Alanya Akademik Bakış Dergisi
Yıl: 2025, C:9, S:1, s.37-50

Alanya Academic Review Journal
Year: 2025, Vol:9, No:1, p.37-50

Investigating the Impact of High-Performance Work Systems on Innovation Behavior with Structural Equation Modeling*

(Research Article)

Yüksek Performanslı İş Sistemlerinin İnovasyon Davranışı Üzerindeki Etkisi: Yapısal Eşitlik Modellemesi

Doi: 10.29023/alanyaakademik.1458291

Yasaman BAGHINIPOUR[1], Burak Nedim AKTAŞ[2]

[1] Graduate Student, Beykoz University, Institute of Graduate Programs, Master of Business Administration, yasamanbaghinipour@ogrenci.beykoz.edu.tr, Orcid No: 0009-0000-1938-2617

[2] Asst. Prof., Beykoz University, Faculty of Business and Management Sciences, Department of International Trade and Finance, buraknedimaktas@beykoz.edu.tr, Orcid No: 0000-0003-3011-4706

Keywords:
High-Performance Work Systems, HRM, Innovation Behavior, Structural Equation Model

Received:
25.03.2024

Accepted:
19.11.2024

ABSTRACT

This study investigates the relationship between high-performance work systems (HPWS) and innovation behavior (IB) using structural equation modeling. The research was carried out on a sample of 205 managers and employees at diverse hospitals located in Istanbul. The normal distribution conformity of quantitative variables was assessed by examining the skewness values against the threshold points of the kurtosis and skewness values. The independent sample t-test was also used to compare two normally distributed groups, while the one-way Anova test was used to compare three or more groups. Findings reveal a positive and significant effect of HPWS on IB. Moreover, demographic factors such as gender, age, education, tenure, and status are examined for their impact on HPWS and innovation behavior, which yields varying and significant outcomes. The study contributes to theoretical understanding by identifying the mechanisms by which HPWS foster innovation and providing useful insights for organizational practitioners seeking to leverage human capital to achieve sustainable competitive advantage.

Anahtar Kelimeler:
Yüksek Performanslı İş Sistemleri, İKY, İnovasyon Davranışı, Yapısal Eşitlik Modeli

ÖZET

Bu araştırmada, yüksek performanslı iş sistemleri (YPİS) alt boyutlarının (liderlik, istihdam güvencesi, seçici işe alım, iş kalitesi, eğitim ve koşullu tazminat) inovasyon davranışı (İD) üzerindeki etkisini yapısal eşitlik modellemesi kullanarak incelemektedir. Ayrıca, YPİS ve İD'nın katılımcıların demografik özelliklerine göre değişkenlik gösterip göstermediği ele alınmıştır. Sonuçlar, YPİS'nin tüm alt boyutları ile İD üzerinde önemli bir etkiye sahip olduğunu göstermektedir. Öte taraftan, koşullu tazminat hariç, İD ve YPİS alt boyutları arasında cinsiyet açısından farklılık olmadığı ortaya çıkmış, yaş açısından ise, YPİS alt boyutlarında, seçici işe alım hariç, farklılıklar gözlemlenmiş, İD alt boyutları yaşa göre farklılık göstermemiştir. Benzer şekilde, eğitim düzeyine göre İD ve YPİS alt boyutları arasında farklılık saptanmamıştır. Şirketteki hizmet süresine göre, eğitim ve koşullu tazminat hariç, YPİS alt boyutları farklılık göstermiş, İD alt boyutları şirketteki hizmet süresine göre farklılık göstermemiştir. Son olarak, çalışanların şirketteki pozisyonlarına göre YPİS alt boyutları, iş kalitesi dışında, farklılık gösterirken, İD alt boyutları, uygulama hariç, farklılık göstermemiştir.

* Bu makale, yazar Yasaman BAGHINIPOUR'un, Dr. Öğr. Üyesi Burak Nedim AKTAŞ danışmanlığında gerçekleştirilen "Investigation of The Effect of High-Performance Work Systems on Innovation Behavior with Structural Equation Modeling" başlıklı yüksek lisans tez çalışmasından üretilmiş olup, çalışma için Beykoz Üniversitesi Bilimsel Araştırma ve Yayın Etiği Kurulu'nun 08.06.2023 tarihli ve 5 nolu kararınca etik kurul onayı alınmıştır.

1. INTRODUCTION

In their existing competitive and ever-changing business surroundings, businesses are always seeking out approaches to improve their overall performance. Among the exclusive strategies, the adoption of high-performance work systems (HPWS) has attracted much interest. Introduced in the late 80s and early 90s, HPWS is an integrated approach that blends together various human resource (HR) practices in order to raise organizational effectiveness and competitiveness. The essence of HPWS lies in strategic HRM approaches, which are commonly referred to as high-commitment HR practices or high-involvement work practices aimed at maximizing employee skills, motivation, and opportunities (Shin & Konrad, 2014). Given the rapid change operating environment, supporting innovation has become a prerequisite of life. Innovation is the generation and profitable implementation of new ideas and stands at the foundation of sustainable competitive advantage (Dess & Picken, 2000). Viewing the potential of innovation, organizations design an atmosphere in which thought and novel answers could become revolutionized (Agarwal, 2014).

The relationship between HPWS and IB is an exciting area of study in organizational science or practice. Recent research has demonstrated a connection between HPWS and IB, proposing that HPWS could foster a culture about innovation and tap organizational innovation sources (Fu et al., 2015; Shanker et al., 2017). HPWS develops organizations' performance as well as supports a continuous flow of ideas by directly making HR effective; such training also creates an environment for sustainable innovation (Ansari et al., 2018; Bhattacharjee & Sarkar, 2023).

From this point of view, the aim of this study is to examine how HPWS affects IB using structural equation modeling while taking into consideration how HPWS and IB dimensions relate to participant demographics. The research was driven by three main questions: (1) Does HPWS have an impact on IB in organizations? If so, what is the direction and degree of this impact? (2) Do demographic variables have an impact on HPWS in organizations? (3) Do demographic variables have an impact on IB in organizations? A broad understanding of the relationship between HPWS, as an independent variable, and IB, as a dependent variable, was aimed at by investigating the combined effects of their dimensions. HPWS encompasses a bundle of HR practices, including leadership, employment security, selective hiring, job quality, training, and contingent compensation, while IB includes dimensions of exploration, generation, championing, and implementation. Moreover, the research seeks to understand how those variables differ according to demographic characteristics, including gender, age, education, tenure, and status.

The research has been done on managers and employees at private hospitals using a quantitative research approach with a questionnaire technique. The research intends to contribute to these discussions through empirical exploration among private hospitals since the healthcare system in Turkey has seen rapid growth, paralleled by advancements in technology within the healthcare industry. The investigation of the effects of HPWS dimensions on IB alongside the demographic variable's effects permits rewarding the scholarly gap. On the practical front, this research can deliver relevant and practical contributions to knowledge and best practices regarding organizational performance and innovation management.

2. LITERATURE REVIEW

2.1. Conceptual Framework

High-Performance Work Systems, or HPWS, is a method that incorporates many human resource (HR) approaches with the goal of improving organizational performance. In the late 1980s and early 1990s, researchers and practitioners created the HPWS concept in pursuit of techniques to improve organizational performance and competitiveness (Appelbaum & Batt, 1993). The use of strategic human resource management (HRM) methods, also known as high-performance work systems, high-commitment HR practices, or high-involvement work practices, is said to improve an organization's performance and produce superior results (Shin & Konrad, 2014). A bundle of practices known as HPWS is intended to improve performance results by putting the aforementioned methodology into practice. Lawler (1986) created the first and most well-known HPWS, which is regarded as "high involvement management." Despite many practices outlined in the literature, common specific practices could be mentioned: top leadership support (Green, 1995), employee empowerment and team-based structures (Bektas & Sohrabifard, 2013), performance measurement (Tangen, 2003), knowledge management (Aftab, 2009), skill development (Cooke et al., 2019), compensation policy (Ehrenberg, 1990), and workplace participation (Damachi, 1986).

Across the way, to gain a competitive edge and a differentiating advantage, businesses must innovate, and innovative work behavior is a crucial part of the process (Efandi & Syuhada, 2021). Innovation is the process that generates fresh, useful concepts from one's imagination, recognizes, sorts, clarifies, alters, expands upon, and ultimately sells them. Imagination drives the conduits of the invention process, overcoming many hurdles along the way (Jain, 2015). Innovation, widely acknowledged as a primary generator of competitive advantage, plays a critical role for companies operating in a rapidly changing market (Dess & Picken, 2000). Businesses may promote

a creative culture by putting in place incentive programs that motivate staff to think creatively (Agarwal, 2014). As a result, employees play a crucial role in bringing innovations to life, which is why many businesses throughout the world encourage their employees to be creative (Etikariena & Muluk, 2014). Innovative practices at the workplace can improve productivity of workers, leading to enhanced company performance and providing a competitive advantage (Shanker et al., 2017).

2.2. Relationship between HPWS and IB

Bhattacharjee and Sarkar (2023) conducted a research which examines the link between HPWS and the innovative work behaviors (IWB) of employees. The findings indicate that HPWS positively impacts employees' innovation behavior by fostering higher levels of work engagement. A research was done in 2022 to find out how HPWS support workers' radical IB. The findings showed that HPWS significantly improves employees' propensity for radical innovation (Liu, 2022). Another study focuses on HPWS, organizational embedding (OE), and workers' innovative behavior (WIB). It comes to the conclusion that OE and WIB have important connections to HPWS and to one another. Furthermore, HPWS significantly influences WIB indirectly via OE (Poompurk et al., 2020). According to a study by Mrisho and Gwaltu (2023), HPWS have a big influence on the future horizon. The study shows that HPWS had a significant and positive impact on IWB. An association between HPWS and employee IB was shown in a different study (Zhu et al., 2022). A study investigated how HPWS affected organizational innovation found that there is a strong connection between the two variables, and that workers' innovative work practices act as a buffer in this relationship (Fu et al., 2015).

An investigation on how employees' perceptions of HPWS impact their tendency for creative thinking and exploratory learning was also undertaken in 2017. The results showed how important employee perceptions of HPWSs are for promoting exploratory learning and innovative thinking (Escribá-Carda et al., 2017). Another study reveals the correlations between HPWS and employee innovation that is mediated by job embedding, and HPWS positively effects employee innovative activity through job embedding (Ansari et al., 2018). The link between a high commitment work system and creative behavior has been found to be mediated by information sharing behavior (Ahmed et al., 2018). Another study examined the relationship between HPWS and IWB and found that HPWS are related to IWB (Wijesingha and Arachchi, 2021).

3. METHODOLOGY

3.1. Research Purpose and Questions

The purpose of the study is to examine how HPWS affects IB using structural equation modeling while taking into consideration how HPWS and IB dimensions relate to participant demographics. Three main questions drive the research: (1) Does HPWS have an impact on IB in organizations? If so, what is the direction and degree of this impact? (2) Do demographic variables have an impact on HPWS in organizations? (3) Do demographic variables have an impact on IB in organizations? The results are considered to contribute to the body of the literature as well as shed light on future studies and practices.

The research takes HPWS as a dependent variable, which encompasses six dimensions, including leadership, employment security, selective hiring, job quality, training, and contingent compensation, while IB, as a dependent variable, encompasses four dimensions of exploration, generation, championing, and implementation. In the findings section, Figure 1 represents the structural model based on those variables.

3.2. Hypotheses

In line with the research questions, the following hypotheses were formulated.

H_1: High-performance work systems significantly affect innovation behavior.

H_2: High-performance work systems scale scores differ according to demographic characteristics.

H_3: Innovation behavior scale scores differ according to demographic characteristics.

3.3. Sample and Measurement

The healthcare system in Turkey has seen rapid growth, paralleled by advancements in technology within the healthcare industry. Hospitals represent a unique organizational context in which factors such as high levels of capital investment, rapid technological advances, and the need for continuous improvement in patient care interact with each other. In this dynamic environment, fostering a culture of innovation is of utmost importance in meeting emerging challenges, enhancing service delivery, and ultimately improving patient outcomes. Thus, managers and employees at private hospitals were the subjects of the study. The bulk of the participants were members of the administrative staff, although the sample also included medical professionals. A total of 300 respondents took the surveys online, and 205 responded in a clear and concise manner. Therefore, 205 managers and workers from the

health industry make up the research sample. According to Comrey and Lee (1992), a sample size of 200 would be appropriate for this type of study.

The study utilized two questionnaires to collect data. First, a high-performance management practices scale was used to measure HPWS. Zacharatos (2001) created this scale, and Ekici and Türkmen (2020) translated it into Turkish. On the other side, the innovation work behavior scale was used to measure IB, which was created and tested by Jong and Hartog (2010) and translated into Turkish by Çimen and Yücel (2017).

3.4. Analysis

SPSS 24.0 has been used for the analysis. Descriptive analysis was performed, and the normal distribution conformity of quantitative variables was assessed by examining the skewness values against the threshold points of the kurtosis and skewness values. Finally, the independent sample t-test was used to compare two normally distributed groups, while the one-way Anova test was used to compare three or more groups. A Bonferroni correction test was used when there was a significant difference between the groups. The analyses were evaluated according to the significance levels of $p<0.01$ and $p<0.05$.

4. FINDINGS AND DISCUSSION

4.1. Distribution of Demographic Characteristics

Table 1. Demographic Characteristics

Age	Frequency	%	Education	Frequency	%
18-24	27	3.4	**Associate degree**	12	5.9
25-34	125	61.9	**Bachelor's Degree**	119	58.9
35-55	50	24.7	**Master & above**	71	35.2
Total	**202**	**100,0**	**Total**	**202**	**100,0**

Tenure	Frequency	%	Status	Frequency	%
0-1 years	76	37.6	**Manager**	38	18.8
2-5 years	90	44.6	**Specialist**	131	64.9
6 years & abv.	36	17.8	**Others**	33	16.3
Total	**202**	**100.0**	**Total**	**202**	**100.0**

Gender	Frequency	%
Male	102	50.5
Female	100	49.5
Total	**202**	**100.0**

Table 1 presents the findings on demographic characteristics. First of all, 50.5% (n = 102) of participants are male, whereas 49.5% (n = 100) are female. In terms of age, out of the total participants, 3.4% (n = 32) are 18–24 years old, while 69.1% (n = 125) are 25–34 years old, and 24.7% (n = 50) are 35–55 years old. In terms of educational background, 5.9% (n = 12) have an associate degree, 58.9% (n = 119) have a bachelor's degree, and 35.2% (n = 71) have a master's degree or above. In terms of tenure, 37.6% (n = 76) have 0–1-year tenure, 44.6% (n = 90) have 2–5 years, and 17.8% (n = 36) have 6 years or more. Lastly, 18.8% (n = 12) are managers, 64.9% (n = 131) are specialists, and 16.3% (n = 33) have other status at the company.

4.2. Factor Analysis

4.2.1. High-Performance Work System Scale

Table 2. Findings of KMO ve Bartlett's Test for HPWS Scale

KMO Measure of Sampling Adequacy		**0.910**
	Chi-Square	4493.171
	Df	630
	Sig.	**<0.000**

For the efficiency of factor analysis, the Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) adequacy test were utilized. It is more acceptable to do component analysis on the given data group the closer the KMO measurement is to 1. The computed value of KMO was 0.910, so the data group should be analyzed.

Table 3. Findings of Factor Analysis of HPWS Scale

Factors/Items	Factor Loading	Eigen value	Explained Variance (%)
Leadership		12.556	34.877

LDR1	0.457		
LDR2	0.593		
LDR3	0.733		
LDR4	0.675		
LDR5	0.697		
LDR6	0.625		
LDR7	0.779		
LDR8	0.805		
LDR9	0.798		
LDR10	0.788		
LDR11	0.741		
LDR12	0.595		
Employment Security			
SEC1	0.592	3.539	9.832
SEC2	0.781		
SEC3	0.668		
SEC4	0.475		
SEC5	0.480		
SEC6	0.441		
SEC7	0.709		
Selective Hiring			
HIR1	0.791	2.818	7.829
HIR2	0.793		
HIR3	0.774		
HIR4	0.708		
Job Quality			
JOQ1	0.657	1.519	4.219
JOQ2	0.720		
JOQ3	0.778		
JOQ4	0.749		
JOQ5	0.638		
JOQ6	0.628		
JOQ7	0.763		
Training			
TRA1	0.850	1.378	3.829
TRA2	0.843		
TRA3	0.643		
Contingent Compensation			
CMP1	0.724	1.064	2.956
CMP2	0.760		
CMP3	0.519		

The items of the scale are made up of six components, in line with the findings of the explanatory factor analysis. Table 3 provides the factor's eigenvalue and variance explanation percentage. The computed total variance explanation rate was 63.54%. The value between 40% and 60% in social domains is sufficient according to the established theory that the higher the variance rates attained, the stronger the factor structure is (Karagöz, 2017). The factor loadings, common factor variance, and explained variance ratios for each variable were analyzed. The value of factor load is anticipated to be 0.30 or higher in order to state that an item measures a construct or factor effectively (Stevens, 2002). The factor loads of all the items were found to be 0.30 and above, which are shown in Table 3.

4.2.2. Innovation Behavior Scale

Table 4. Findings of KMO ve Bartlett's Test for IB Scale

KMO Measure of Sampling Adequacy		**0.926**
	Chi-Square	1204.114
	Df	45
	Sig.	**<0.000**

The effectiveness of factor analysis was evaluated using Bartlett's sphericity test and the KMO adequacy test. It was permissible to investigate the data group after calculating the KMO, which came out to be 0.926.

Table 5. Findings of Factor Analysis for IB Scale

Factors/Items	Factor Loading	Eigen value	Explained Variance (%)
Exploration		5.914	59.143

BEH1	0.900		
BEH2	0.683		
Generation			
BEH3	0.613	1.203	8.757
BEH4	0.840		
BEH5	0.713		
Championing			
BEH6	0.746	1.015	7.060
BEH7	0.604		
Implementation			
BEH8	0.792	0.950	5.428
BEH9	0.531		
BEH10	0.887		

Explanatory factor analysis revealed four variables to be present in the scale's items. Table 5 provides the factor's eigenvalue and variance explanation percentage. Calculations resulted in a total variance explanation rate of 80.38%. The factor loadings, common factor variance, and explained variance ratios for each variable were all analyzed. The factor loads of all the items were found to be 0.30 and above.

Table 6. Mean Scores, Normality Distributions and Cronbach's Alpha Values

	Mean±SS	***Min-Max (Median)***	***Skewness***	***Kurtosis***	***Cronbach's Alpha***
High-Performance Work Systems Scale					
Leadership	3.84±0.63	1.62-5 (3.92)	-0.854	1.554	***0.932***
Employment Security	3.74±0.69	1-5 (3.86)	-1.100	2.199	***0.890***
Selective Hiring	3.55±0.77	1-5 (3.5)	-0.480	1.256	***0.873***
Job Quality	3.03±0.72	1-5 (3)	0.543	1.339	***0.859***
Training	3.13±0.85	1-5 (3.33)	-0.321	-0.050	***0.788***
Contingent Compensation	2.93±0.76	1-4.33 (3)	-1.045	1.221	***0.744***
Total	3.37±0.53	1.72-4.89 (3.44)	-0.538	0.740	***0.885***
Innovation Behavior Scale					
Exploration	3.72±0.78	1-5 (4)	-0.886	1.715	***0.736***
Generation	3.86±0.79	1-5 (4)	-1.282	2.806	***0.849***
Championing	3.91±0.84	1-5 (4)	-0.935	1.539	***0.808***
Implementation	3.95±0.76	1-5 (4)	-0.745	0.767	***0.807***
Total	3.86±0.69	1-5 (4)	-0.954	1.451	***0.922***

Skewness and kurtosis measurements are used to assess if a distribution is normal or not. At this moment, the skewness value and kurtosis value thresholds both should not exceed 3 and 10, respectively (Kline 2011). All of the findings from the analysis are consistent with a normal distribution since they all fall within the specified limit ranges.

The Cronbach Alpha values of the scales, ranging from 0.70 to 0.99 (Tavakol & Dennick, 2011), demonstrate their reliability. Because they fall inside the defined boundary ranges, every value found in our investigation is trustworthy.

4.3. Hypotheses Testing and Estimates of Structural Model

This section includes the testing of hypotheses. The analysis results are presented below.

H_1: High-performance work systems significantly affect innovation behavior.

Goodness of fit statistics and the limits for the structural model (Figure 1) could be found in Table 7.

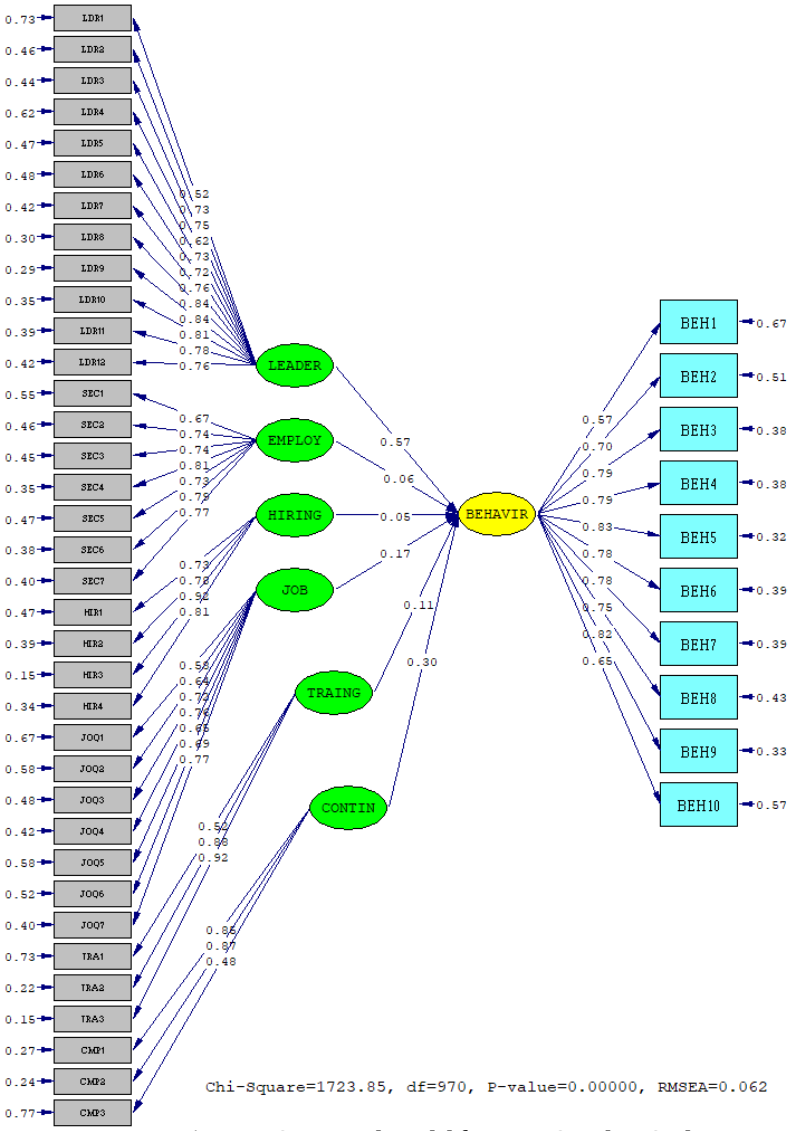

Figure 1. Structural Model for HPWS and IB Scales

Table 7. Limits and the Results of the Structural Model

Fitness Criterion	Perfect Fitness	Acceptable Fitness	Model
$\chi 2$ /df	$1 \leq \chi 2$ /df ≤ 3	$3 < \chi 2$ /df ≤ 5	1.77
RMSEA	$0 \leq$ RMSEA ≤ 0.05	$0.05 <$RMSEA ≤ 0.10	0.062
NFI	$0.95 \leq$ NFI ≤ 1	$0.90 <$NFI < 0.95	0.95
NNFI	$0.95 \leq$ NFI ≤ 1	$0.90 <$NNFI < 0.95	0.97
SRMR	$0 \leq$ SRMR < 0.05	$0.05 \leq$ SRMR < 0.10	0.047
CFI	$0.97 \leq$ CFI ≤ 1	$0.95 \leq$ CFI < 0.97	0.97

Source: *Schermelleh-Engel at all, 2003, Doğan and Özdamar, 2017) (RMSEA: Root Mean Square Error of Approximation, NFI: Normed Fit Index, NNFI: NonNormed Fit Index, CFI: Comparative Fit Index, SRMR: Standardized Root Mean Square Residual, GFI: Goodness of Fit Index, AGFI: Adjusted Goodness of Fit Index).*

Table 7 shows that the model's outputs fall between a good match and a perfect fit. In addition to these fitness criteria, a satisfactory fit is indicated if the value of {$\chi 2$/df} is less than 3. The model is statistically significant since the $\chi 2$ /df value for it is 1723.85/970=1.77.

Finally, the structural equation model (Figure 1) proves that leadership (coefficient of 0.57), employment security (coefficient of 0.06), selective hiring (coefficient of 0.05), job quality (coefficient of 0.17), training (coefficient of 0.11), and contingent compensation (coefficient of 0.30) have a positive and significant effect on IB.

These results support earlier research (Ansari et al., 2018; Poompurk et al., 2020; Wijesingha & Arachchi, 2021; Bhattacharjee & Sarkar, 2023; Mrisho & Gwaltu, 2023) that found HPWS had a significant and positive influence on employees' innovative behavior. Similar to those, a study by Fu et al. (2015) found a substantial association between HPWS and organizational innovation and that workers' innovative work behaviors mitigate this

relationship. Also, Liu (2022) found that HPWS considerably increases employees' tendency for radical innovation.

H_2: High-performance work systems scale scores differ according to demographic characteristics.

H_3: Innovation behavior scale scores differ according to demographic characteristics.

Table 8. Evaluation of HPWS and IB Scales by Gender

	Gender				
	Female		**Male**		
	Mean±SS	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	**[a]p**
High-Performance Work Systems Scale					
Leadership	3.79±0.68	1.62-5 (3.92)	3.89±0.57	2.23-5 (3.92)	***0.259***
Employment Security	3.68±0.7	1.29-5 (3.86)	3.8±0.68	1-5 (4)	***0.243***
Selective Hiring	3.48±0.86	1-5 (3.5)	3.63±0.66	1-5 (3.75)	***0.175***
Job Quality	2.95±0.69	1-5 (3)	3.12±0.74	1-5 (3)	***0.092***
Training	3.03±0.83	1-5 (3.33)	3.23±0.86	1-5 (3.33)	***0.092***
Contingent Compensation	2.82±0.78	1-4.33 (3)	3.04±0.72	1-4.33 (3)	***0.033****
Total	3.29±0.55	1.72-4.56 (3.38)	3.45±0.5	1.97-4.89 (3.5)	***0.032****
Innovation Behavior Scale					
Exploration	3.68±0.82	1-5 (4)	3.76±0.74	1-5 (4)	***0.504***
Generation	3.89±0.84	1-5 (4)	3.83±0.74	1-5 (4)	***0.618***
Championing	3.93±0.87	1-5 (4)	3.9±0.8	1-5 (4)	***0.790***
Implementation	3.97±0.82	1-5 (4)	3.93±0.7	2.33-5 (4)	***0.683***
Total	3.87±0.75	1-5 (4)	3.85±0.62	1.83-5 (3.96)	***0.882***

*[b]One-Way Anova test *p<0.05 **p<0.01*

The analysis of the HPWS scale by gender proves that leadership, employment security, selective hiring, job quality, and training do not differ statistically by gender ($p > 0.05$). Conversely, contingent compensation differs by gender ($p = 0.032$; $p<0.05$). Contingent compensation for females was lower than that of males. Also, the total evaluation of HPWS differs by gender ($p = 0.032$; $p<0.05$). With a clearer expression, the total evaluation of HPWS in females was lower than that of males. On the other side, when analyzing the IB scale, exploration, generation, championing, implementation, and total IB show no statistical differences by gender ($p > 0.05$).

Research contradicts the notion of gender disparities in innovation. A study by Reutzel et al. (2018) suggests that the gender of leaders influences company behaviors, affecting organizational innovation practices. Cropley and Cropley (2017) emphasize the importance of gender diversity for organizational innovation, indicating that it enhances innovation outcomes. Zuraik et al. (2020) and Lebedeva and Schmidt (2012) highlight differences in IB based on gender, showing that female leaders may have unique approaches to innovation compared to male leaders.

Table 9. Evaluation of HPWS and IB Scales by Age

	Age						
	18-24 Age		**25-34 Age**		**35-55 Age**		
	Mean±SS	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	**[b]p**
High-Performance Work Systems Scale							
Leadership	3.95±0.56	2.69-5 (4.08)	3.75±0.61	1.62-5 (3.92)	3.99±0.66	1.77-5 (4)	***0.044****
Employment Security	3.78±0.59	2,43-5 (3.86)	3.65±0.68	1-5 (3.71)	3.94±0.73	1.29-5 (4)	***0.038****
Selective Hiring	3.44±0.91	1-5 (3.5)	3.5±0.75	1-5 (3.25)	3.74±0.71	1-5 (3.75)	***0.147***
Job Quality	2.78±0.77	1-4.43 (3)	2.97±0.61	1-5 (3)	3.33±0.86	1.71-5 (3.14)	***0.002****
Training	3.33±0.86	1.67-5 (3.33)	2.98±0.89	1-5 (3)	3.4±0.62	1.67-4.67 (3.33)	***0.005****
Contingent Compensation	2.84±0.78	1-3.67 (3)	2.85±0.74	1-4.33 (3)	3.18±0.74	1-4.33 (3.33)	***0.025****
Total	3.36±0.52	1.92-4.07 (3.35)	3.28±0.51	1.72-4.89 (3.33)	3.6±0.53	2.06-4.56 (3.68)	***0.002****

Innovation Behavior Scale							
Exploration	3.7±0.85	1-5 (4)	3.65±0.79	1-5 (4)	3.9±0.7	2-5 (4)	***0.155***
Generation	4.02±0.72	1.67-5 (4)	3.79±0.79	1-5 (4)	3.95±0.81	1-5 (4)	***0.241***
Championing	4.09±0.67	3-5 (4)	3.82±0.89	1-5 (4)	4.05±0.74	2-5 (4)	***0.118***
Implementation	4.01±0.75	2.33-5 (4)	3.89±0.77	1-5 (4)	4.08±0.75	1.67-5 (4)	***0.293***
Total	3.96±0.66	2-5 (4.04)	3.78±0.7	1-5 (3.92)	3.99±0.65	2.08-5 (4)	***0.137***

*[b]One-Way Anova test *p<0.05 **p<0.01*

The analysis of the HPWS scale by age demonstrates that leadership ($p = 0.044$; $p<0.05$), employment security ($p = 0.038$; $p<0.05$), job quality ($p = 0.002$; $p<0.01$), training ($p = 0.005$; $p<0.01$), and contingent compensation ($p = 0.025$; $p<0.05$) differ statistically by age, while selective hiring has no differences ($p > 0.05$). When comparing pairs, leadership in 25-34 age was lower than that of 35-55 ($p = 0.045$), employment security in 35-55 age was higher than that of 25-34 ($p = 0.045$), job quality in 18-24 age was lower than that of 25-34 ($p = 0.001$) and 35-55 age ($p = 0.001$), training in 25-34 age was lower than that of 18-24 ($p = 0.001$) and 35-55 age ($p = 0.001$), and contingent compensation in 35-55 age was higher than that of 18-24 ($p = 0.029$) and 25-34 age ($p = 0.030$). Moreover, the total evaluation of HPWS differs statistically by age ($p = 0.002$; $p<0.01$). More specifically, the total evaluation of HPWS in 35–55 years of age was higher than that of 18–24 ($p = 0.001$) and 25–34 years of age ($p = 0.001$). Whereas exploration, generation, championing, implementation, and total IB score have no differences by age ($p > 0.05$).

Hentschel et al. (2019) examined gender stereotypes concerning competence. They discovered that both male and female evaluators rated men and women in terms of competence. This discovery contradicts the findings that specific aspects of competence, such as leadership skills or work performance, vary based on gender. Moreover, HPWS was strongly linked to reduced turnover in companies with a female workforce. This challenges the findings emphasis on age-related variations in HPWS aspects, indicating that gender composition within a company may impact the success of HPWS.

Table 10. Evaluation of HPWS and IB Scales by Education

	Education						
	Associate Degree		**Bachelor's Degree**		**Master and above**		
	Mean±SS	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	**[b]p**
High-Performance Work Systems Scale							
Leadership	3.62±1.08	1.62-5 (3.88)	3.81±0.6	1.92-5 (3.85)	3.92±0.57	1.77-5 (4)	***0.230***
Employment Security	3.58±1.18	1.29-4.57 (4.07)	3.69±0.69	1-5 (3.86)	3.86±0.58	2.14-5 (3,86)	***0.179***
Selective Hiring	3.44±0.99	1-5 (3.5)	3.49±0.75	1-5 (3.5)	3.68±0.75	1-5 (3.75)	***0.247***
Job Quality	3.3±0.68	2.43-4.71 (3)	3.03±0.71	1-5 (3)	2.99±0.73	1-5 (3)	***0.383***
Training	3.19±1.13	1-4.67 (3.33)	3.13±0.81	1.67-5 (3.33)	3.13±0.86	1-5 (3.33)	***0.965***
Contingent Compensation	3.08±0.67	1.67-4.33 (3)	2.92±0.77	1-4.33 (3)	2.91±0.75	1-4.33 (3)	***0.763***
Total	3.37±0.71	1.99-4.24 (3.5)	3.34±0.53	1.83-4.89 (3.42)	3.41±0.5	1.72-4.56 (3.5)	***0.680***
Innovation Behavior Scale							
Exploration	3.38±0.68	2-4.5 (3.25)	3.73±0.77	1-5 (4)	3.75±0.81	1-5 (4)	***0.288***
Generation	3.89±0.73	3-5 (4)	3.84±0.8	1-5 (4)	3.88±0.8	1-5 (4)	***0.949***
Championing	3.67±1.05	1-5 (4)	3.92±0.81	1-5 (4)	3.93±0.84	1-5 (4)	***0.528***
Implementation	3.5±0.89	1.67-4.67 (4)	3.98±0.75	1.67-5 (4)	3.98±0.75	1-5 (4)	***0.105***
Total	3.61±0.71	2.5-4.54 (3.81)	3.87±0.66	1.75-5 (4)	3.88±0.73	1-5 (4)	***0.420***

*[b]One-Way Anova test *p<0.05 **p<0.01*

Table 10 shows the analysis of HPWS and IB scale scores by educational background, which demonstrates that leadership, employment security, selective hiring, job quality, training, contingent compensation, and total

evaluation of HPWS do not show differences statistically by education ($p > 0.05$). Similarly, exploration, generation, championing, implementation, and total IB do not differ statistically by education ($p > 0.05$). These results seem to be the first evidence regarding the factors, since the existing literature does not explicitly indicate such a conclusion.

Table 11. Evaluation of HPWS and IB Scales by Tenure

	Tenure						
	0-1 Years		**2-5 Years**		**6 years and above**		
	Mean±SS	***Min-Max Median***	***Mean±SS***	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	**[b]p**
High-Performance Work Systems Scale							
Leadership	3.7±0.71	1.62-5 (3.85)	3.89±0.56	1.92-5 (3.92)	4±0.53	2.23-5 (4)	***0.019 ****
Employment Security	3.48±0.75	1-5 (3.57)	3.84±0.6	1.29-4.86 (4)	4.06±0.58	1.86-5 (4.07)	***0.001 *****
Selective Hiring	3.26±0.86	1-5 (3.13)	3.64±0.69	2-5 (3.63)	3.94±0.52	3-5 (4)	***0.002 *****
Job Quality	2.96±0.79	1-5 (3)	2.99±0.61	1.71-4.71 (3)	3.29±0.79	1.86-5 (3)	***0.042 ****
Training	2.87±0.92	1-5 (3)	3.21±0.79	1-5 (3.33)	3.5±0.63	2-5 (3.33)	***0.234***
Contingent Compensation	2.73±0.86	1-4.33 (3)	2.97±0.66	1-4.33 (3)	3.24±0.64	1-4.33 (3,33)	***0.142***
Total	3.16±0.59	1.72-4.89 (3.24)	3.43±0.45	1.83-4.32 (3.5)	3.67±0.4	2.57-4.56 (3.66)	***0.002 *****
Innovation Behavior Scale							
Exploration	3.58±0.88	1-5 (3.5)	3.82±0.73	1-5 (4)	3.75±0.64	3-5 (3.5)	***0.409***
Generation	3.75±0.89	1-5 (4)	3.96±0.7	1-5 (4)	3.81±0.77	1-5 (4)	***0.759***
Championing	3.78±0.94	1-5 (4)	4.04±0.74	2-5 (4)	3.86±0.8	1-5 (4)	***0.181***
Implementation	3.76±0.92	1-5 (4)	4.11±0.61	2.33-5 (4)	3.94±0.63	2.33-5 (4)	***0.500***
Total	3.72±0.78	1-5 (3.85)	3.99±0.59	2.33-5 (4)	3.84±0.63	1.83-5 (3.88)	***0.416***

*[b]One-Way Anova test *p<0.05 **p<0.01*

The evaluation of HPWS by tenure illustrates that leadership ($p = 0.019$; $p<0.05$), employment security ($p = 0.019$; $p<0.05$), selective hiring ($p = 0.002$; $p<0.01$), job quality ($p = 0.042$; $p<0.05$), and total evaluation of HPWS scores ($p = 0.002$; $p<0.01$) do differ statistically by tenure, although training ($p > 0.05$) and contingent compensation ($p > 0.05$) do not have differences. Comparing pairs, leadership in 0–1 years was lower than that of 6 years and above ($p = 0.025$), and employment security in 0–1 years was lower than that of 6 years and above ($p=0.025$).Selective hiring in 0–1 years was lower than that of 2–5 years ($p = 0.001$) and 6 years and above ($p = 0.001$); job quality in 6 years and above was higher than that of 0–1 years ($p = 0.001$); and total evaluation of HPWS in 0–1 years was lower than that of 2–5 years ($p = 0.001$) and 6 years and above ($p = 0.001$). In addition, exploration, generation, championing, implementation, and total IB scores do not differ statistically by tenure ($p > 0.05$).

Research reveals that team members who join simultaneously often share common experiences and connections. This can foster team unity, which in turn may boost performance (Baer et al., 2008). However, unlike earlier research that highlighted differences in tenure in areas like leadership, job security, and job satisfaction, this suggests that shared experiences and length of employment within a team may have a nuanced impact on organizational outcomes.

Table 12. Evaluation of HPWS and IB Scales by Status

	Status						
	Manager		**Others**		**Specialist**		
	Mean±SS	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	***Mean±SS***	***Min-Max (Median)***	**[b]p**
High-Performance Work Systems Scale							
Leadership	4.09±0.47	3.31-5 (4)	3.82±0.77	1.62-5 (3.92)	3.77±0.61	1.77-5 (3.85)	***0.029****
Employment Security	4.1±0.48	2.29-4.86 (4.14)	3.75±0.75	1.57-5 (3.86)	3.64±0.7	1-5 (3.71)	***0.001*****
Selective Hiring	3.8±0.6	2-4.75 (4)	3.82±0.83	1-5 (3.75)	3.41±0.77	1-5 (3.25)	***0.001*****

Job Quality	3.21±0.78	1.71-5 (3)	3.19±0.83	1.14-5 (3)	2.94±0.66	1-5 (3)	***0.060***
Training	3.34±0.76	1-5 (3.33)	3.06±0.85	1-4.67 (3.33)	3.09±0.87	1-5 (3.33)	***0.001*****
Contingent Compensation	3.13±0.54	2-4.33 (3)	2.97±0.76	1-4.33 (3)	2.86±0.8	1-4.33 (3)	***0.001*****
Total	3.61±0.42	2.4-4.28 (3.62)	3.44±0.55	1.99-4.56 (3.56)	3.28±0.53	1.72-4.89 (3.33)	***0.002*****
Innovation Behavior Scale							
Exploration	3.86±0.73	2-5 (4)	3.76±0.84	1-5 (4)	3.67±0.78	1-5 (4)	***0.130***
Generation	3.86±0.81	1-5 (4)	3.95±0.73	1.67-5 (4)	3.83±0.8	1-5 (4)	***0.224***
Championing	4.13±0.85	1-5 (4)	3.91±0.84	1-5 (4)	3.85±0.82	1-5 (4)	***0.111***
Implementation	4.03±0.71	2.33-5 (4)	4.05±0.72	2.33-5 (4)	3.91±0.79	1-5 (4)	***0.012****
Total	3.97±0.67	1.83-5 (4)	3.92±0.69	2-5 (4.08)	3.81±0.69	1-5 (3.88)	***0.042****

*[b]One-Way Anova test *p<0.05 **p<0.01*

The analysis of the HPWS scale by status points out that leadership ($p = 0.029$; $p<0.05$), employment security ($p = 0.001$; $p<0.01$), selective hiring ($p = 0.001$; $p<0.01$), training ($p = 0.001$; $p<0.01$), contingent compensation ($p = 0.001$; $p<0.01$), and total HPWS scores ($p = 0.002$; $p<0.01$) differ statistically by status. Conversely, job quality does not differ by status ($p > 0.05$). Comparisons in pairs show that leadership in the specialist was lower than that of the manager ($p = 0.035$), employment security in the specialist was higher than that of the manager ($p = 0.001$) and others status ($p = 0.001$), selective hiring in the specialist was higher than that of the manager ($p = 0.001$) and others status ($p = 0.001$), training in the manager was higher than that of the specialist ($p = 0.001$) and others status ($p = 0.001$), and contingent compensation in the manager was higher than that of the specialist ($p = 0.001$) and others status ($p = 0.001$). Also, the total evaluation of HPWS does differ statistically by status ($p = 0.001$; $p<0.01$). It was found that the total evaluation of HPWS in the manager was higher than that of the specialist ($p = 0.001$) and others ($p = 0.001$).

Across the way, exploration, generation, and championing do not differ statistically by status ($p > 0.05$), while implementation does ($p = 0.012$; $p< 0.05$). Comparing pairs, implementation in specialists was lower than other statuses ($p = 0.001$). Total IB does differ statistically by status ($p = 001$; $p < 0.01$). In terms of the paired comparisons, the total IB in the specialist was lower than that of the manager ($p = 0.001$).

Conflicting evidence can be mentioned about the worth of HPWS to employees and employers. The research discloses different opinions on HPWS benefits, with some studies supporting its positive effect on workers' welfare and organizational performance while others argue that it may improve organizational performance at the cost of workers' health (Rana & Javed, 2017). This contradicts previous findings about how HPWS impacts various dimensions of status, indicating that depending on how one looks at it, HPWS will have diverse effects for employees and organizations. The study's findings indicate that, regardless of an employee's level of expertise, four of the five HRM practices have a significant and positive impact on their ability to retain their job. These practices include training and development, innovative benefits, incentive compensation, and a polite and stimulating work environment (Renaud et al., 2015).

5. CONCLUSION AND SUGGESTIONS

This research investigates the impact of HPWS on IB using a method of structural equation modeling. The study also explores differences in HPWS and IB scores based on demographic factors. First, the analysis of the model shows that dimensions of HPWS, including leadership, employment security, selective hiring, job quality, training, and contingent compensation, have a positive effect on IB (H1). This finding indicates that companies can improve their performance and effectiveness by fostering creativity, endorsing risk-taking attitudes, and nurturing the development of employees to establish an environment that fosters innovation. A work culture that appreciates ideas and views challenges as chances to learn could stimulate problem-solving.

Secondly, when examining HPWS and IB aspects across genders, differences between men and women are less apparent in some areas but become evident in contingent compensation and the total scores of HPWS. Organizations should consider promoting gender equality by introducing pay systems and impartial evaluation procedures to tackle any discrepancies that may exist in these areas. In the third analysis, when looking at how age influences HPWS and IB dimensions, it becomes evident that age disparities impact leadership roles, employment security, job quality, training opportunities, contingent compensation, and the total scores of HPWS. Organizations must acknowledge these distinctions and adjust their HR strategies accordingly. For example, offering personalized training and development programs for employees across age brackets can adeptly cater to a range

of requirements and preferences. On the other hand, there were no significant variations in selective hiring practices or total IB scores based on age. It suggests that companies should focus on hiring individuals based more on their skills, experience, and cultural fit than age.

Moving on to the fourth analysis regarding the correlation between HPWS and IB dimensions with educational backgrounds, it was observed that educational variances did not impact HPWS or IB dimensions significantly. This finding suggests that companies should focus less on credentials when introducing systems or evaluating creative initiatives. It is better to cultivate an environment that appreciates abilities originality, and teamwork of individuals from educational backgrounds.

Lastly, examining how tenure influences HPWS and IB dimensions reveals that tenure plays a role in determining leadership, employment security, selective hiring, and job quality for employees while shaping perceptions of HPWS positively; however, it does not have a significant effect on training or contingent compensation. Furthermore, the various aspects of exploration, generation, championing, and implementation, as well as the total score of IB, remain consistent regardless of how long someone has been with the company. Companies should understand the influence of how employees have been with them and create policies that appreciate and assist long-term staff. This might include programs for mentorship opportunities, career growth, and maintaining job security to keep experienced employees on board.

Moreover, an examination of how employee status relates to HPWS and IB dimensions revealed that leadership, employment security, selective hiring, training, contingent compensation, and the total score of HPWS are crucial factors except for job quality. Additionally, both implementation and overall IB scores are influenced by employee status. Based on these discoveries, it is crucial for businesses to tackle any disparities in these aspects, depending on the staff's roles, to promote fairness and diversity at work. This might involve implementing payment plans and chances for progress that're open to all staff members, regardless of their rank, in the organization.

The study has some limitations. First of all, findings may not be highly generalizable due to its specific industry focus. Furthermore, time is crucial so that different times of investigation may yield different outcomes. Despite the limitations, this study advances the field of study by examining how HPWS influences IB. For companies aiming to foster an innovative culture and implement effective HR practices to raise employee well-being and spur company success, the study provides useful insights. To deepen our knowledge of the relationship between HPWS and IB, future studies should examine and overcome the limits mentioned above.

REFERENCES

Aftab, S. M. (2009). Knowledge management and setting up of effective communities of practice. *AAPG Search and Discovery Article #90139©2012 PAPG/SPE Annual Technical Conference*, Pakistan. 1-9.

Agarwal, U. A. (2014). Linking justice, trust and innovative work behavior to work engagement. *Personnel Review, 43*(1), 41–73. https://doi.org/10.1108/PR-02-2012-0019

Ahmed, F., Hassan, A., Ayub, M. U., & Klimoski, R. J. (2018). High commitment work system and innovative work behavior: The mediating role of knowledge sharing. *Pakistan Journal of Commerce and Social Sciences, 12*(1), 29-51. https://hdl.handle.net/10419/188334

Ansari, N., Siddiqui, S. H., & Farrukh, M. (2018). Effect of high-performance work practices on job embeddedness and employee innovative behavior. *International Journal of Contemporary Economics and Administrative Sciences, 8(2), 64–88.* http://www.ijceas.com/index.php/ijceas/article/view/249

Appelbaum, E., & Batt, R. (1993). *High-performance work systems: American models of workplace transformation*. ILR Press.

Baer, M., Niessen-Ruenzi, A., & Ruenzi, S. (2008). The impact of workgroup diversity on performance: Large sample evidence from the mutual fund industry. *SSRN Electronic Journal*. https://ssrn.com/abstract=1017803

Bektas, C., & Sohrabifard, N. (2013). Terms of organizational psychology, personnel empowerment and team working: A case study. *Procedia-Social and Behavioral Sciences, 82*, 886-891. https://doi.org/10.1016/j.sbspro.2013.06.366

Bhattacharjee, A., & Sarkar, A. (2023). High-performance work systems and employees' innovative work behavior: An empirical investigation based on job demands-resources (JD-R) theory. *Global Business Review*. https://doi.org/10.1177/09721509221145414

Comrey, A., & Lee, H. (1992). *A first course in factor analysis.* Erlbaum.

Cooke, F. L., Cooper, B., Bartram, T., Wang, J., & Mei, H. (2019). Mapping the relationships between high-performance work systems, employee resilience and engagement: A study of the banking industry in China. *The International Journal of Human Resource Management, 30*, 1239-1260. https://doi.org/10.1080/09585192.2015.1137618

Cropley, D., & Cropley, A. (2017). Innovation capacity, organisational culture and gender. *European Journal of Innovation Management, 20*(3), 493-510. https://doi.org/10.1108/EJIM-12-2016-0120

Çimen, İ., & Yücel, C. (2017). Yenilikçi davranış ölçeği (YDÖ): Türk kültürüne uyarlama çalışması. *Cumhuriyet International Journal of Education, 6*(3), 365–381. https://doi.org/10.30703/cije.334136

Damachi, U. G. (1986). Workers' participation in management. In U. G. Damachi & H. D. Seibel (Eds.), *Management Problems in Africa* (pp. 315–330). Palgrave Macmillan. https://doi.org/10.1007/978-1-349-05478-7_14

Dess, G. G., & Picken, J. C. (2000). Changing roles: Leadership in the 21st century. *Organizational Dynamics, 28*(3), 18–34. https://doi.org/10.1016/S0090-2616(00)88447-8

Efandi, S. E., & Nur Syuhada, M. (2021). Innovative work behavior and influencing factors. *Jurnal Ipteks Terapan, 15*(3), 241–250. https://doi.org/10.22216/jit.v%vi%i.245

Ehrenberg, R. G. (1990). Introduction: Do compensation policies matter? *Industrial and Labor Relationship Review, 43*(3), 3-12. https://www.jstor.org/stable/2523568

Ekici, Z., & Türkmen, E. (2020). Yüksek performanslı çalışma sistemleri ölçeği'nin Türkçeye uyarlanması: Geçerlik ve güvenirlik çalışması. *Sağlık ve Hemşirelik Yönetimi Dergisi, 7*(1), 1-16. https://doi.org/10.5222/SHYD.2020.50490

Escribá-Carda, N., Balbastre-Benavent, F., & Canet-Giner, M. T. (2017). Employees' perceptions of high-performance work systems and innovative behavior: The role of exploratory learning. *European Management Journal, 35*(2), 273-281. https://doi.org/10.1016/j.emj.2016.11.002

Etikariena, A., & Muluk, H. (2014). Correlation between organizational memory and innovative work behavior. *Makara Human Behavior Studies in Asia, 18*(2), 77-88. https://doi.org/10.7454/mssh.v18i2.3463

Fu, N., Flood, P. C., Bosak, J., Morris, T., & O'Regan, P. (2015). How do high-performance work systems influence organizational innovation in professional service firms. *Employee Relations, 37*(2), 209-231. https://doi.org/10.1108/ER-10-2013-0155

Green, S. G. (1995). Top management support of R&D projects: A strategic leadership perspective. *IEEE Transactions on Engineering Management, 42*(3), 223-232. https://doi.org/10.1109/17.403740

Jain, R. K. (2015). Employee innovative behavior: A conceptual framework. *The Indian Journal of Industrial Relations, 51*(1), 1-16.

Jong, J., & Hartog, D. (2010). Measuring innovative work behavior. *Creativity and Innovation Management, 19*(1), 23-36. https://doi.org/10.1111/j.1467-8691.2010.00547.x

Karagöz, Y. (2017). *SPSS ve AMOS uygulamalı nitel-nicel-karma bilimsel araştırma yöntemleri ve yayın etiği.* Nobel Yayın Dağıtım.

Kline, R. B. (2011). *Principles and practice of structural equation modelling* (3rd.Edition). Guilford Press.

Lawler III, E. E. (1986). *High-involvement management: Participative strategies for improving organizational performance*. Jossey-Bass.

Lebedeva, N., & Schmidt, P. (2012). Values and attitudes towards innovation among Canadian, Chinese and Russian students. *SSRN Electronic Journal*. https://ssrn.com/abstract=2008139

Liu, W. (2022). Research on the influential path of high-performance work system on employees' breakthrough innovation behavior. *Journal of Management and Strategy, 13*(1), 1-15. https://doi.org/10.5430/jms.v13n2p37

Mrisho, D., & Gwaltu, P. (2023). Cross-level effects of high-performance work systems on the innovative work behaviors of employees: The role of future time perspectives. *East African Journal of Business and Economics, 6*(1), 34-46. https://doi.org/10.37284/eajbe.6.1.1076

Poompurk, C., Jermsittiparsert, K., & Chienwattanasook, K. (2021). High-performance work system, organizational embeddedness, and workers innovative behavior: Evidence from hotel industry of Thailand. *Psychology and Education, 58*(2), 2970-2982. https://doi.org/10.17762/pae.v58i2.2484

Rana, F. A., & Javed, U. (2017). High-performance work systems, job demands, and employee well-being in Pakistan's insurance industry. *Global Business and Organizational Excellence, 37*(1), 48-58. https://doi.org/10.1002/joe.21828

Renaud, S., Morin, L., Saulquin, J. Y, & Abraham, J. (2015). What are the best HRM practices for retaining experts? A longitudinal study in the Canadian information technology sector. *International Journal of Manpower, 36*(3), 416-432. https://doi.org/10.1108/IJM-03-2014-0078

Reutzel, C. R., Collins, J. D., & Belsito, C. A. (2018). Leader gender and firm investment in innovation. *Gender in Management: An International Journal*, *33*(6), 430-450. https://doi.org/10.1108/GM-05-2017-0066

Shanker, R., Bhanugopan, R., Van Der Heijden, B. I., & Farrell, M. (2017). Organizational climate for innovation and organizational performance: The mediating effect of innovative work behavior. *Journal of Vocational Behavior, 100,* 67-77. https://doi.org/10.1016/j.jvb.2017.02.004

Shin, D., & Konrad, A. M. (2014). Causality between high-performance work systems and organizational performance. *Journal of Management, 43*(4), 973-997. https://doi.org/10.1177/0149206314544746

Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences* (Fourth Edition). Lawrance Erlbaum Association.

Tangen, S. (2003). An overview of frequently used performance measures. *Work Study, 52*(7), 347-354. https://doi.org/10.1108/00438020310502651

Tavakol, M., & Dennick, R. (2011) Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Wijesingha, P. R., & Arachchi, R. S. (2021). The role of high-performance work practices and personality traits on employee innovative work behaviors. *Asian Journal of Management Studies, 1*(2), 54-74. https://doi.org/10.4038/ajms.v1i2.35

Zacharatos, A. (2001). *An organization and employee level investigation of the relationship between high-performance work systems and workplace safety* (Publication No. NQ65689). [Doctoral Dissertation, Queen's University], Library and Archives Canada, https://www.Collectionscanada.Gc.Ca/Obj/S4/F2/Dsk3/Ftp05/NQ65689.Pdf

Zhu, F., Gao, Y., & Chen, X. (2022). Tough love: Impact of high-performance work system on employee innovation behavior. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.919993

Zuraik, A., Kelly, L., & Perkins, V. (2020). Gender differences in innovation: The role of ambidextrous leadership of the team leads. *Management Decision, 58*(7), 1475-1495. https://doi.org/10.1108/MD-01-2019-0054