of a collective expect power to be distributed equally (House et al., 2002; 2004). In high power distance societies, hierarchy is rigidly adhered to and privileges are distributed unequally. In such societies, higher-level members are expected to preserve their relative advantage in status and power. Thus, with respect to such societies, it is reasonable to expect that organizations will typically design HRIS in which employees have little access to information and in which the communication provided to the employees by the organization is non-interactive in nature. In contrast, in societies low in power distance, one can expect that organizations will be more inclined to establish advanced HRIS characterized by integration of the HRIS into a wider management information system (e.g., ERP), in which a large number of employees have access to the information. Moreover, these organizations are also more likely to design the HRIS as an interactive system, which allows the user employees to perform complex activities directly on the computer, such as selecting particular fringe benefits, and being approved/disapproved by the computer program (cf. Aycan, 2005). This suggests that:

> *H1: Organizations are more likely to design an advanced HRIS (in which the system is integrated into a wider management information system and is interactive in nature) in low power distance societies than in high power distance societies.*

**Future orientation** is the degree to which individuals engage in future-oriented behaviors such as planning, investing in the future, and delaying gratification (House et al., 2002). Future orientation in HRM means investment and development to prepare the workforce to meet future organizational needs. This suggests that organizations embedded in future-oriented societies are more likely, relative to organizations embedded in present- or less future-oriented societies, to adopt advanced HRIS.

> *H2: Organizations are more likely to adopt an advanced HRIS (in which the system is integrated into a wider management information system and is interactive in nature) if they are embedded in future-oriented societies rather than in present- or less future-oriented societies.*

**Individualism/collectivism** refers to the degree to which societies value individual rights and opportunities versus group success and individual loyalty to the group. In collectivistic societies individuals are expected to subordinate themselves to the group's goals and success. Therefore, organizations in collectivist societies are likely to avoid individual-based systems because of their potentially adverse effect on group, unit, or organizational solidarity and morale (e.g., Kovach, 1995; Vallance, 1999). However, organizations embedded in collectivistic societies

are likely to design and implement HRIS for purposes that would generally benefit all employees, such as human resource planning or identification of needs for training and development. Chow, Deng and Ho (2000), in a study comparing American and Chinese managers, found that Chinese respondents were more likely to share knowledge, since this was consistent with their collectivistic value system.

> *H3: Organizations in collectivistic societies are more likely to establish an advanced HRIS* (*in which the system is integrated into a wider management information system and is interactive in nature*)*, than are organizations in individualistic societies.*

**Uncertainty avoidance** is defined as the extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate the unpredictability of future events (House et al., 2002; 2004). Organizations embedded in societies characterized by high uncertainty avoidance are more likely, relative to organizations embedded in societies low in uncertainty avoidance, to reduce the use of HRIS, because of a loss of control. Png, Tan and Wee (2001), in a multinational survey of 153 businesses, found that uncertainty avoidance affected information systems adoption. Businesses in high uncertainty avoidance countries were less likely to adopt information technology infrastructure.

> *H4: Organizations in low uncertainty avoidance societies are more likely to establish an advanced HRIS (in which the system is integrated into a wider management information system and is interactive in nature) than will organizations in high uncertainty avoidance societies.*

**National Values, HRIS, and Organizational Outcomes**

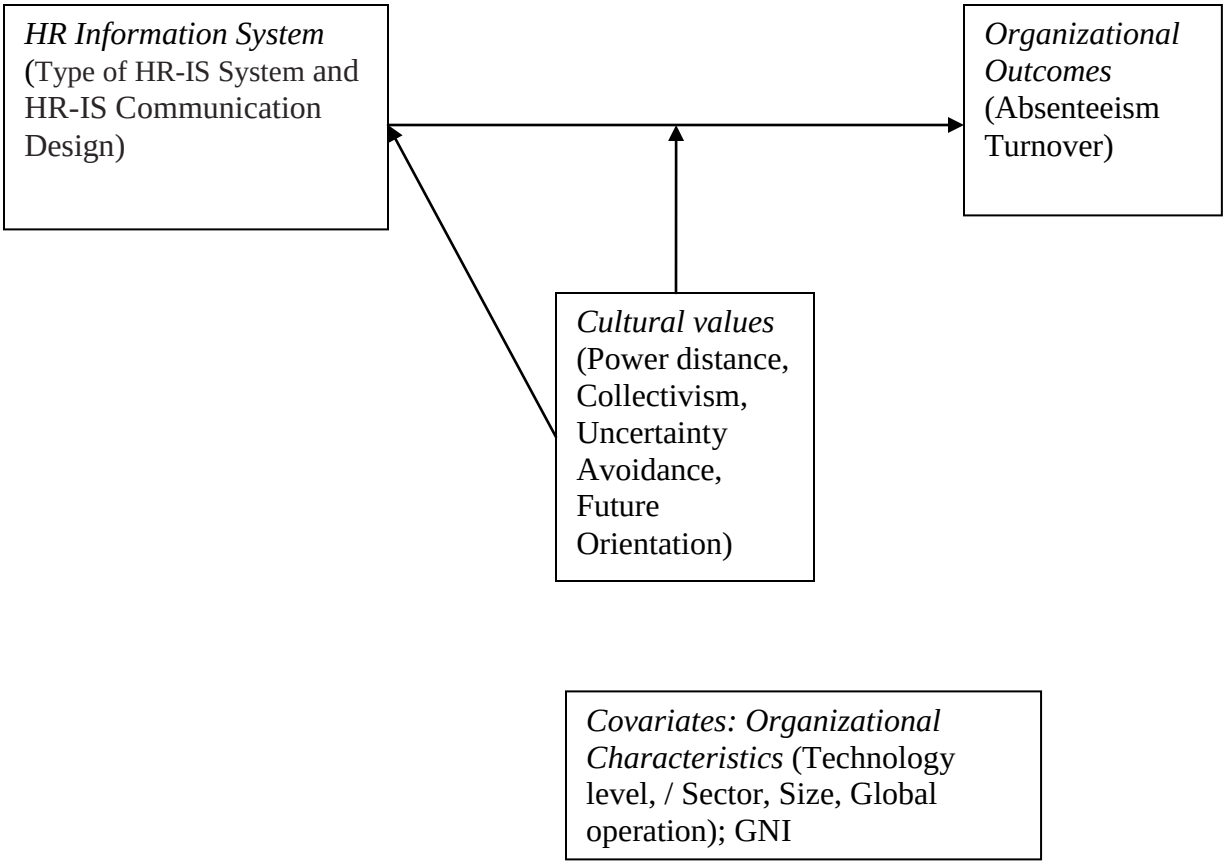
Understanding the expected level of fit (consistency) between societal values and the HRIS in organizations is important as a basis for understanding the effects of such systems on organizational performance (cf. Leidner & Kayworth, 2006). Overall, we expect that if organizations adopt HRIS according to the culture they are embedded in, the results will be higher performance indicators, such as less turnover and absenteeism. Conversely, if organizations adopt HRIS that deviate from the dominant societal culture, the results will be decreases in these performance indicators.

To support our arguments, we borrowed from the literature on fit that emphasizes the important effect of compatibility between national (societal) culture and organizational human resource practices on organizational performance (see, e.g., Aycan, 2005; Kanungo & Jaeger, 1990; Mendonca and Kanungo, 1994). However, while empirical studies have shown that national values predict organizational processes and managerial practices (e.g., Communal & Senior 1999; Hofstede & Peterson, 2000), there is also evidence to suggest that managerial decisions and operations, including HR practices, may reflect strategic goals and interests, that deviate at times from the norms established by the national culture (e.g., House et al, 2004). Drawing from the literature on fit, it follows that when employees are exposed to HR activities that do not fit the national culture, they will tend to respond negatively (Aycan, 2005; Aycan et al., 2000). When the negative reactions are combined across all employees, they are expected to contribute to negative aggregate outcomes for the organization, such as high levels of absenteeism and turnover. On the other hand, when employees are exposed to HR activities that fit the national culture, they will respond positively, which will lead to positive aggregate organizational outcomes (Aycan, 2005).

Drawing on these assumptions, we propose that consistency versus inconsistency between the national values and the HRIS the organization adopts will contribute to the organizational outcomes of absenteeism and turnover. Our hypotheses, which follow, are based on the earlier discussion on the expected consistency between national culture and organizational HRIS. More specifically, our earlier reasoning concerning the fit between societies low in power distance and HR information systems, leads us to the following hypothesis:

> *H5: In a. low power distance societies ;b. future-oriented societies; c. collectivistic societies; and d. low uncertainty avoidance societies, organizations are likely to have lower rates of turnover and absenteeism if they adopt an advanced HRIS (in which the system is integrated into a wider management information system and is interactive in nature) than if they do not.*

Figure 1: Description of the study



## Method

### Sample

The sample consisted of 5,991 organizations from 21 countries: Australia, Austria, Canada, Denmark, Germany, Greece, Hungary, Ireland, Israel, Italy, Finland, The Netherlands, New Zealand, Philippines, Portugal, Slovenia, Sweden, Switzerland, Turkey, USA, UK.

### Data Sources

Data for the study were obtained from two independent sources:

1. The CRANET (Cranfield Network on Comparative Human Resource Management) 2004 database of international HRM. Data for the project are collected annually at organizations with 200 employees or more worldwide. The data collection tool is a standardized postal questionnaire, addressed to the most senior HR/personnel specialist in each organization. Questions seek factual answers (numbers or percentages) or a yes/no response to factual questions (e.g., Do you use…?). The criteria for selecting organizations for the present study were: (1) full and clean data on training; and (2) participation of the respective country in the GLOBE project (see below).
2. The GLOBE (Global Leadership and Organizational Behavior Effectiveness) 2004 database. GLOBE is a multi-phase multi-method project, in which investigators spanning the world examine inter-relationships between societal culture, organizational culture, and organizational leadership. The GLOBE Project was founded in 1993. Today, scholars from 61 countries, representing all major regions of the world, are engaged in this long-term programmatic series of cross-cultural leadership studies.

### Variables and Measurement

<u>Indices of HRIS</u>

The following measures were obtained from the 2004 CRANET database:

*1. Type of HRIS:* This measure describes the type of computerized HR system in the organization on a 1 to 3 scale, with 1 = do not have computerized HR; 2 = independent; and 3 = integrated with wider management system

*2. IS Communication Design of HR Information System.* This measure describes the degree to which the computerized HR system is designed to disseminate information interactively. The measurement uses a 1 to 5 scale, with 1 = one-way communication to the entire group of employees (for example, publishing information for the use of all the employees); 2 = one-way communication to a specific individual (for example benefits and schedule); 3 = two-way communication with simple update by the employee on his/her records (for example bank record); 4 = two-way communication with complex transaction in which the employee is able to select items such as preferred benefits which can be approved/disapprove by the computerized system; and 5 = more complex two-way communication system

<u>Cultural Practical Values</u>

The following measures were obtained from the GLOBE database (House et al., 2004):

1. Power distance;2. Future orientation; 3.Uncertainty avoidance; 4. Individualism.

These data reflected the national values of the participating countries. The values used in the present study reflected reported practices ("as is") and they tell us about the current perceptions of each culture (as opposed to feelings about cultural aspirations). Aspiration values refer to the society's ideal values, while practical values measure the society's actual engagement in a particular value. In the professional literature, while measuring the effects of societal culture, it is common to

use practical values and not aspiration values (for example, Brodbeck, Hanges, Dickson, Gupta and Dorfman, 2004).

Scores for the four cultural values ranged between 1 (lowest) and 7 (highest).

Organizational background

Data on four organizational background variables were taken from the CRANET database.

*1. Technology level*. This measure provides categorical information on whether the organization is high tech (the categories are 1 = low, 2 = middle, and 3 = high tech).

*2. Organizational Size*. This variable indicated the total number of employees in a given organization. Because of the non-normal distribution of this variable, we divided the distribution into three categories based on percentage: small (scored 1, 33.4%), medium (scored 2, 33.2%), and large (scored 3, 33.4%).

*3. Organization Age:* This item indicated the establish year of the organization.

*4. Sector*. This item indicated whether the organization belongs to the private (1) or the public (2) sector.

*5. Level of globalization*. This item indicated whether the organization operates locally (1) or in the global arena (2).

Economic strength

*Gross National Index (GNI*) was used as a control variable. GNI comprises the total value of goods and services produced in a country, together with its income received from other countries minus payments made to other countries.

**Analytic Strategy**

Analysis was performed in two phases. In *phase one*, we examined the effects of national values on HR information systems, above and beyond the organization background variables and the economic indicator of GNI. To accomplish this, we used multilevel analysis (hierarchical linear modeling, HLM) to model the structure of the data (Bryk & Raudenbush, 1992). Because of the range differences of the variables, we converted the scores using standard Z scores.

In *phase two*, we explored the interactive effects of societal cultures and HR information strategies on organizational performance outcomes. Again, we used multilevel analysis in which organizational characteristics and GNI are the covariates, HR information systems are level-one predictors and cultural values are level-two predictors

## Results

Means, standard deviations, ranges, and correlations for the study's level-1 dependent variables (organizational level) and level-2- independent variables (national level) are presented in Tables 1, 2 and 3, respectively.

Results at the organizational level showed that the two HRIS measures had low inter-correlations (.07**). At the national level all four possible inter-correlations (N=21) had medium to high inter-correlations.

Table 1: Means, Standard Deviations, Ranges, and Correlations among HR information system measures: Organizational Level (Level 1)

| | Type of HR Information System | HR-IS communication design |
|---|---|---|
| Type | - | .07** |
| **Mean SD)** | 2.06 | 1.96 |
| | (.69) | (1.35) |
| **Range** | 1-3 | 1-5 |

N= 5,991 **p<.01

Table 2: Means, Standard Deviations, Ranges, and Correlations among Organizational Performance measures: Organizational Level (Level 1)

| | Absenteeism | Turnover |
|---|---|---|
| Absenteeism | - | .02 |
| **Mean (SD)** | 8.52 | 11.26 |
| | (6.61) | (18.18) |
| **Range** | 0-45 | 0-766 |

N= 5,991 *p<.05 **p<.01

Table 3: Means, Standard Deviations, Ranges, and Correlations among national values (Level 2)

| | Power distance | Uncertainty avoidance | Future orientation | Collectivism |
|---|---|---|---|---|
| Power distance | - | -.36* | -.54** | -.10** |
| Uncertainty avoidance | - | - | .74** | -.41** |
| Future orientation | - | - | - | -.29** |
| **Mean (SD)** | 5.01 | 4.70 | 4.21 | 4.46 |
| | (.40) | (.56) | (.41) | (.71) |
| **Range** | 4.14-5.68 | 3.26-5.42 | 3.31-4.80 | 3.46-6.14 |

N= 21 *p<.05 **p<.01

## Hypothesis Testing

### *Phase one*

Before investigating the relationship of all four national values on HRIS, we tested for possible multicollinearity. This test seemed necessary, given the relatively high correlations among the independent variables (the highest being r=.74, p<.01 between uncertainty avoidance and future orientation: see Table 3). We used the Variance Inflation Factor (VIF) index, with stepwise regression, to examine possible multicollinearity. VIF=5.3 was used as the cutoff point for multicollinearity (Hair, Anderson, Tatham, & Black, 1998). This procedure revealed a VIF of 1.33, suggesting no multicollinearity in our equation. Thus, all four country-level variables could be used in the same HLM equation.

To test the unique relationship between the four country (societal) values and HRIS measures, we conducted a set of regression analyses. Specifically, we first examined the

relationship of the organizational-level variables and GNI with the PA measures, followed by the relationship of the country values with these HRIS measures, after controlling for the organizational-level variables and GNI. The results of the first phase of the analysis (Table 4, step 1) indicated that among the organization-level variables, size, sector and level of globalization were positively related to the type of HRIS. Size and technology level were positively related to stage of E-HRM development.

Second, we examined the effect of GNI on HRIS outcomes, using the maximum likelihood method of HLM analysis. The HRIS outcomes were at level-1 (organizational-level) and GNI was at level-2 (national-level). The results (Table 4, step 2) indicated that GNI was related only to the type of HRIS (the higher the GNI, the higher the use of HRIS that was integrated with a wider management system)

Table 4: Summary of the Regression Analysis for HR Information system (HR-IS) outcomes

| Step | Level of analysis | | Type of HR System β | [2] HR-IS communication design β |
|---|---|---|---|---|
| 1 | Organizational level | Size | **.05*** | **.08**** |
| | | Tech. level | .02 | **.08**** |
| | | Age | **.06*** | **.05*** |
| | | Sector | **.08**** | .02 |
| | | Globalization | **.05*** | .01 |
| 2 | National level (HLM) | GNI | **.06*** | .03 |
| 3 | National level (HLM) (while Organizational variables and GNI are controls) | Power distance (PD) | .04 | **-.10**** |
| | | Future orientation (FO) | **.06*** | **.15**** |
| | | Uncertainty avoidance (UA) | **-.07*** | .03 |
| | | Collectivism (Coll) | **.15**** | .04 |

*P<.05 **P<.01

Type of HR System: 1=do not have computerized HR / 2=independent / 3=integrated with wider management system

[2] HR-IS communication design: 1=one way / 2=one way but with some access / 3=two way with simple update / 4=two way but complex transaction / 5=more complex

Finally, we examine the relationship between national values (country-level variables) and HRIS measures, controlling for the organizational-level variables. These associations were also analyzed by the maximum likelihood method of HLM, to estimate the values of the regression coefficients, and the intercept and slope variance1 (Table 4, step 3). In this analysis all independent

[1] This general estimation procedure produces estimates for the population parameters that maximize the probability of observing the data that are actually observed, given the model (Hox, 2002).

variables (organizational background characteristics, GNI and national values) were entered into the same equation, with background variables and GNI were entered first into the equation as controls. The purpose was to detect the unique effect of national values, above and beyond the effects of organizational characteristics and economic strength.

The results indicate that our hypotheses pertaining to societal values and HRIS (H1 through H4) were generally supported: power distance was negatively related to IS communication design (β = -.10**); future orientation was positively related to the type of HRIS (β = .06*) and to IS communication design (β = .15**), collectivism was positively related to the type of HRIS (β = .15**); and uncertainty avoidance was negatively related to the type of HRIS (β = -.07*). However, uncertainty avoidance and collectivism were not found to be significantly related to IS communication design, and power distance was not found to be significantly related to the type of HRIS.

***Phase two***

In the second phase of the analysis, organizational performance variables were included. The purpose was to investigate the combined (joint) effect of national values and HRIS variables on organizational performance.

Table 5: Summary of the Interactions between HR Information system (HR-IS) outcomes and National values on Organizational Outcomes (controlling for GNI and the organizational background variables)

| | Absenteeism<br>β | Turnover<br>β |
|---|---|---|
| Type | **-.05*** | -.02 |
| Stage | -.02 | -.02 |
| PD | -.01 | .00 |
| PD X Type | -.03 | .00 |
| PD X Stage | -.02 | .02 |
| Type | **-.05*** | -.02 |
| Stage | -.02 | -.01 |
| FO | **-.06**** | **-.06**** |
| FO X Type | -.04 | -.03 |
| FO X Stage | **-.05*** | -.03 |
| Type | **-.05*** | -02 |
| Stage | -.02 | -.01 |
| UA | .02 | **-.08**** |
| UA X Type | **-.06*** | .00 |
| UA X Stage | **-.05*** | **-.04*** |
| Type | **-05*** | -.02 |
| Stage | -.02 | -.01 |
| COLL | **-.04*** | **-.08**** |
| COLL X Type | **-.07**** | -.01 |
| COLL X Stage | -.02 | -.01 |

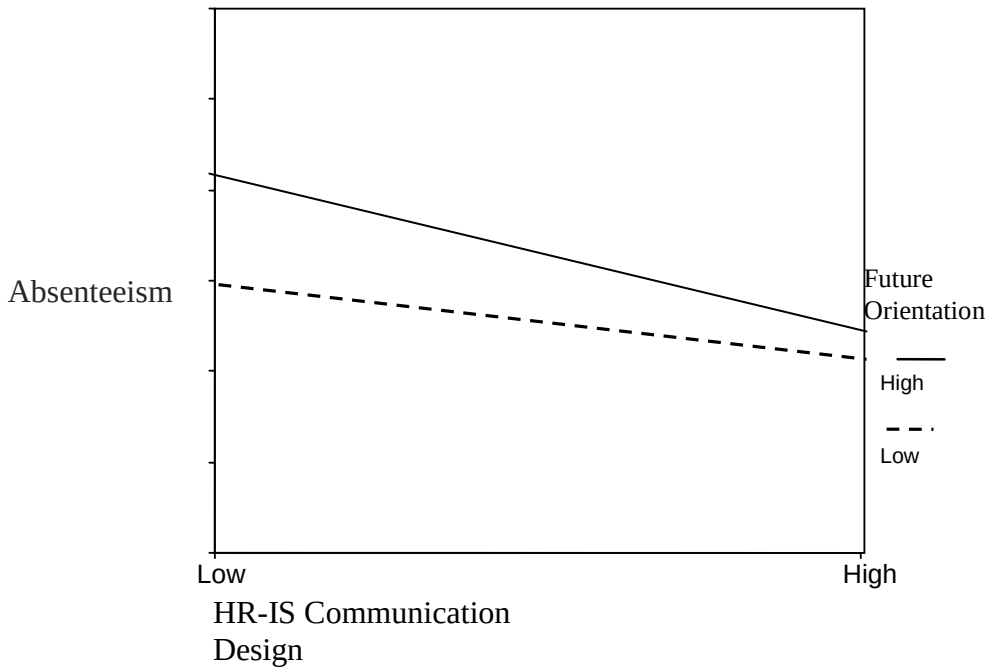
To test hypotheses 5a-5d, we conducted a series of multi-level regression analyses using HLM. The HRIS variables and organizational performance outcomes were measured at level 1 (organizational level), and culture values was measured at level 2 (national level). A summary of the results is presented in Table 5.

The results provided general support to our hypotheses pertaining to the interactions between the national values and the HRIS indicators, such that the interactions were significant with regard to turnover and/or absenteeism in 3 of the 4 interactions. To more systematically examine the direction of the interactions, we graphed the results (these Figures are presented at the end of the paper). The specific patterns of the interactions supported the direction of our hypotheses.

The results failed to support Hypothesis 5a, but provided partial confirmation of Hypothesis 5b by supporting the interactive effect of future-orientation and HRIS communication design on absenteeism ($\beta$ = -.05*). The figure depicting this interaction (see Figures 2) supports the notion that in societies characterized by high future-orientation, organizations tend to have lower absenteeism rates if they adopt advanced complex HRIS.

Further, the results pertaining to Hypothesis 5c provided partial support for the hypothesized interactions between collectivism and the type of HRIS. More specifically, we found an interaction between collectivism and type of HRIS on absenteeism ($\beta$ = -.07**). The pattern shown in Figure 3 supported the directions hypothesized by Hypothesis 8, in that it indicates that in collectivistic societies, organizations that adopted a more advanced type of HRIS reported lower level of absenteeism.

Figure **2**: Interactive effect of Stage of HR-IS and Future Orientation on absenteeism




The results pertaining to Hypothesis 5d supported the hypothesized interactive effect of uncertainty avoidance and HRIS communication design on absenteeism and turnover ($\beta$ = -.05* and -.04* respectively), and of uncertainty avoidance and type of HRIs on absenteeism ($\beta$ = -.06*).

As hypothesized, the results indicated that in societies characterized by low uncertainty avoidance, organizations that implement advanced HRIS tended to show lower absenteeism and turnover than did organizations that did not implement such systems (see Figures 5-6).

Figure **3**: Interactive effect of Type of HR-IS and Collectivism on Absenteeism

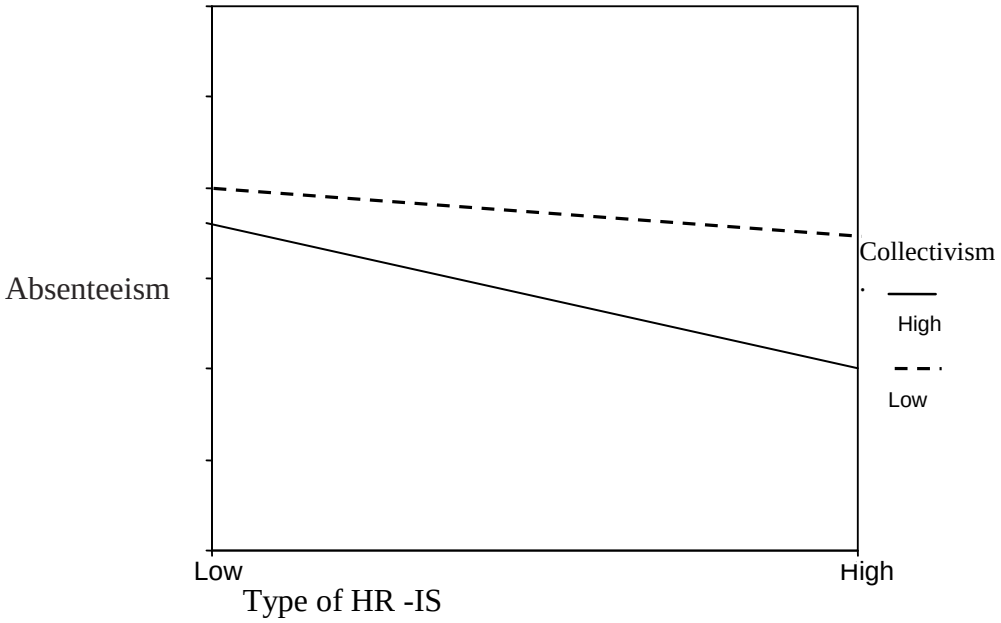



Figure 4: Interactive effect of Type of HR-IS and Uncertainty Avoidance on Absenteeism

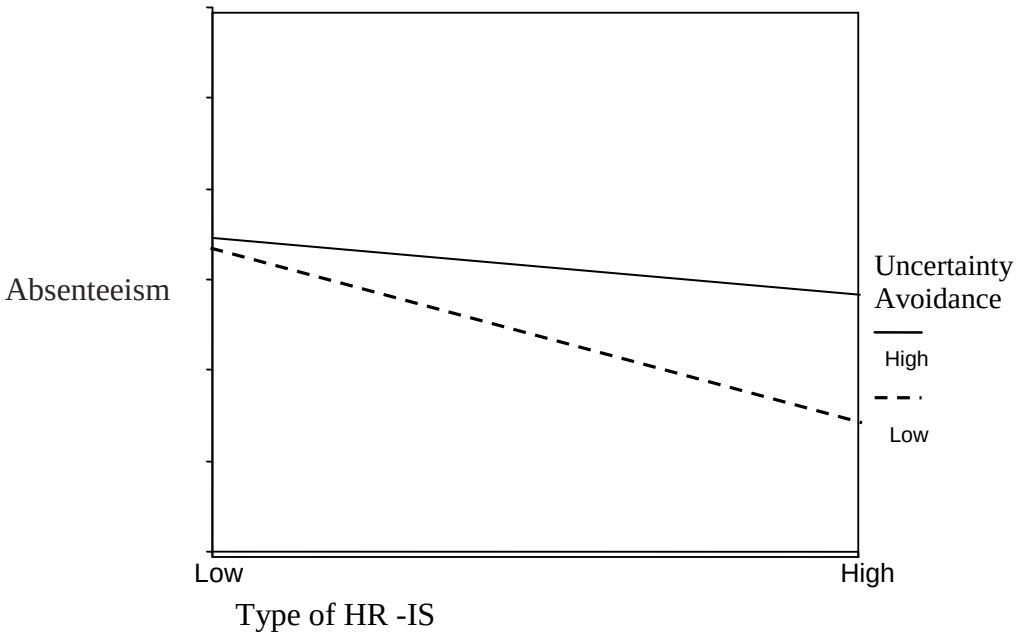


Figure 5: Interactive effect of Stage of HR-IS and Uncertainty Avoidance on Absenteeism

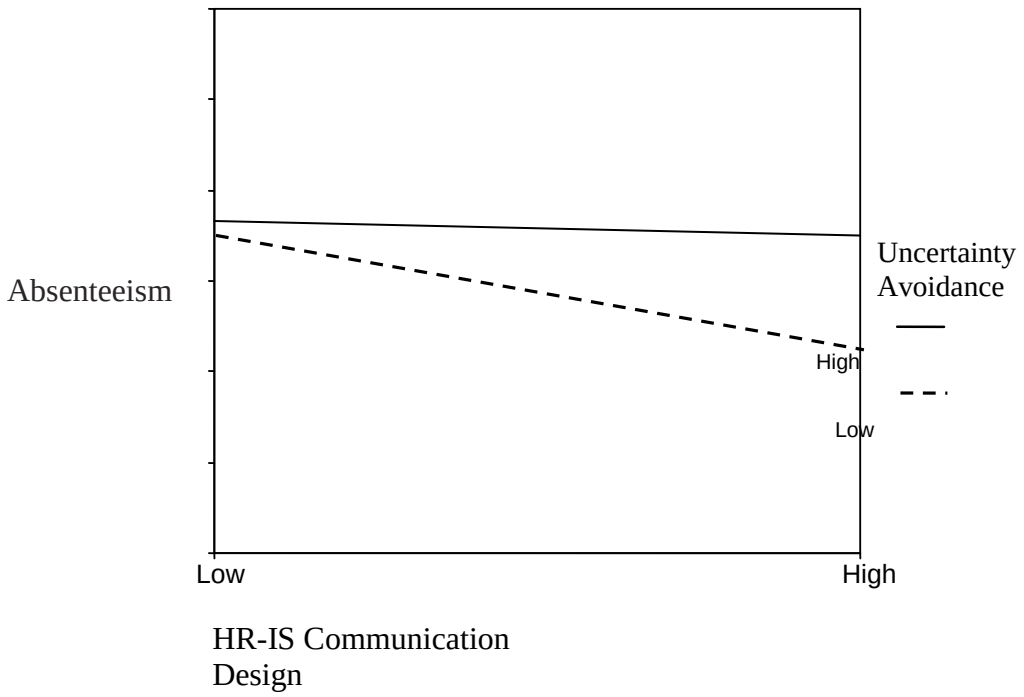
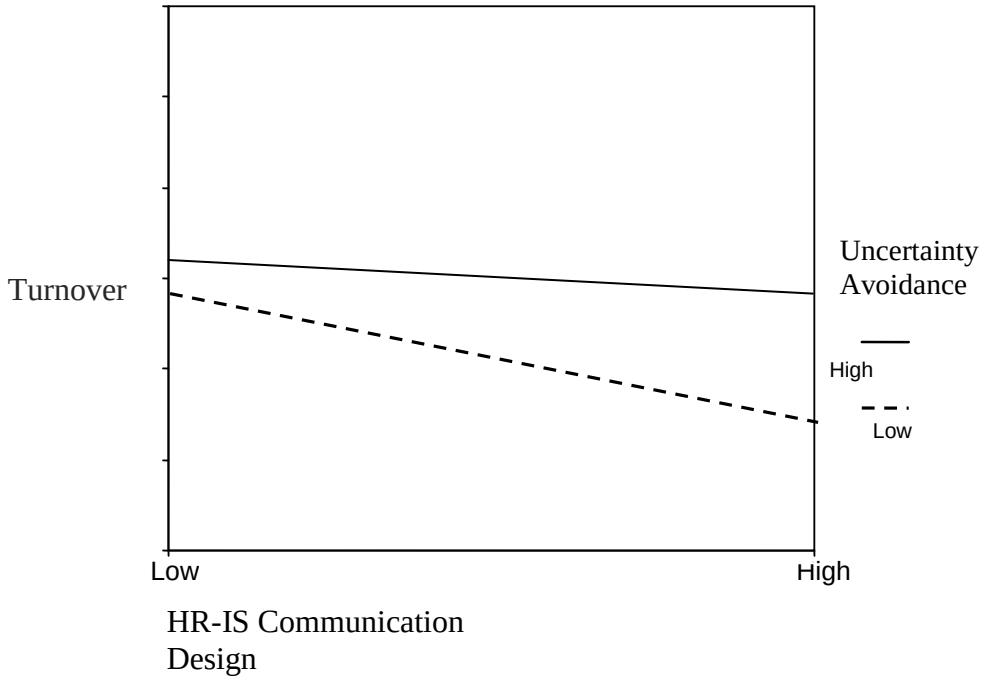



Figure 6: Interactive effect of Stage of HR-IS and Uncertainty Avoidance on Turnover



In addition, we found several main effects for both national variables and HRIS variables on organizational performance variables (see Table 5). Uncertainty avoidance was negatively related to turnover (β = -.08**); collectivism was negatively related to absenteeism (β = -.04*) and turnover (β = -.08*); and future orientation was negatively related to absenteeism and turnover (β = -06** to both). With regard to HRIS variables, type of HRIS was negatively related to absenteeism (β =.-05*).

## Conclusions

The present study has focused on the important issue of the relationship between societal culture and the use of information technology in the HR area. We focused on two complementary issues: (a) the influence of national values on the implementation practices of information technology in the HR area (i.e., degree of integration of HRIS into a wider management information system and the degree to which the HRIS was interactive in nature); and (b) the contribution of the level of fit between national values and these HR information technology practices on two key organizational outcomes: absenteeism and turnover. The results generally supported our hypotheses by indicating that national cultures affect the information technology practices in the HR area and that absenteeism and turnover tend to be affected by the level of fit between the societal culture and the HR-related information technology practices. The higher the fit, the lower the absenteeism and turnover.

A methodological strength of the present study is the independence of its data sources. While the organizational-level data on information technology practices has been obtained from the CRANET study, the country-level data on cultural values have been obtained from the GLOBE study. The consistent theory-based relationships found in the study, occurring in datasets from different sources, clearly strengthen the conclusions that can be drawn. Another strength of the study is the multi-level analysis that was conducted. Relatively few studies have examined the interaction between variables at the organizational level and national level, taking into account the nested structure of the data (in the current study, organizations within countries; e.g., Brown, 2005).

The results pertaining to cultural values support culture-based theories such as those originally advanced by Hofstede (1991) and later developed by the GLOBE study (House et al., 2002), namely that management is influenced not only by organizational culture, but also by the culture of the larger society surrounding the organization (Schein, 2000). In a later publication, Hofstede (2000) discussed the complex relationships between national and organizational culture. He raised the question of whether management can establish a strong organizational culture that reflects values different from those of the larger national culture and that compete with societal socialization practices. He further argued that even strong organizational cultures of multi-national organizations will be subject to local reinterpretations of their “standard” values when their practices are transferred abroad. Thus, even seemingly identical practices in multi-national organizations can produce different nuances in different countries. Understanding the influence of national cultures is therefore of great importance for understanding organizational cultures.

## International and managerial implication

The study results provide important theoretical and practical implications. Theoretically, the results enhance our understanding of the effect of national values on information technology practices in HR, and on organizational outcomes. Practically, because of increases in globalization and in the pervasiveness of international business operations, corporations are likely to benefit from

research findings on the adaptation of information technology practices under different environmental conditions, and their effects on performance-related outcomes. Thus, the results of this study can enable managers who are responsible for global operations or who are in organizations competing in the global market, to decide more effectively which information technologies practices to implement in different societal cultures. The study clearly indicates that understanding the fit between HR-related information technology practices and societal values is an important basis in implementing effective information technology practices (cf. Leidner & Kayworth, 2006).

The knowledge derived from the present study about cultural effects is applicable to studies concerning cross-cultural organizational processes, such as globalization, outsourcing, and expatriate behavior. Studies of information technology practices across societal cultures (e.g., Snape, Thompson, Yam & Redman, 1998) need to consider the separate and the interactive contributions of organizational and national factors. Kim (1999) stated that globalization implies accepting that cultural diversity in management composition and style contributes to the competitive advantage of the firm. The results of the present study suggest that globalization also implies acceptance of both national and organizational diversity. Ultimately, recognition and acceptance of such values should contribute to the successful operation of multi-national firms.

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English Abstract

# Information Technology Systems in the Human Resource Area:

## A Cross Culture Approach

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**Abstract**

Using two independent large databases of 5,991 organizations in 21 countries, this study explored (a) the influence of national values on human resource (HR) information system practices (type of HR information system and information system communication design) adopted by organizations; and (b) the contribution of the level of fit between national values and these HR information system practices to two key organizational performance indicators: absenteeism and turnover. Results showed that national values explained HR information system practices and supported the hypothesized interactive effects of national values and HR information system practices on absenteeism and turnover. The results have strong implications for organizations concerned with how to maximize the fit between particular cultures and HR information system practices as a basis to enhance organizational performance indicators.

**Keywords:** Human resource management, cross culture, information system

French Abstract*

Information Technology Systems in the Human Resource Area: A Cross Culture Approach

# Systèmes technologiques d'information GRH

## Une approche interculturelle

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**Résumé**

A partir de deux bases de données indépendantes, comprenant 5991 organisations dans 21 pays, cette étude explore : (a) comment des valeurs nationales influent sur les pratiques en matière de systèmes d'information GRH adoptés par des organisations, et (b) le niveau de concordance entre les valeurs nationales et la pratique de ces systèmes d'information GRH par rapport à deux indicateurs-clés de performance que sont l'absentéisme et le chiffre d'affaires. Les résultats montrent que les valeurs nationales expliquent des pratiques en matière de systèmes d'information GRH. Les résultats soutiennent l'hypothèse des effets interactifs des pratiques en matière de systèmes d'information GRH sur l'absentéisme et le chiffre d'affaires. Les résultats ont des implications fortes pour les organisations qui se demandent comment elles peuvent optimiser l'ajustement entre cultures particulières et les pratiques en matière de système d'information GRH, de manière à favoriser la performance organisationnelle.

**Mots clés :** Gestion des ressources humaines, l'interculturel, système d'information

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Spanish Abstract*

Information Technology Systems in the Human Resource Area: A Cross Culture Approach

# Sistemas de Tecnología de la Información en los Recursos Humanos

## Un enfoque Trans-Cultural

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**Resumen**

Utilizando dos grandes bases de datos independientes de 5.991 organizaciones en 21 países, este estudio explora: (a) la influencia de los valores nacionales en la aplicación de los sistemas de información a los Recursos Humanos (HR) adoptado por las organizaciones (un tipo de diseño de sistema de información de recursos humanos y de sistema de información de la comunicación) y (b) la contribución del nivel de ajuste entre los valores nacionales y las prácticas de estos sistemas de información a dos indicadores clave del rendimiento organizacional: el absentismo y la facturación. Los resultados mostraron que los valores nacionales explican las prácticas de los sistemas de información de los Recursos Humanos y confirmaron la hipótesis de la relación existente entre los valores nacionales y las prácticas de los sistemas de información de Recursos Humanos en el absentismo y la facturación. Los resultados tienen una fuerte implicación para las organizaciones preocupadas con la forma de maximizar el ajuste entre las culturas particulares y las prácticas de los sistemas de información de Recursos Humanos como base para mejorar los indicadores de rendimiento de la organización.

**Palabras clave:** Gestión de recursos humanos, trans-cultural, sistemas de información.

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German Abstract*

Information Technology Systems in the Human Resource Area: A Cross Culture Approach

# Einsatz von IT Systemen im Personalbereich

## Ein Cross-Culture Ansatz

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**Zusammenfassung**

Auf Basis einer großen Datenbank mit Informationen aus über 5,991 Organisationen aus 21 Ländern untersucht die vorliegende Studie (a) den Einfluss von nationalen Werten auf Human Resource (HR) Informationssysteme sowie deren Anwendung in Form von unterschiedlichen Typen von HR Informationssystemen und das Informationssystem-Kommunikation Design und (b) deren Beitrag bezogen auf zwei Schlüssel-Performance Indikatoren „Absentismus“ und „Umsatz“. Die Ergebnisse zeigen, dass das nationale Wertesystem den Einsatz und die Nutzung von HR Informationssystemen und bestätigt die zugrundeliegenden Hypothesen. Die Resultate der Studie geben eine gute Implikationsgrundlage für Organisationen, wie diese den Fit zwischen ihrer speziellen Kultur und den verwendeten HR Informationssystemen maximieren können, um so ihre Performance Indikatoren steigern zu können.

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Italian Abstract*

Information Technology Systems in the Human Resource Area: A Cross Culture Approach

# I sistemi informativi nell'ambito della gestione risorse umane

## Un approccio relativo a varie culture

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Abstract

Utilizzando due consistenti e indipendenti database di 5.991 aziende e 21 nazioni, questo studio ha esplorato : a) l'influenza dei valori nazionali su sistemi informativi di gestione delle risorse umane ( tipologia di sistemi informativi e design del sistema di comunicazione degli stessi ); e b) la relazione del livello di compatibilità fra valori nazionali e pratiche riguardanti questi specifici sistemi informativi per due indicatori di prestazione chiave: assenteismo e turnover . I risultati hanno evidenziato che i valori nazionali spiegano il perché di particolari utilizzi di sistemi informativi in questione e hanno supportato l'ipotesi di una interazione fra valori nazionali e utilizzo di sistemi informativi per la gestione delle risorse umane riguardo ad assenteismo e turnover. I risultati hanno delle forti implicazioni per aziende che intendono massimizzare l'integrazione fra le caratteristiche di particolari culture e sistemi informativi relativi alla gestione risorse umane allo scopo di migliorare indicatori di prestazione

**Parole chiave:** Gestione delle risorse umane, varie culture, sistemi informativi

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Arabic Abstract*

# Information Technology Systems in the Human Resource Area: A Cross Culture Approach

# نظم تكنولوجيا المعلومات في مجال الموارد البشرية

## نهج ثقافي مشترك

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**خلاصة**

قامت هذه الدراسة بإستخدام قاعدتا بيانات مترابطتين من 5991 منظمة في 21 بلد بإستطلاع أ)تأثير القيم الوطنية على ممارسات نظام معلومات الموارد البشرية (نوع من نظام معلومات الموارد البشرية وتصميم نظام المعلومات والإتصالات) المعتمدة من قبل المنظمة، وب) مساهمة درجة التناسب بين القيم الوطنية وممارسات نظام معلومات الموارد البشرية إلى مؤشرات الأداء الرئيسية في المنظمة: التغيب والعائد. بينت النتائج أن القيم الوطنية فسرت ممارسات نظام معلومات الموارد البشرية كما أيدت إفتراض الآثار التفاعلية من القيم الوطنية وممارسات نظام معلومات الموارد البشرية المتعلقة بالغياب والعائد. تترتب على النتائج آثار قوية للمنظمات المعنية بكيفية تعظيم التناسب بين ثقافات معينة وممارسات نظام معلومات الموارد البشرية كأساس لزيادة مؤشرات أداء المنظمة.

الكلمات الرئيسية : إدارة الموارد البشرية؛ الثقافة الشاملة؛ نظام معلومات.

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Hebrew Abstract

Information Technology Systems in the Human Resource Area
A Cross Culture Approach

# מערכות מידע ממוחשבות בתחום משאבי אנוש:
## גישה בין תרבותית

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**תקציר**

באמצעות שני בסיסי נתונים בלתי תלויים הכוללים 5,991 ארגונים מ 21 מדינות, מחקר זה בדק: א. את ההשפעה של ערכים תרבותיים על השימוש במערכות מידע ממוחשבות בתחום משאבי אנוש (סוג המערכת ועיצוב התקשורת במערכת), ב. ההשפעה שלי מידת ההלימה בין ערכים תרבותיים ובין מערכות מידע ממוחשבות בתחום משאבי אנוש על שני משתני מפתח בביצועים ארגוניים – היעדרויות ותחלופת עובדים. תוצאות המחקר מעידות כי ערכים תרבותיים מסבירים את דרך השימוש במערכות מידע ממוחשבות בתחום משאבי אנוש, ותומכות בהשערת האינטראקציה שבין ערכים תרבותיים ובין מערכות מידע ממוחשבות בתחום משאבי אנוש על היעדרויות ותחלופה. לתוצאות השלכות יישומיות רבות אשר עוזרות לארגונים למקסם את ההתאמה שבין התרבות בה הם פועלים ודרך השימוש במערכות מידע ממוחשבות בתחום משאבי אנוש וזאת לשם הפחתת היעדרויות ותחלופת העובדים.