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A STUDY ON EVALUATING THE VALIDITY AND RELIABILITY OF HIGH PERFORMANCE WORK SYSTEMS (HPWS) SCALE IN TURKISH

Abstract:

High-Performance Work Systems (HPWS) are generally defined by the combination of single practices that collectively affect organizational performance. High performance human resource practices can be listed as provision of job security, extensive skills, training, promotion, results-oriented appraisal and broad career paths. HPWS foster employees' shared perceptions of an organizational environment that motivates discretionary behaviors that contribute to organizational performance (Sun, Aryee & Law, 2007). HPWS are expected to contribute to employees in a positive way in terms of certain skills and duties due to flexibility and empowerment they provide (Yalabık et. al., 2008). HPWS has the greatest potential to provide sustained competitive advantage to companies they adopt it. The main idea of HPWS is to create an organization based on employee involvement, commitment and empowerment without employee control. HPWS organizations use an approach that is fundamentally different from the traditional hierarchical or bureaucratic approach which is known as control oriented approach (Tomer, 2001). The aim of this study is to investigate the validity and reliability of the HPWS scale in Turkish which was developed by Sun, Aryee and Law (2007) and analyze the relationship between HPWS and demographic variables. In this perspective, the theoretical background and literature review about HPWS is given and then the statistical results are discussed in the context of the validity and reliability of the scale. The scale developed by Sun, Aryee and Law (2007) has 8 dimensions as "Selective Staffing", "Extensive Training", "Internal Mobility", "Employment Security", "Clear Job Description", "Results-Oriented Appraisal", "Incentive Reward" and "Participation". The method which was proposed by Brislin et. Al. (1973) is used for the translation of the scale. This method consists of a process as translating to the target language, evaluating the translation, translating back to the source language, evaluating the translation again and consulting to the experts. Exploratory and confirmatory factor analysis is used for the scale. Then the results and findings are discussed according to the current literature of HPWS.

Keywords:

High performance work systems, human resource management, reliability, validity.

JEL Classification: M12, M19

1. INTRODUCTION

High-performance work systems (HPWS) consist of a bundle of actions that focus on the improvement of individuals' performance opportunities and their motivations. HR systems are expected to work through its impacts on the skills and knowledge of employees, their willingness to improve effort and their opportunities to express their talents in their work. HPWS are expected to contribute to employees in a positive way in terms of certain skills and duties due to flexibility and empowerment they provide (Yalabık et. al., 2008). HPWS has the greatest potential to provide sustained competitive advantage to companies they adopt it. The main idea of HPWS is to create an organization based on employee involvement, commitment and empowerment without employee control. HPWS organizations use an approach that is fundamentally different from the traditional hierarchical or bureaucratic approach which is known as control oriented approach (Tomer, 2001).

2. HIGH PERFORMANCE WORK SYSTEMS (HPWS)

HPWS are generally defined to include selective hiring, extensive training, performance-based pay, workplace empowerment, reduced status differentials and sharing organizational information with employees (Yalabık et.al, 2008). They are also defined by the combination of single practices that collectively affect organizational performance. Also known as high-performance work practices or high-involvement work systems, the HPWS stream argues that strategic human resource practices 'designed to enhance employee's skills, involvement, commitment and productivity might inspire the workforce to work harder or better in such a way that employees become a source of competitive advantage' (Zhang et al.,2014; Steigenberger, 2013; Datta et al. 2005). Lawler (1992) suggests that HPWSs should lead to less voluntary turnover since HPWSs provide more flexibility and autonomy to employees. By considering this, it is possible to say that HPWS has the great potential to provide sustained competitive advantage to companies adopting it (Tomer, 2001).

High-performance work systems (HPWS) research has dominated innovative human resource management studies for two decades. The HPWS literature has helped to underline the fact that HR systems affect both the psychological climates of individual employees and the organizational context in which they are embedded (Boxall, 2012; Evans and Davis, 2005). However, mainstream HPWS research has paid less attention to employees' perceptions of HPWS, or to the relationship between HPWS and corporate social performance (CSP) (Zhang et al., 2014) even though the individual and collective levels are inextricably blended. The reason for inseparability depends on the influence of the physical and interpersonal features in employee's working environment on his performance opportunity/ outcomes and motivation. The influence of CSP on employee outcomes such as organizational commitment and organizational citizenship behavior (OCB) has thus been similarly neglected. (Zhang et al., 2014)

While strategic HRM research has disproportionately focused on the unit-level of analysis, there is a growing research interest in understanding employees' perceptions of and reactions to HR systems. Through the integration of macro and micro level HRM

researches, scholars have started to examine the influence of HR systems on individual attitudes and behaviors. (Jiang et al., 2013.; Nishii et al., 2008; Takeuchi et al., 2009). Different from traditional micro-HR research, strategic HRM research at the individual level focuses on the influence of HR systems rather than a single HR practice on individual outcomes. There are various mediating variables that may play roles in the HR systems–performance relationship. Several dominant perspectives have been used to explain the black box at the firm- or unit-level of analysis in the strategic HRM literature (Jiang et al., 2013). Briefly "the black box" refers to the chain of links or mediators inside the firm's models of HRM. According to the HPWS debate, there is an understanding in which all HR systems depend on influencing the abilities (A), motivations (M), and opportunities (O) of individuals to perform (Boxall, 2012; Appelbaum et al. 2000; Huselid 1995; MacDuffie 1995). In that respect there is need to study how managers and employees envisage HRM, how they perceive and enact it, and how it affects the complex organizational climate concerning both psychological and social aspects of organizations, particularly the institutive ones which perform HR functions more strategically.

A wide variety of theoretical perspectives, such as expectancy theory, equity theory, social exchange theory, self-determination theory, goal-setting theory, job characteristics theory, and, most recently, engagement theory are used to explain the HRM and organizational behavior integration in the high-performance work systems (Boxall, 2012). High performance human resource practices can be listed as provision of job security, extensive skills, training, promotion, results-oriented appraisal and broad career paths. HPWS foster employees' shared perceptions of an organizational environment that motivates discretionary behaviors that contribute to organizational performance (Sun, Aryee & Law, 2007). Wright and Nishii (2012) suggest that between three different forms of HR practices only perceived HR practices will influence employee attitudes and behaviours which means that the other two forms; intended HR practices (those designed by management), actual HR practices (those implemented by management) have no effect on employees' perceptions of and reactions to HR systems. (Zhang, 2014; Jiang et al., 2013; Nishii and Wright, 2008; Wright & Nishii, 2012). Similarly, it is only the perceived HPWS that will shape employee attitudes and behaviors (Farndale et al. 2011; Guest 1999). Only the HPWS which satisfies employees will elicit high affective commitment and greater discretionary efforts that lead to high performance.

3. RESEARCH METHODOLOGY

The purpose of this study is to investigate the validity and reliability of the HPWS scale in Turkish which was developed by Sun, Aryee and Law (2007) and analyze whether there is a difference among employees in terms of certain demographic variables (gender, age, education) or not. The findings are valuable to develop a HRM scale of the HR practices of Turkish organizations. When the need for empirical studies in this field is considered, it is obvious that both the theoretical and empirical results of this research are expected to make an important contribution to related literature.

3.1.   Sample and Data Collection

The study is conducted with employees working in public and private sectors (n = 65). The method of the research sampling is "convenience sampling" (Balcı, 2005). Reliability and validity analyses are carried for the HPWS scale developed by Sun, Aryee and Law (2007). The scale has 8 dimensions as "Selective Staffing", "Extensive Training", "Internal Mobility", "Employment Security", "Clear Job Description", "Results-Oriented Appraisal", "Incentive Reward" and "Participation". The face validity of the scale is determined by the judgment of the researchers. Face validity is the extent to which a scale is subjectively viewed as covering the concept it purports to measure. In this validity method, a percentage is calculated for the validity. If this calculated percentage is high then we can say that the face validity is high according to this value (Balcı, 2011). The reliability of the scale is found by Cronbach alpha coefficient.

A questionnaire is used as measurement instrument of the research. In the first part of the questionnaire, there are 22 items for HPWS scale. The method which was proposed by Brislin, Lonner and Thorndike (1973) is used for the translation of the scale from English to Turkish. This method consists of a process as translating to the target language, evaluating the translation, translating back to the source language, evaluating the translation again and consulting to the experts. The questions about social demographic qualifications such as gender and education are included to the second part of the questionnaire.

3.2. Data Analysis

The items of HPWS scale are presented using a five-point Likert item as "1: strongly disagree" and "5: strongly agree". Data was analyzed by SPSS for Windows 18.0 package program. Arithmetic mean and standard deviation are used as descriptive statistics techniques for data analysis. Cronbach alpha reliability value is computed to find the reliability of the scale and its dimensions. The reliability value of the scale is 0,947. The value of the scale is very high and within the acceptable limits for researches in social sciences (Kalaycı, 2005: 405). T-test and one way ANOVA analysis is employed in order to test the hypothesis of the research.

3.3. Findings and Results

Employees from various sectors participated to the research (n=65). The sample ranges due to the socio-demographic characteristics are reported in Table 1. Participant group consisted of 37 male (%56,9) and 28 female (%43,1). According to the age range; there were 12 employees between 18-25 (%18,5), 37 employees between 26-33 (%56,9) and 16 employees over 34 years old (%24,6). Education levels were; 30 from graduate school (%46,2) and 32 from post graduate school (49,2). 3 employees did not answer the question about their education. Range of organizational seniority was like that; 11 employees who work less than 1 year (%16,9), 21 employees with 1-4 years seniority (%32,3), 21 employees between 4-7 years seniority (%32,3) and 12 employees who work

more than 7 years (%18,5). %41,5 of all participants were working in public sector and other %58,5 were in private sector.

Table 1. Demographic Characteristics of the Sample

	Variables	Frequency	Percentage (%)
Gender	Male	28	52,8
	Female	25	47,2
Age	18-25	12	18,5
	26-33	37	56,9
	34 and over	16	24,6
Education	Graduate school	30	46,2
	Post graduate school	32	49,2
	Unreplied	3	4,6
Organizational seniority	Less than 1 year	11	16,9
	1-4 years	21	32,3
	4-7 years	21	32,3
	More than 7 years	12	18,5
Sector	Public	28	41,5
	Private	37	58,5

When we examine the descriptive statistical analysis (Table 2), the arithmetic mean of the human performance work systems` scale is computed as 3,18  (std.dev.: 0,81) and this score indicates that participants answered the HPWS items almost as "agree". According to the arithmetic means of the HPWS scale` dimensions, the highest computed arithmetic mean is 3,62 (std dev.: 0,88) for the dimension of "selective staffing", besides the lowest mean is 2,85 (std dev.: 1,19) for "incentive reward".

Table 2. Descriptive Statistics Results and Reliability Values Concerning the HPWS Scale

Scale and dimensions	$\bar{x}$	Std. dev.	Cronbach alpha
HPWS INDEX	3,18	,81	,947
Selective staffing	3,62	,88	,574
Extensive training	3,08	,99	,886
Internal mobility	3,12	1,04	,874
Employment security	3,56	1,06	,816
Clear job description	3,18	1,02	,883
Results-Oriented Appraisal	3,02	1,15	,857
Incentive Reward	2,85	1,19	,760
Participation	3,16	1,07	,925

3.4. Research Hypothesizes and Results

Within the research, it was investigated that whether there is a relationship between employees' perceptions on the human resources management practices and specific demographic variables (gender, age, education, organizational seniority, sector) or not.

H_{1a}: Employees' perceptions on the human resources management practices differ with respect to the sector working in.

In order to investigate if employees' perceptions on HRM practices differ with respect to the sector, t-test was carried out. The result shows that there exists a significant difference (p:0,018<0,05) between the variables and **H_{1a} is accepted.** To understand the difference more clearly, we examined the descriptive statistics. Public sector employees' perception on HRM practices is computed as 2,92 (std.dev.: 0,7) while private sector employees' perception is 3,38 (std.dev.: 0,82). This finding shows that HRM practices are perceived higher in private sector. Besides there are significant differences in the sub dimensions of the scale such as staffing, internal mobility, results-oriented appraisal and participation.

H_{1b}: Employees' perceptions on the human resources management practices differ with respect to their education.

In order to investigate if employees' perceptions on HRM practices differ with respect to their education, t-test was carried out. The finding shows that there exists a significant difference ($p: 0,001 < 0,05$) between the variables and **H$_{1b}$ is accepted.** To understand the difference more clearly, we examined the descriptive statistics. The perception of employees who completed graduate school is computed as 3,52 (std.dev.: 0,82), besides perception of employees from post-graduate schools is 2,84 (std.dev.: 0,66) which shows that HRM practices are perceived higher by the employees who completed the first cycle education. Furthermore we found significant differences also in the sub dimensions of the scale such as staffing, training, clear job description, incentive reward and participation.

We did not find significant differences between the perception on the HRM practices and other demographic variables; seniority, age and gender.

4. CONCLUSION

Human resource management practices stood out in the organization as a strategic function. The reason is that HR function can manage all processes such as staffing, performance appraisal, rewarding, participation of the organization's intellectual capital `employees`. From that perspective, HRM practices has great potential to provide sustained competitive advantage to companies they adopt and effectively manage it. Gaining competitive advantage will step forward the companies against other organizations.

This study has importance since there is not so many researches that aims to investigate the existence and feasibility of human resource management practices of public and private sectors in Turkey. The scales concerning human resources management practices and particularly the ones developed in USA and Europe had not been tested in our country's circumstances. From that point on we analyzed the face validity and reliability of the HPWS scale which was developed by Sun, Aryee and Law (2007). Within this study it is also found that the correlation scores between scale's sub dimensions are considerably high. So this scale can be accepted applicable to Turkey's working conditions. Furthermore the study shows that the perception on the HRM practices differentiate with respect to education and public/private sector division. For further studies, increasing the sample size, hereby examining exploratory and confirmatory factor structure can be suggested.

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