



GRADUATE PROGRAMS INSTITUTE

**INVESTIGATION OF THE EFFECT OF HIGH-
PERFORMANCE WORK SYSTEMS ON INNOVATION
BEHAVIOR WITH STRUCTURAL EQUATION
MODELING**

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PREFACE

In the present day and age, running a business is no longer the same as it used to be. Traditional methods are no longer effective, and therefore, it is necessary to adopt new approaches to manage businesses. In this study, I have gathered practical techniques aimed at helping businesses become more successful in today's competitive market by incorporating these new perspectives.

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ABSTRACT

INVESTIGATION OF THE EFFECT OF HIGH-PERFORMANCE WORK SYSTEMS ON INNOVATION BEHAVIOR WITH STRUCTURAL EQUATION MODELING

This research aims to investigate the impact of HPWS on innovation behavior with the structural equation modelling, taking into account the relationship between various dimensions of HPWS and demographic characteristics. Using quantitative research method and questionnaire technique, the research has been conducted on 205 managers and employees which work for private hospitals in Istanbul. Descriptive statistical techniques (Mean, Standard Deviation, Median, Frequency, Ratio, Minimum, Maximum) and the conformity of quantitative data to the normal distribution were tested when analyzing the study's data. The Skewness values of the cut-off points (boundaries) of the kurtosis and skewness values were used for this. Two groups with normal distribution were compared using the independent-samples t-test, and three or more groups were compared using the one-way Anova test. If there was a difference between the groups, the Bonferroni adjustment test was applied. The results demonstrate a positive and substantial impact on employees' innovation behavior of the dimensions of High-Performance Work Systems which are leadership, employment security, selective hiring, job quality, training, and contingent compensation. This result adds to the body of research on how HPWS affects innovative behavior, and also offers insightful information for organizations looking to develop an innovative culture and put into place efficient HR procedures to boost worker satisfaction and propel business growth.

Keywords: High-Performance Work Systems, Innovation Behavior, Human Resources Management, Innovation.

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ABBREVIATIONS

HPWS: High Performance Work Systems
HRM: Human Resources Management
HR: Human Resources
IWB: Innovation Work Behavior or Innovative Work Behavior
WIB: Workers' Innovative Behavior
OE: Organizational Embedding
KMO: Kaiser-Meyer-Olkin
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

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1 INTRODUCTION

In the rapidly changing and competitive business environment, innovation has turned into a basic driver of achievement and endurance. Organizations that can reliably produce and carry out innovative ideas gain a competitive edge, sustain their operations, and create values for their stakeholders. Thus, there is developing interest among researchers and practitioners in understanding the elements that add to encouraging innovation within the organizations. On the other hand, High-Performance Work Systems (HPWS) play a significant function that has drawn a lot of attention. A collection of HR procedures and guidelines known as HPWS are intended to improve employee productivity, engagement, and general company effectiveness. Leadership, employment security, selective hiring, job quality, training, and contingent remuneration are common components of these systems.

The relationship between HPWS and innovation behavior has been the subject of broad examination, as organizations try to establish a climate that empowers and supports employee's commitment to be more creative. By taking on successful HPWS practices, organizations plan to use the capability of their human resources and invigorate innovativeness and creativity all through the labor force.

From this point of view, this research aims to investigate the impact of HPWS on innovation behavior with the structural equation modelling, taking into account the relationship between various dimensions of HPWS and demographic characteristics of the participants. Using quantitative research method and questionnaire technique, the research has been conducted on private hospital managers and employees through collected dataset. By examining the combined influence of leadership, employment security, selective hiring, job quality, training, and contingent compensation, this study seeks to provide a holistic view of the relationship between HPWS and innovation behavior.

Findings are intended to add to both theory and practice. The study will improve

our theoretical knowledge of how HPWS variables jointly impact workers' involvement in innovative activities. The research will contribute to the development of a more complete framework for developing an innovative culture inside firms by identifying the key factors that have a substantial influence on innovation behavior. Practically speaking, the study's conclusions can help firms create and put into place efficient HPWS processes to foster innovation. Organizations may strategically spend resources and create focused interventions to promote an innovative culture by identifying the aspects that significantly impact innovation behavior.

The study was limited to a single sector, its conclusions might not be very generalizable. Therefore, it may be better understood by conducting this research in various sectors or organizations with different cultural backgrounds. Also, the time was limited so that research in different time-frame may give different results.

The study has four main sections. First, extensive literature review has been conducted about two variables. Secondly, the methodology part gives information about the significance of the study, the method used, hypothesis, data collection and scales. Third part includes analysis, findings, and discussions. Lastly, the results and suggestions section draw a conclusion and includes some practical implications.

2 LITERATURE REVIEW

2.1 HIGH PERFORMANCE WORK SYSTEMS

2.1.1 THE BACKGROUND AND CONCEPTUAL FRAMEWORK

High-Performance Work Systems, or HPWS, is a strategy that combines a variety of human resource (HR) ideas with the aim of enhancing organizational performance. In the late 1980s and early 1990s, researchers and practitioners developed the HPWS idea in quest of methods to boost organizational performance and competitiveness. The performance-boosting initiatives undertaken by multiple U.S. corporations and identified two distinct and compelling models of high-performance work systems (HPWS) in the American workplace (Appelbaum and Batt, 1993). These models have been articulated as lean production and team production.

- Lean production: This perspective places a greater emphasis than traditional systems do on administrative and technical know-how as well as centralized coordination and decision-making.
- Team production: It is a concept that more completely decentralizes work flow management and decision-making by fusing the principles of Swedish sociotechnical systems with the ideas of quality engineering.

Another model of HPWS which is discovered is path dependency and causal ambiguity are two characteristics of HPWS that Collis and Montgomery (1995) claim make them challenging to reproduce. Path dependency describes organizational policies that take time to adopt and are difficult for rival businesses to simply acquire. It has been stated that Huselid (1995) is the earliest leading study of HPWS and that it is mainly concerned with the performance results attained after employing a number of methods. Lower employee turnover, more productivity, and enhanced financial performance are the main goals of this approach.

The application of advanced human resource management (HRM) strategies, sometimes referred to as high-performance work systems, high-involvement work practices, or high-commitment HR approaches, is stated to be capable of improving an organization's performance and producing superior outcomes (Shin and Konrad, 2014). Another brief glance to HPWS can be expressed as: Work systems with high performance include those with effective employee recruiting and selection methods, effective training and development programs, and effective communication and employee engagement practices (Armstrong et al., 2008). By making a solid fit between a person's knowledge, skills, and abilities and the tasks, obligations, and responsibilities of the job, these techniques seek to attract, retain, and motivate talented HR (Wright et al., 2001).

The literature is replete with arguments that the HPWS procedures themselves do not necessarily produce competitive advantage, but rather that the system's true worth lies in the creation of HR that can lead to performance enhancements (Appelbaum et al., 2000). Implementing a HPWS is essential for achieving operational success, encouraging innovation, and providing consumers with high-quality outputs. Through the use of team structures, this scientific approach to organizational design aims to create harmony between the firm and its surroundings as well as between the organizational structure, systems, and processes (Sienknecht and Aken, 1999).

Other synonyms for HPWS include high involvement work systems (Guthrie, 2001) and high commitment work systems (Arthur, 1994). This is because they all adhere to the same fundamental management and employee engagement concepts, resulting in a set of HR practices that improve employee effectiveness and organizational success (Gittell et al., 2010). Research, experience, and common sense are increasingly supporting a company's commitment to management practices that view its employees as assets as well as its financial performance. It was also mentioned that when applied regularly and thoroughly, high-performance work approaches may enhance employee attitudes, behaviors, and general corporate performance (Pfeffer and Veiga, 1999).

Recent research consistently provides evidence supporting the notion that HPWS have positive effects on businesses and their employees. Researchers have discovered a correlation between HPWS and various organizational outcomes, such as increased productivity, profitability, innovation, and overall performance (Jiang et al., 2012).

Researchers have shown that HPWS have a favorable effect on elements including work satisfaction, dedication, empowerment, organizational citizenship, and relational coordination at the employee level (Xi et al., 2021).

Another approach toward HPWS is defined as a set of procedures designed to enhance performance outcomes by implementing the mentioned approach. The initial and widely recognized HPWS, introduced by Lawler (1986), is referred to as "high involvement management." This system entails engaging employees in both financial and psychological responsibilities.

The "high commitment system," which Arthur (1994) later developed as another influential variant of HPWS, attempts to cultivate dedicated workers who can be trusted to do job tasks in a manner that is in line with organizational goals. Also, in 1995, Huselid conducted ground-breaking research on HPWS, investigating the link between particular HR practices and company success. According to the study, firms that implemented a suite of HR methods such as selective hiring, intense training, performance-based compensation, and employment security beat those that did not.

During the early 1990s, a fresh approach emerged regarding work systems, aiming to depart from conventional manufacturing methods of the past. This new vision advocated for "transformed" systems that could achieve "high performance" across various efficiency and quality measures (Batt and Appelbaum, 1993). In another article was mentioned that when HPWS affect organizational culture and people management practices, they can have a favorable influence on financial and operational performance (Varma et al., 1999).

Ramsay et al. (2000) have proved that employees' workdays won't get much busier or more stressful throughout the implementation of HPWS, because an HPWS is typically understood to be a collection of employment practices that are coordinated both horizontally and vertically with the intention of boosting employees' motivation and capacity to support corporate goals (Huselid, 1995). Pfeffer and Veiga (1999) published that: In today's international economy, skilled, adaptable, and motivated workers are seen as a significant asset since they can help companies develop their capabilities over the long term.

2.1.2 The Practices of High-Performance Work Systems

An organizational design strategy that takes a systemic approach is necessary to develop a HPWS. By using team structures, this strategy unifies the organization's systems, processes, and organizational structure while also creating vital links between the organization and its surroundings. By adopting this holistic viewpoint, the company may successfully coordinate its internal and external constituents, creating an atmosphere that is conducive to success and high performance (Sienknecht and Aken, 1999). Kling (1995) has mentioned that in order to have a meaningful impact, work practices should be seamlessly integrated within a harmonized work system. However, certain approaches, like involving employees in problem-solving committees, might not yield optimal results without a supportive structure in place.

Some complimentary groups, or "domains," of HPWS techniques were identified in the research of Bryson and White (2021). These procedures include hiring and selecting employees, providing training and development, paying employees based on performance, organizing teams that operate well together, and "participation," which encompasses various forms of communication and consultation.

A number of processes make up HPWS, including rigorous hiring and selection procedures, incentive compensation schemes, performance management systems, and staff training and development programs. These processes are created to assist staff in acquiring the skills and mindsets necessary to support the competitive strategy of the business. For the organization to successfully implement its plan and to gain a sustainable competitive advantage, this method relies heavily on HPWS (Huselid and Mark, 1997). Also, some subsystems were mentioned in studies such as Getting and Developing Talent, Engaging Employees, Empowering the Frontline and Aligning Leaders (McAlearney 2015) which are all in association with HPWS and if get implemented properly, leads to benefit of the organizations:

- Getting and Developing Talent: Employees are hired, selected, and trained as part of talent acquisition and development strategies.
- Engaging Employees: By using engagement techniques, staff members' understanding of and commitment to accomplishing organizational goals may

be increased.

- **Empowering the Frontline:** Strategies for empowering frontline personnel usually focus on minimizing status inequities, improving employment security, and decentralizing decision-making to prioritize the viewpoints of frontline caregivers.
- **Aligning Leaders:** Aligning leaders via tactics like succession planning, leader development, and performance-based compensation is intended to improve leadership capabilities and make it simpler to meet organizational objectives.

Additionally, other studies include different practices which are essential for achieving high performance should be mentioned in brief:

Top leadership support: Specifically, initiatives that were anticipated to contribute more to company goals, represented higher investments, targeted new goods and processes rather than incremental changes, and were less likely to be discontinued were found to have top management support (Green, 1995).

Employee empowerment and team-based structures: Personnel empowerment is the process of improving personnel in businesses via training, sharing, and teamwork. Whereas Organizational teamwork acts as a tool to harness the synergistic effects of personnel empowerment (Bektas and Sohrabifard, 2013).

Innovative HRM: HRM becomes an instrument of a long-term strategy focused at reducing obstacles to innovation in a creative firm, and it becomes the link between learning, innovation, and creativity (Togaeva, 2021).

Performance measure: Performance measurements should be straightforward to draw from strategic objectives, simple to grasp, and aid in the formation of a long-term picture of performance (Tangen, 2003).

Knowledge management: Knowledge management is a collection of management methods aiming at improving the acquisition, development, transfer, distribution, and application of primary knowledge (Aftab, 2012).

Skill development: Employee resiliency may be viewed as a set of skills and competencies that may be developed via effective HPWS utilization, to the mutual benefit of the employee and the business (Cooke et al., 2019).

Compensation policy: Individuals may be encouraged to exert more effort through compensation systems that reward performance (Ehrenberg, 1990). On the other word, the study contends that executive remuneration linked to business success boosts business performance, whereas compensation plans that reward good performance might encourage people to exert more effort.

Workplace participation: Workplace involvement aims to increase productivity, boost employee contentment, and create a more pleasant working environment (Damachi, 1986).

2.1.3 The Function of High-Performance Work Systems

HPWS has a positive impact on the internal social structure by encouraging the development of network connections, generalized reciprocity norms, shared mental models, role-making, and organizational citizenship behavior. Additionally, HPWS produce financial success through organizational effectiveness and long-term performance through flexibility brought about by the coordination and use of knowledge resources (Evans and Davis, 2005).

On the other hand, by stimulating individuals' innovation and constructive movement, HPWS have been demonstrated to enhance staff efficiency and output (Mahdi et al., 2014). By putting staffs in the core of decision making and provide the chance to have the voice and involving them by their creative behavior, it will lead to the benefit of the company (Ashiru et al., 2022).

HPWS prioritize firm-wide transformation, such as workplace reorganization, employee retraining, and the use of new technologies. Although implementing such a system is hazardous and costly, it can result in greater productivity and product quality (Aghazadeh and Seyedian, 2004).

2.2 INNOVATION BEHAVIOR

2.2.1 Conceptual Framework

Innovation is the process through which new, practical ideas are conceived via one's imagination, acknowledged, sorted, clarified, changed, developed further, and finally sold. Along the route, there are a lot of obstacles to be overcome, and the innovation process' conduits are fueled by imagination (Jain, 2015). Companies must innovate to get a competitive edge and a differentiated advantage, with imaginative work behavior being a critical component of the process (Efandi and Syuhada, 2021). "The cornerstone of innovation lies in ideas, but it is the individuals who conceive, propagate, respond to, and refine those ideas." Therefore, cultivating a climate of creative and diverse thinking is vital to harness the collective contributions of individuals in generating enhanced processes, products, or services (Ven, 1986). Businesses must emphasize innovation to secure long-term performance and market position (Santoso and Heng, 2019). Creative work behavior has grown crucial due to the growing need for higher productivity and performance in enterprises and organizations (Ausat et al., 2022).

Many minor and significant breakthroughs are the product of worker initiative (Carranza et al., 2020). Furthermore, according to some academics, small scale worker discoveries make a considerably bigger difference in terms of competitiveness than huge break-through ideas that can be easily imitated (Georgsdottir et al., 2003). Employees that start, create, develop, apply, promote, execute, and change new ideas in order to improve their work performance are said to engage in self-initiated creative behavior, according to Konermann's (2012) research. Such behavior is regarded as essential for developing innovation within firms.

Innovation behavior, sometimes referred as innovative work behavior (IWB), is defined as: Instead of emphasizing team innovation, innovative work behavior places more emphasis on individual inventiveness. It is closely tied to the knowledge, skills, and experience of certain employees, so showcasing their capabilities (Stoffers and Heijden, 2018). IWB refers to the purposeful acts of employees who propose fresh ideas or concepts inside their organizational or group positions in order to improve the group's or

organization's performance. Such behaviors may include developing and implementing novel solutions, products, or procedures (Firdaus and Sakinah, 2023). The idea of IWB substantially intersects with other ideas like workplace creativity, intrapreneurship, organizational citizenship behavior, personal initiative, taking charge, and employee-driven innovation. However, the IWB concept stands out for its intense focus on innovation in many forms (Stan, 2014).

IWB could be divided into three categories:

1. Idea generation: Creativity serves as a critical source of organizational innovation and a means to gain a competitive edge. It delineates the influence of diverse managerial practices on the work environment, thereby affecting the level of creativity within business organizations (Rama et al., 2011).
2. Concept advocacy: It contends that innovativeness should be understood at a higher level of abstraction, and that the complex communication channels that exist between this construct and observed behavior should be explicitly recognized (Midgley and Dowling, 1978).
3. Idea implementation: The quality of an organization's innovation implementation climate and the invention's compatibility with the values of the targeted users determine how well an innovation is implemented (Klein and Sorra, 1996).

The significance of innovative behavior among employees is paramount for long-term success across various industries and roles. Consequently, fostering a culture of innovation becomes essential within organizations (Jain, 2015).

Employees play a pivotal role in driving innovation within organizations, and three key contributions stand out as crucial across diverse industries. Firstly, they contribute by generating fresh ideas. Secondly, they actively share their ideas with colleagues and supervisors. Lastly, they work towards spreading innovation throughout the organization and collaborate with others to implement those innovative ideas. These examples illustrate the creative behaviors exhibited by employees in the workplace. (Ng and Feldman, 2010). As it was agreed that employee innovation consisted of idea generation, idea search, concept communication, idea execution initiating actions, including others, and overcoming hurdles it is crucial for organizations to consider innovation behavior as

an important factor to develop their businesses (Lukeš and Stephan, 2017). But it should be noted that to comprehend employee innovative behavior, it is necessary to first understand the problems and hurdles that inventive employee face, as well as the reasons of psychological barriers (Kabasheva et al., 2015).

2.2.2 The Importance of Innovation Behavior for Organizations

In the current business environment, it is widely recognized that innovation plays a vital role as a major driver of competitive advantage for organizations operating in a rapidly changing market (Dess and Picken, 2000). Businesses can foster a creative culture by implementing reward systems that encourage employees to think outside the box (Agarwal, 2014). Thus, staff have an important part in bringing innovation to life, hence many firms throughout the world encourage their staff to be inventive (Etikariena and Muluk, 2014). Employees that exhibit innovative work behavior can deliver the best work results, enhancing corporate performance and giving businesses a competitive advantage (Shanker et al., 2017).

However, a company's success is dependent not just on creative conduct, but also on employee dedication. According to previous study, organizational commitment has a considerable influence on staff performance (Almutairi, 2016). To put it another way, the presence of devoted workers is critical to enhancing productivity, and leaders must inspire employee loyalty to the firm (Laily, 2017). Employees who are committed to their organizations are more productive and have lower absenteeism and this commitment can also have a positive impact on work-related behaviors such as increased loyalty and lower turnover (Susilo and Satrya, 2019).

Also, it has been proved that committed leaders, who prioritize their organizational objectives and actively facilitate the implementation of organizational changes, play a pivotal role in influencing the quality of organizational performance and the level of employee engagement. Consequently, a leader's role is crucial in guiding subordinates towards achieving corporate goals (Nasomboon, 2014). Also, it was mentioned that leaders impact workers' creative behavior through both explicit acts aimed at stimulating idea development and implementation and more general, everyday conduct (De Jong and

Den Hartog, 2007).

A few researchers even venture to such an extreme as to guarantee that one of the primary drivers for the rising meaning of innovations lately is the requirement for innovation in a world that is changing so rapidly. Just scant investigations that analyze innovation's impacts on organizations, regardless of the way that most of specialists think it makes positive impacts. According to the researchers, innovation has a significant impact on organizational effectiveness and increases their ability to innovate and expand (Tohidi and Jabbari, 2012).

Also, it has been found that to maintain or raise their level of performance or effectiveness, organizations embrace innovations to make improvements to their outputs, structures, and processes and these modifications may be the product of managerial decision or may be forced by outside factors (Damanpour and Gopalakrishnan, 1999).

It is important for employers to be aware of their behavior in order to encourage employees to be creative. Innovative behavior is affected both directly and indirectly by leadership, individual problem-solving preferences, and work group dynamics (Scott and Bruce, 1994). And also, it was emphasized that in order to increase the immediate impact on employees, it highlights the need of leaders cultivating their workforce via vision inspiration, charismatic leadership, intellectual stimulation, and personal care (Zhan, and Hu, 2021). On the other hand, in organizations undergoing digital transformation, the key determinants of employee innovation behavior are leadership style, organizational innovation maturity, and organizational social responsibility (Wu et al., 2022).

In general, corporate innovation results in a competitive advantage, which leads to increasing profits which is the core goal of every modern organization (Janjić and Rađenović, 2019). Companies understand the value of internal operations and developing a knowledge-driven environment, and evidence shows that an employee's impression of company culture has a substantial influence on their performance in terms of creativity and innovation. The findings emphasize the importance of subjective variables in influencing individual behavior. A good work environment, along with supportive managers who encourage idea adoption and offer recognition and rewards, supports organizational creativity (Malaviya and Wadhwa, 2006). Managerial support was shown to be the most proximal contextual influence on creative behavior, and it moderated the

effect of organizational support and country culture (Lukeš and Stephan, 2017).

2.2.3 Different Models of Innovation Behavior

Innovation behavior refers to the activities and attitudes that people or organizations exhibit when generating and implementing innovative concepts, ideas, commodities, services, or processes. A variety of models and frameworks have been developed to understand and categorize distinct types of innovative behavior. Here are a few well-known examples:

The innovation funnel model: The model emphasizes the importance of generating a significant number of ideas, carefully evaluating and selecting the most promising ones, and ultimately converting them into tangible breakthroughs. It illustrates the entire innovation process, starting with a large pool of ideas at the top and concluding with a smaller collection of actual inventions at the bottom (AHN, 2002).

The business model innovation: According to Chesbrough (2010), business models play a crucial role in enabling firms to create and capitalize on the value of original thoughts or technological innovations that lack a clear objective value until they are commercialized through a business model. Commercializing ideas effectively involves the application of business models (Chesbrough and Rosenbloom, 2002).

The Open Innovation Model: Henry Chesbrough (2003), made this idea popular, emphasizing the need of cooperation and infusing outside knowledge and resources into the creative process. It states that companies should aggressively seek out suggestions and criticism from external sources, including customers, vendors, institutions, and even competing companies.

The Diffusion of Innovation Model: Everett Rogers' model (2003), describes how new concepts, goods, or technology spread and are embraced by people and organizations. It divides adopters into many groups, ranging from early adopters to laggards, depending on their inventiveness and readiness to accept new ideas.

The Ambidexterity Model: Exploring how organizational ambidexterity might be encouraged and developed has been the main goal of study on the topic. In this approach, the emphasis is on how organizations must strike a balance between exploration and exploitation. Exploration is the exploration of novel concepts and experiments, whereas

exploitation is the improvement and optimization of current offers or processes. It acknowledges that in order to promote innovation and preserve competition, businesses must concurrently participate in both activities (Gibson and Birkinshaw, 2004).

The innovation mindsets model: This paradigm, developed by Higgs and Rowland (2005), depicts a variety of mindsets or attitudes toward innovation. The prospector mindset (exploring and finding new possibilities), the settler mindset (implementing and expanding innovations), and the pioneer mindset (embracing new ideas and taking risks) are among these mindsets.

2.3 THE RELATIONSHIP BETWEEN HIGH-PERFORMANCE WORK SYSTEMS AND INNOVATION BEHAVIOR

Based on a recent study conducted by Bhattacharjee and Sarkar (2023), the research examines the connection between high-performance work systems (HPWS) and the innovative work behaviors of employees. The findings indicate that HPWS positively impacts employees' innovation behavior by fostering higher levels of work engagement.

Additionally, a research was done in 2022 to find out how HPWS support workers' radical innovation behavior. Understanding the involved processes and influence pathways was the study's main goal. The findings showed that HPWS significantly improves employees' propensity for radical innovation. Additionally, the study found that information diffusion and absorption serve as mediators in this association (Liu, 2022).

The HPWS, organizational embedding (OE), and workers' innovative behavior (WIB) in the Thai hotel sector are the focus of a study conducted in 2020. 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).

Based on a study done in Tanzania's banking industry the research findings show empirical evidence that HPWS have a substantial and favorable influence on future time perspective. The study also demonstrates that HPWS has a strong and favorable effect on IWB. Furthermore, future temporal perspective partially mediates the association

between HPWS and creative work behavior (Mrisho and Gwaltu, 2023).

Another study, completed in 2022, found that the researchers had established a positive relationship between HPWS and employee innovation behavior. The aforementioned relationship between HPWS and employee innovation behavior is partially mediated by challenge stress, and perceived organizational support moderates this mediating effect (Zhu et al., 2022).

In 2015, a group of researchers identified a study. This study investigates the impact of HPWS on organizational innovation in professional service firms. It discovers that the two have a significant relationship, and that employees' creative work behaviors buffer the relationship (Fu et al., 2015).

Also, in 2017, another study conducted which determines how employees' opinions of HPWS affect their propensity for innovative thinking and exploratory learning. The findings demonstrated the value of employees' opinions of HPWSs in encouraging exploratory learning and inventive behavior (Escribá-Carda et al., 2017).

Relying on a study in the hospitality sector in Pakistan, it is ascertained that job embeddedness mediates the association between HPWS and employee creative behavior and HPWS positively encourage employee innovative behavior through job embedding (Ansari et al., 2018).

The purpose of the study which was established in 2018, is to investigate the influence of a high commitment work system on innovative work behavior, as well as the function of information sharing as a mediator. It has been discovered that information sharing behavior mediates the association between a high commitment work system and creative work behavior (Ahmed et al., 2018).

In another study revealed in 2021 upon five-star hotels in Sri Lanka, the research looked at the link between high-performance work practices and employee innovative work behaviors in. It discovered that high-performance work practices are associated with employee creative work behaviors (Wijesingha and Arachchi, 2021).

3 METHODOLOGY

3.1 RESEARCH OBJECTIVE

Investigating and analyzing how high-performance work systems (HPWS) affect innovation behavior is the main objective of this study. Moreover, the study specifically seeks to:

- Analyze the connection between various dimensions of HPWS and demographic characteristics of employees.
- Identify the key practices of HPWS that contribute to promoting innovation behavior.
- Provide firms with recommendations and suggestions for effectively implementing HPWS to foster innovative behavior.

By addressing these research objectives, this study hopes to contribute to the body of evidence on organizational behavior and HRM by highlighting the function of HPWS in encouraging innovative behavior in organizations. Taking into account today's dynamic and competitive business climate, the results may help organizations plan and implement strategies that encourage an innovation culture and drive corporate success.

3.2 RESEARCH METHOD

In this research, quantitative research method and questionnaire technique was used. The primary goal of quantitative research is to collect information that is objective, free of bias, able to explaining cause and effect relationships, and has the ability of generalizing from the sample to the population (Gall and Borg 1996).

3.3 RESEARCH QUESTIONS

The study tries to answer 3 main questions:

1. Do HPWS have an impact on innovation behavior in organizations? If so, what is the direction and degree of this impact?
2. Do demographic variables have an impact on high-performance work systems in organizations?
3. Do demographic variables have an impact on innovative behavior in organizations?

3.4 HYPOTHESIS

Three main hypotheses were tested in the study based on the structural equation model:

H₁: *HPWS scale scores differ according to demographic characteristics.*

H₂: *Innovation behavior scale scores differ according to demographic characteristics.*

H₃: *HPWS significantly affect innovation behavior.*

3.5 DATA COLLECTION AND SCALES

The research has been conducted on private hospital managers and employees. The majority of the participants were administrative staff; however, medical personnel were also included in the sample. The questionnaires were collected electronically, sent to a total of 300 people, and clear responds was received from 205 participants. Therefore, the research sample is 205 health sector managers and employees. Comrey and Lee (1992) has suggested that 200 sample would be fair in this type of study.

The data was collected using two questionnaires. “High Performance Management Practices” scale was developed by Zacharatos (2001) and adapted to Turkish language by Ekici and Türkmen (2020). To analyze innovation behavior, “Innovation Work Behavior” scale was used which was developed and tested by Jong and Hartog (2010) and adapted to Turkish language by Çimen and Yücel (2017). Since the study has been conducted in Türkiye, Turkish version of the questionnaires were used. Approval for the questionnaires was obtained from the Ethics Committee of Beykoz University, with the decision no. 5,

dated 08/06/2023 and numbered 2023/15.

Since questionnaires were used for the research, application was made to the Scientific Research and Publication Ethics Committee of Beykoz University in line with the ethical consideration, and approval has been obtained on 08/06/2023 at the meeting numbered 2023/15 with the decision no. 5.



4 FINDINGS AND DISCUSSIONS

For the statistical analysis, SPSS 24.0 was employed. Descriptive statistical techniques (Mean, Standard Deviation, Median, Frequency, Ratio, Minimum, Maximum) and the conformity of quantitative data to the normal distribution were tested when analyzing the study's data. The Skewness values of the cut-off points (boundaries) of the kurtosis and skewness values were used for this. Two groups with normal distribution were compared using the independent-samples t-test, and three or more groups were compared using the one-way Anova test. If there was a difference between the groups, the Bonferroni adjustment test was applied. Significance was evaluated at $p < 0.01$ and $p < 0.05$ levels.

4.1 DEMOGRAPHICS ANALYSIS

Table 1 Distribution by Gender

	Frequency	%
Male	102	50.5
Female	100	49.5

Of the participants, 50.5% (n=102) were male and 49.5% (n=100) were female.

Table 2 Distribution by Age

	Frequency	%
18-24 age	27	3.4
25-34 age	125	61.9
35-55 age	50	24.7

3.4% (n=32) of the participants were 18-24 years old, 69.1% (n=125) were 25-34 years old and 24.7% age (n=50) were 35-55 years old.

Table 3 Distribution by Education

	Frequency	%
Associate degree	12	5.9
Bachelor's Degree	119	58.9
Master and above	71	35.2

Of the participants, 5.9% (n=12) are associate degree, 58.9% (n=119) are bachelor's degree, 35.2% (n=71) are master and above.

Table 4 Distribution by Service Period in the Company

	Frequency	%
0-1 years	76	37.6
2-5 years	90	44.6
6 years and above	36	17.8

Of the participants, 37.6% (n=76) have 0-1 years, 44.6% (n=90) have 2-5 years, and 17.8% (n=36) have 6 years or more service period in the company.

Table 5 Distribution by Status

	Frequency	%
Manager	38	18.8
Specialist	131	64.9
Others	33	16.3

Of the participants, 18.8% (n=38) are manager, 64.9% (n=131) are specialist, 16.3% (n=33) are others status.

4.2 FACTOR ANALYSIS

High-Performance Work Systems (HPWS) Scale

Table 6 KMO ve Bartlett's Test Results for High-Performance Work Systems (HPWS) Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.910
	Chi-Square	4493.171
	Df	630
	Sig.	<0.000

The effectiveness of Factor Analysis was evaluated using the Bartlett's Sphericity Test and the Kaiser-Meyer-Olkin (KMO) Adequacy Test. It is more acceptable to do component analysis on the given data group the closer the KMO measurement is to 1 (Ivadinovi; 2004). The computed value for our study was 0.910, and it was decided that the data group should be analyzed.

Table 7 Factor Analysis Results for High-Performance Work Systems (HPWS) Scale

Factors/Items	Factor Loading	Eigen value	Explained Variance (%)
Leadership			
LDR1	0.457	12.556	34.877
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, according to the findings of explanatory factor analysis. Table 7 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 variance rates attained, the stronger the factor structure is (Karagöz, 2017). The factor loadings of the items, explained variance ratios, and common factor variance of the factors on each variable were all looked at in the study. The value of this 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 in our study were found to be 0.30 and above, and are shown in Table 7.

Innovation Behavior Scale

Table 8 KMO ve Bartlett's Test Results for Innovation Behavior Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.926
Chi-Square	1204.114
Df	45
Sig.	<0.000

The effectiveness of Factor Analysis was evaluated using the Bartlett's Sphericity Test and the KMO Adequacy Test. It is more acceptable to do component analysis on the given data group the closer the KMO measurement is to 1 (Ivadinovi; 2004). It was decided that it was permissible to investigate the data group after our study's calculation of 0.926.

Table 9 Factor Analysis Results for Innovation Behavior Scale

Factors/Items	Factor Loading	Eigen value	Explained Variance (%)
<i>Exploration</i>			
BEH1	0.900	5.914	59.143
BEH2	0.683		
<i>Generation</i>			
BEH3	0.613	1.203	8.757
BEH4	0.840		
BEH5	0.713		
<i>Championing</i>			
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 9 provides the factor's eigenvalue and variance explanation percentage. Calculations resulted in a total variance explanation rate of 80.38%. The value between 40% and 60% in social domains is sufficient according to the established theory that the higher variance rates attained, the stronger the factor structure is (Karagöz, 2017). The factor loadings of the items, explained variance ratios, and common factor variance of the factors on each variable were all looked at in the study. The value of this 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 in our study were found to be 0.30 and above, and are shown in Table 9.

Table 10 Mean Scores, Normality Distributions and Cronbach's Alpha Values

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

To determine if a distribution has a normal distribution or not, skewness and kurtosis values are taken into consideration. At this time, the cut-off points (boundaries) for the skewness value and kurtosis values should both not exceed 3 and 10, respectively

(Kline 2011). All of the results discovered in our investigation fall within the defined limit ranges, making them appropriate for normal distribution.

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

4.3 HYPOTHESIS TESTING AND ESTIMATES OF STRUCTURAL MODEL

In this section, the hypotheses established with the scales according to demographic characteristics were tested. The results of the analysis are presented below.

H₁: *HPWS scale scores differ according to demographic characteristics.*

H₂: *Innovation behavior scale scores differ according to demographic characteristics.*

Table 11 Evaluation of High-Performance Work Systems (HPWS) Scale and Innovation Behavior Scale by Gender

	Gender				^a p
	Female		Male		
	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	
High-Performance Work Systems (HPWS) 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

^aIndependent Sample t Test

*p<0,05

Leadership, Employment Security, Selective Hiring, Job Quality and Training dimension do not differ statistically by gender ($p>0.05$). Contingent Compensation dimension do differ statistically by gender ($p=0.032$; $p<0.05$). It was found that the Contingent Compensation in the Female was lower than that of Male. Total Evaluation of High-Performance Work Systems dimension do differ statistically by gender ($p=0.032$; $p<0.05$). It was found that the Total Evaluation of High-Performance Work Systems in the Female was lower than that of Male. Exploration, generation, championing, implementation and total innovation behavior dimensions do not differ statistically by gender ($p>0.05$).

Table 12 Evaluation of High-Performance Work Systems (HPWS) Scale and Innovation Behavior Scale by Age

	Age						^b p
	18-24 Age		25-34 Age		35-55 Age		
	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	
High-Performance Work Systems (HPWS) 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

^bOne-Way Anova test

* $p<0,05$

** $p<0,01$

Leadership dimension do differ statistically by age ($p=0.044$; $p<0.05$). According to the paired comparisons, it was found that the Leadership in the 25-34 Age was lower

than that of 35-55 Age ($p=0.045$). Employment Security dimension do differ statistically by age ($p=0.038$; $p<0.05$). According to the paired comparisons, it was found that the Employment Security in the 35-55 Age was higher than that of 25-34 Age ($p=0.045$). Selective Hiring dimension do not differ statistically by age ($p>0.05$). Job Quality dimension do differ statistically by age ($p=0.002$; $p<0.01$). According to the paired comparisons, it was found that the Job Quality in the 18-24 Age was lower than that of 25-34 Age ($p=0.001$) and 35-55 Age ($p=0.001$). Training dimension do differ statistically by age ($p=0.005$; $p<0.01$). According to the paired comparisons, it was found that the Training in the 25-34 Age was lower than that of 18-24 Age ($p=0.001$) and 35-55 Age ($p=0.001$). Contingent Compensation dimension do differ statistically by age ($p=0.025$; $p<0.05$). According to the paired comparisons, it was found that the Contingent Compensation in the 35-55 Age was higher than that of 18-24 Age ($p=0.029$) and 25-34 Age ($p=0.030$).

Total Evaluation of High-Performance Work Systems dimensions do differ statistically by age ($p=0.002$; $p<0.01$). According to the paired comparisons, it was found that the Total Evaluation of High-Performance Work Systems in the 35-55 Age was higher than that of 18-24 Age ($p=0.001$) and 25-34 Age ($p=0.001$). Exploration, generation, championing, implementation and total innovation behavior dimensions do not differ statistically by age ($p>0.05$).

Table 13 Evaluation of High-Performance Work Systems (HPWS) Scale and Innovation Behavior Scale by Education

	Education						b _p
	Associate Degree		Bachelor's Degree		Master and above		
	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	
High-Performance Work Systems (HPWS) 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

^bOne-Way Anova test * $p < 0,05$ ** $p < 0,01$

Leadership, employment security, selective hiring, job quality, training contingent compensation and total evaluation of high-performance work systems dimension do not differ statistically by education ($p > 0.05$). Exploration, generation, championing, implementation and total innovation behavior dimensions do not differ statistically by education ($p > 0.05$).

Table 14 Evaluation of High-Performance Work Systems (HPWS) Scale and Innovation Behavior Scale by Service Period in the Company

	Service Period in the Company						^b p
	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)	
High-Performance Work Systems (HPWS) 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				

Leadership dimension do differ statistically by service period in the company (p=0.019; p<0.05). According to the paired comparisons, it was found that the Leadership in the 0-1 years was lower than that of 6 years and above (p=0.025). Employment Security dimension do differ statistically by service period in the company (p=0.019; p<0.05). According to the paired comparisons, it was found that the Employment Security in the 0-1 years was lower than that of 6 years and above (p=0.025). Selective Hiring dimension do differ statistically by service period in the company (p=0.002; p<0.01). According to the paired comparisons, it was found that the Selective Hiring in the 0-1 years was lower than that of 2-5 years (p=0.001) and 6 years and above (p=0.001). Job Quality dimension do differ statistically by service period in the company (p=0.042; p<0.05). According to the paired comparisons, it was found that the Job Quality in the 6 years and above was higher than that of 0-1 years (p=0.001). Training dimension do not differ statistically by service period in the company (p>0.05). Contingent Compensation dimension do not differ statistically by service period in the company (p>0.05).

Total Evaluation of High-Performance Work Systems dimensions do differ statistically by service period in the company (p=0.002; p<0.01). According to the paired comparisons, it was found that the Total Evaluation of High-Performance Work Systems in the 0-1 years was lower than that of 2-5 years (p=0.001) and 6 years and above (p=0.001). Exploration, generation, championing, implementation and total innovation behavior dimensions do not differ statistically by service period in the company (p>0.05).

Table 15 Evaluation of High-Performance Work Systems (HPWS) Scale and Innovation Behavior Scale by Status

	Status						b _p
	Manager		Others		Specialist		
	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	Mean±SS	Min-Max (Median)	
High-Performance Work Systems (HPWS) 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*

^bOne-Way Anova test * $p < 0,05$ ** $p < 0,01$

Leadership dimension do differ statistically by status ($p=0.029$; $p < 0.05$). According to the paired comparisons, it was found that the Leadership in the Specialist was lower than that of manager ($p=0.035$). Employment Security dimension do differ statistically by status ($p=0.001$; $p < 0.01$). According to the paired comparisons, it was found that the Employment Security in the specialist was higher than that of manager ($p=0.001$) and others status ($p=0.001$). Selective Hiring dimension do differ statistically by status ($p=0.001$; $p < 0.01$). According to the paired comparisons, it was found that the Selective Hiring in the specialist was higher than that of manager ($p=0.001$) and others status ($p=0.001$). Job Quality dimension do not differ statistically by status ($p > 0.05$). Training dimension do differ statistically by status ($p=0.001$; $p < 0.01$). According to the paired comparisons, it was found that the Training in the manager was higher than that of specialist ($p=0.001$) and others status ($p=0.001$). Contingent Compensation dimension do differ statistically by status ($p=0.001$; $p < 0.01$). According to the paired comparisons, it was found that the Contingent Compensation in the manager was higher than that of specialist ($p=0.001$) and others status ($p=0.001$).

Total Evaluation of High-Performance Work Systems dimensions do differ statistically by status ($p=0.001$; $p < 0.01$). According to the paired comparisons, it was found that the Total Evaluation of High-Performance Work Systems in the manager was higher than that of specialist ($p=0.001$) and others status ($p=0.001$).

Exploration, generation and championing dimensions do not differ statistically by service period in the company ($p > 0.05$). Implementation dimension do differ statistically

by status ($p=0.012$; $p<0.05$). According to the paired comparisons, it was found that the Implementation in the specialist was lower than that of others status ($p=0.001$).

Total Innovation Behavior dimension do differ statistically by status ($p=0.001$; $p<0.01$). According to the paired comparisons, it was found that the Total Innovation Behavior in the specialist was lower than that of manager ($p=0.001$).

H₃: *HPWS significantly affect innovation behavior.*

Goodness of fit statistics and the limits for the structural model (Figure 1) could be found in Table 16.

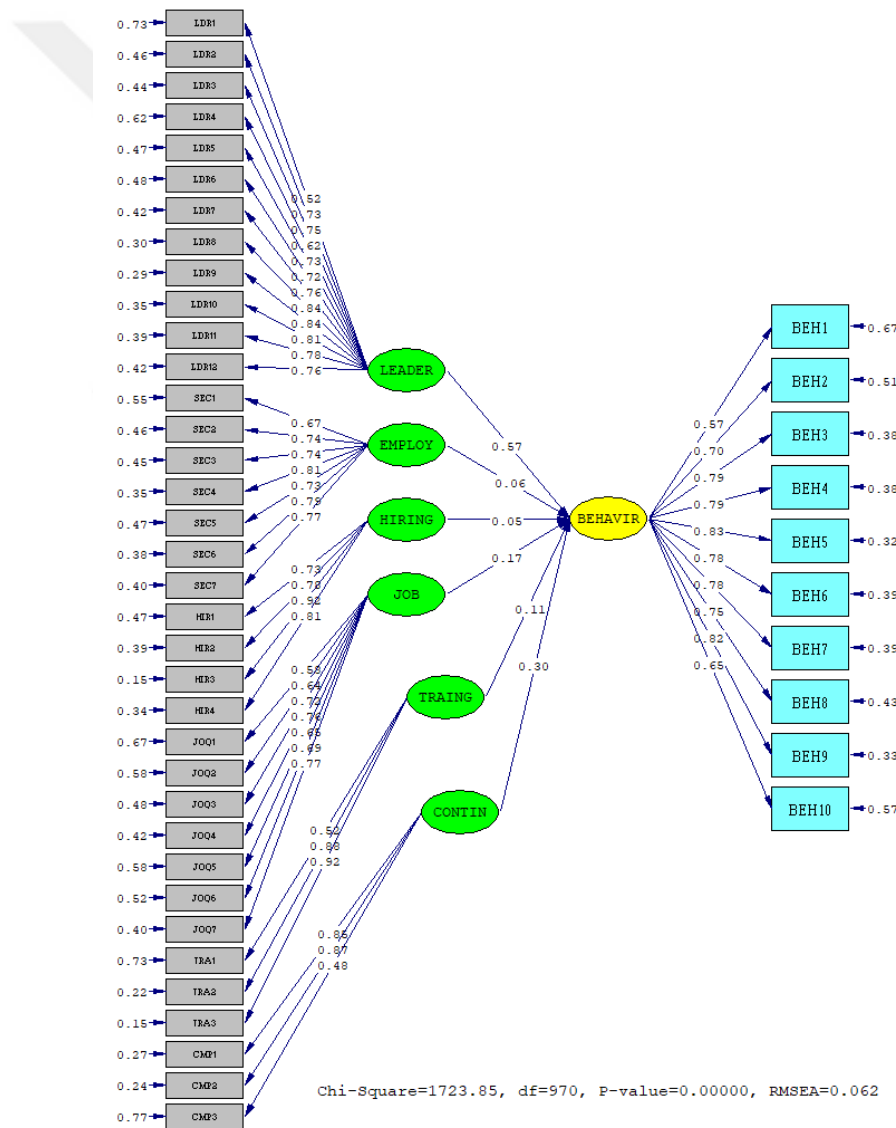


Figure 1 Structural Model for the High-Performance Work Systems (HPWS) Scale and Innovation

Behavior Scale

Table 16 Limits and The Results of The Structural Model

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

Source: Schermelleh-Engel et al., 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 16 shows that our 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 χ^2/df value for it is $1723.85/970=1.77$.

It can be seen that the “Leadership” has a positive and significant effect on “Innovation Behavior” with the coefficient of 0.57. Also, the “Employment Security” has a positive and significant effect on “Innovation Behavior” with the coefficient of 0.06. In addition, the “Selective Hiring” has a positive and significant effect on “Innovation Behavior” with the coefficient of 0.05. The “Job Quality” has also a positive and significant effect on employee’s “Innovation Behavior” with the coefficient of 0.17. The results proved that the “Training” has a positive and significant effect on “Innovation Behavior” with the coefficient of 0.11. Lastly, the “Contingent Compensation” has a positive and significant effect on “Innovation Behavior” with the coefficient of 0.30.

Those findings are in line with some previous studies which proved that HPWS positively impacts employees' (workers) innovation behavior (Ansari et al., 2018; Poompurk et al., 2020; Wijesingha and Arachchi, 2021; Bhattacharjee and Sarkar, 2023; Mrisho and Gwaltu, 2023). Similarly, a study by Fu et al. (2015) has demonstrated that HPWS and organizational innovation have a significant relationship, and that employees' creative work behaviors buffer this relationship. Another study by Liu (2022) showed that HPWS significantly improves employees' propensity for radical innovation.

5 RESULTS AND SUGGESTIONS

The current study used a structural equation modeling technique to examine how High-Performance Work Systems (HPWS) affect innovative behavior. The research includes looking at the connections between different HPWS variables and workers' involvement in innovative activities. This section offers the main conclusions drawn from the data analysis, emphasizing the essential correlations and their significance for businesses looking to promote an innovative culture.

First of all, the analysis investigated the relationship between HPWS, Innovation Behavior (IB) dimensions and gender. The findings indicate that while gender differences may not be noticeable in certain aspects of HPWS and innovative behavior, they do become obvious in contingent compensation and the overall evaluation of HPWS. These results demonstrate the significance of resolving gender-related disparities within HPWS and guaranteeing fair opportunities and viewpoints of the labor system. To make the workplace more inclusive and encouraging for all employees, organizations can think about introducing initiatives to advance gender equality in remuneration practices and improve female employees' opinions of the HPWS' efficacy.

Another analysis examined the relationship between HPWS, IB dimensions and age. The results show that age distinctions effect on leadership, employment security, job quality, training, contingent compensation, and the total evaluation of HPWS except selective hiring and total IB dimensions. Organizations should consider fitting their practices and strategies to meet the particular requirements and assumptions for various age gatherings, particularly in areas such as leadership development, improving the quality of the workplace, providing chances for training, or pay plans. By perceiving and tending to these age-related contrasts, companies can advance a more comprehensive and steadier workplace that lines up with the shifting discernments and necessities of employees at various phases of their careers.

In terms of the analysis that examined the relationship between HPWS, IB dimensions and education, the results show that HPWS and IB dimensions are not significantly influenced by educational disparities. Therefore, firms could concentrate on implementing HPWS principles and encouraging an innovative culture that benefits workers from all educational backgrounds. Although there are no statistically significant differences in education levels in these dimensions, it is nonetheless crucial to keep in mind that education may still have unintended consequences or interact with other factors to affect HPWS and innovation behavior.

Based on the analysis investigated the relationship between HPWS, IB dimensions and service period in the company, the results imply that service period affects leadership, employment security, selective hiring, job quality, and the overall evaluation of HPWS, except training and contingent compensation. Additionally, exploration, generation, championing, implementation and total IB dimensions do not differ by service period. Organizations should think about putting policies into place to improve leadership efficiency, job security, hiring discretion, and job quality for workers at the beginning phases of their employment. This can enhance their perception of the HPWS as a whole and build a positive work environment that encourages engagement and happiness among employees. To guarantee continued skill development and career progression, employers may also concentrate on offering constant training opportunities to workers over various service years.

According to last analysis which examined the relationship between HPWS, IB dimensions and employee status, employee status affects a number of HPWS dimensions, including leadership, employment security, selective hiring, training, contingent compensation, total evaluation of HPWS except job quality. In terms of IB, implementation, and total IB differ by status. Exploration, generation and championing are not affected by employee status. The demands and expectations of employees in various status groups should be taken into consideration when organizations contemplate adjusting their procedures and policies to accommodate them. For instance, giving experts the chance to grow as leaders and improving management job security. Organizations may establish a more inclusive and encouraging work environment that supports employee engagement, contentment, and creativity across all levels and positions by

recognizing and resolving these status-related inequalities.

Based on the analysis of the structural equation model, the results demonstrate a positive and substantial impact on employees' innovation behavior of the analyzed dimensions of High-Performance Work Systems (Leadership, Employment Security, Selective Hiring, Job Quality, Training, and Contingent Compensation). It recommends that organizations concentrate on creating effective leadership practices, ensuring job security, putting in place selective hiring procedures, guaranteeing high-quality jobs, providing training opportunities, and establishing suitable compensation systems. Organizations may promote employee involvement in innovative behaviors by addressing these characteristics, which may benefit company innovation and performance as a whole.

Using structural equation modeling, this study examined the impact of high-performance work systems (HPWS) on innovative behavior. The results show that factors including leadership, employment security, selective hiring, job quality, training, and contingent compensation have an influence on workers' innovation behavior in a positive and substantial way. These findings underline the need of developing efficient HR procedures and guidelines that promote a positive workplace culture and motivate staff to exhibit creative behavior.

It is critical to recognize study's limitations. Questionnaires were employed to gather the data for this study, which may have introduced common method bias and subjective biases. Future research may use numerous data sources or objective performance indicators to give a more thorough understanding of the connection between HPWS and innovative behavior. Moreover, since the study was limited to a single sector, its conclusions might not be very generalizable. The relationship between HPWS and innovative behavior may be better understood by conducting this research again in various sectors of industry or companies with different cultural backgrounds. Other elements that could affect innovative behavior, such as personal attributes (including personality traits), team dynamics, or corporate culture, were not taken into account in the study. To give a more thorough picture of the complex dynamics underpinning innovative behavior inside firms, future study might investigate these additional elements.

Despite these limitations, this study adds to the body of research by evaluating how HPWS affects innovative behavior. The research offers insightful information for

companies looking to develop an innovative culture and put into place efficient HR procedures to boost worker satisfaction and propel business growth. Future research should continue to explore and address the limitations identified here to further advance the understanding of the relationship between HPWS and innovation behavior.

Suggestions could be derived from these outcomes. First of all, HPWS significantly influence how firms encourage innovation. Organizations can use a variety of strategic initiatives to increase their chances of success. Employees' creativity, risk-taking, and continual development in order to foster an innovative culture may be encouraged. Innovative solutions may thrive in a setting where ideas are valued and failure is viewed as a learning opportunity. Additionally, investing in programs that promote continual learning and development gives staff members the abilities and information necessary to effectively come up with novel ideas.

Moreover, businesses may set up processes for rewarding and celebrating inventive initiatives, encouraging staff to participate actively in the innovation process. Cross-functional teams that promote cooperation bring different viewpoints together, stimulating innovation and problem-solving from several aspects. Also, by developing systems for employee feedback on innovation, companies can show their staff that their opinions are appreciated and entice them to participate more. Emphasizing customer-centricity motivates staff to concentrate on comprehending client demands and preferences, resulting in more client-focused inventive solutions. Last but not least, senior leadership support is essential for fostering a creative culture. Employees are more likely to be inspired and feel encouraged to offer their creative ideas when leaders actively promote innovation projects. All in all, companies may use the potential of HPWS to drive innovation by adopting these solutions, which will increase their success and provide them a competitive edge in their particular industries.

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APPENDIX A. LETTER SENT TO PARTICIPANTS

Dear participant,

This research form is submitted to you within the scope of the Master's Thesis titled “Investigation of The Effect of High-Performance Business Systems on Innovation Behavior with Structural Equation Modeling”, conducted under the supervision of Asst. Prof. Burak Nedim Aktaş at the Business Administration Graduate Program at Beykoz University. Filling out this research form, which will take you 15-20 minutes, will be of great value for the completion of our Master's thesis. The answers are Strongly Disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5).

The answers you give are very important in terms of obtaining correct results. The study is carried out for purely academic purposes. No information given by the participants will be disclosed individually or by the company. Thank you very much for your contribution.

Regards,

Yasaman Baghinipour
Beykoz University Graduate Programs Institute
Master's Program Student

APPENDIX B. PERSONAL INFORMATION SCALE

Gender	☐ Female
	☐ Male
Age	☐ 18-24
	☐ 25-34
	☐ 35-44
	☐ 45-54
	☐ 55 and over
Education	☐ Associate Degree
	☐ Bachelor's Degree
	☐ Master
	☐ PhD
Status	☐ Medical Staff
	☐ Intern
	☐ Technician
	☐ Junior Specialist
	☐ Specialist
	☐ Team Leader
	☐ Manager
	☐ Top Executive
Service Period in the Company	☐ 0-1 years
	☐ 2-5 years
	☐ 6-10 years
	☐ 11-15 years
	☐ 16 years and over

APPENDIX C. HPWS SCALE

HIGH-PERFORMANCE WORK SYSTEMS SCALE						
No	LEADERSHIP	1	2	3	4	5
1	If there is a decision to be made, everyone is involved in it.					
2	My organization places a great deal of importance on team development.					
3	I believe that management understands the challenges I face in doing my job.					
4	Managers in my organization make an effort to talk to me.					
6	It is easy for me to communicate my thoughts to management.					
7	I am given enough information to understand my role in this organization.					
8	My supervisor talks enthusiastically about what needs to be accomplished.					
9	My supervisor encourages me to express my ideas and opinions.					
10	My supervisor gets me to look at problems from many different angles.					
11	My supervisor listens attentively to my concerns.					
12	My supervisor treats each of us as individuals with different needs, abilities and aspirations.					
13	My organization measures how its managers are performing.					
No	EMPLOYMENT SECURITY	1	2	3	4	5
1	I have work in my organization for as long as I want it.					
2	I can be sure of being employed in my organization as long as I do good work.					
3	This organization provides me with retirement security.					
4	The company provides enough training for me to learn new ways to do my job.					
5	I feel I am really part of my work group.					
6	I feel in control of things that occur around me while at work.					
7	If a problem emerges with my work, I can take action to remedy it.					
No	SELECTIVE HIRING	1	2	3	4	5
1	Getting a job here was certainly not easy.					
2	Only the best is hired to work in my organization.					
3	To get my job, I had to go through an extensive hiring process.					
4	When new employees are hired, they must go through an extensive hiring process in which they are interviewed a number of times.					
No	JOB QUALITY	1	2	3	4	5
1	My organization does not pay a great deal of attention to the hiring of new employees.					

2	I do not have much say in the decisions that are made around here.					
3	Management is not aware of the difficulties that I have in doing my job well.					
4	I have little opportunity to use my own judgement when doing my work.					
5	I often feel bored at work.					
6	My organization makes little attempt to measure how well I do my work.					
7	My organization does not attempt to measure employee attitudes.					
No	TRAINING	1	2	3	4	5
1	I have a say in how much training I receive.					
2	If I get extra training, the company will pay it.					
3	If I get extra training on my own time, the company will pay me back.					
No	CONTINGENT COMPENSATION	1	2	3	4	5
1	Our pay in this company is higher than what competitors offer.					
2	Part of my compensation is based on how well my workgroup or department performs.					
3	I believe that I would be paid more fairly if I worked at another organization.					

APPENDIX D. INNOVATION BEHAVIOR SCALE

No	INNOVATION BEHAVIOR SCALE					
	Employees in this organization...	1	2	3	4	5
1	...pay attention to issues that are not part of his daily work.					
2	...wonder how things can be improved.					
3	...generate original solutions for problems.					
4	...search out new working methods, techniques or instruments.					
5	...find new approaches to execute tasks.					
6	...make important organizational members enthusiastic for innovative ideas.					
7	...attempt to convince people to support an innovative idea.					
8	...systematically introduce innovative ideas into work practices.					
9	...contribute to the implementation of new ideas.					
10	...put effort in the development of new things.					

RESUME

Yasaman BAGHINIPOUR

EDUCATION:

- BSC of Applied Chemistry
- MSC of Business Administration

LANGUAGE KNOWLEDGE:

- PERSIAN (MOTHER TONGUE)
- ENGLISH (ADVANCE LEVEL)
- TURKISH (INTERMEDIATE LEVEL)

WORK EXPERIENCE:

- QUALITY CONTROL EXPERT AND PRODUCTION ASSISTANT (Aug 2018-Aug 2020)
- ASSIST MANAGER AT ENGLISH TIME LANGUAGE INSTITUTE (Sep 2020-Sep 2021)
- NATIVE ENGLISH TEACHER AT MBA OKULLARI (MEDICANA EGITIM GRUBU) (Aug 2022-Jun 2023)