Volume 25, Special Issue **Print ISSN: 1099 -9264**
Online ISSN: 1939-4675

DO HIGH PERFORMANCE WORK SYSTEMS ENHANCE EMPLOYEE ENGAGEMENT? AN EMPIRICAL STUDY AT MOBILE TELECOMMUNICATION COMPANIES IN JORDAN

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ABSTRACT

The growing interest in employees' engagement is considered the most concept apex of the employees' behaviour that organizations seek to enhance to achieve their strategic goals. This research aimed to examine the effect of high-performance work systems on enhancing the employees' engagement at mobile telecommunication companies in Jordan. The research data was collected through distributing the questionnaires to an appropriated sample of 460 employees, while the returned questionnaires were 385 with the response rate of 83.69%. A structural equation modelling (SEM) method was utilized to test research hypotheses. The research results indicated that high-performance work systems influenced employee engagement and its all dimensions. Pursuant to these results, the recommendations were provided to the mobile telecommunication companies for focusing on creating employees' psychological empowerment through HPWS practices, enhancing the organizational factors that affect employee engagement behaviours, and working to integrate the employees' vision with the general vision of the organization by dealing with HPWS practices as a strategic bundle that affects the long-term employee satisfaction.

Keywords: High Performance Work Systems, Employee Engagement, Mobile Telecommunication Companies, Jordan

INTRODUCTION

Recently, the researchers focused their interest on identifying the role of Employee Engagement (EE) to assist the organization to achieve its goals by influencing its employees' behavior and pushing them to adopt its principles (Ahmed & Ansari, 2020; Estell & Davidson, 2019; Ismail et al., 2019; Sharma et al., 2019). EE is one of the motivational traits that is reflected in the organizational results through the exploitation of the capabilities of internal resources (Chaudhary, 2019; Uddin et al., 2019, Al-Hawary & Nusair, 2017), where employees will engage in work if they are satisfied with organizational decisions (Rashidin et al., 2020), enthusiastic to achieve its goals (Djoemadi et al., 2019), and there is concordance between their ambitions and the organization's vision where they tend to show the role of additional behaviour and reluctance to the idea of leaving the work (Zeng et al., 2019). The latest report on employee engagement issued by Blessing White, which included 1.2 million participants from 425 companies around the world, indicated that employee participation is the starting point towards

employee retention and achieving organizational commitment through job satisfaction based on providing opportunities for professional growth and emphasizing the employees' contribution to administrative processes by creating an appropriate work environment and effective training for employees (Casey, 2018).

High-Performance Work Systems (HPWS) include a set of separate but interconnected human resource practices such as selective recruitment, extensive training and development, developmental performance appraisal, and equitable rewards system (Han et al., 2020; Li et al., 2019). These Human resource practices play a fundamental synergistic role that enhances employees' capabilities, motivate them, and provide an opportunity to develop their careers (Al-Hawary et al., 2020; Al-Hawary & Abdallah, 2021; Al-Hawary & Al-Rasheedy, 2021; Mohammad et al., 2020; Zhou et al., 2019). HPWS impacts employee's job satisfaction (Al-Hawary & Shdefat, 2016; Metabis & Al-Hawary, 2013; Al-Lozi et al., 2017; Al-Lozi et al., 2018; Nasurdin et al., 2020), employees' commitment (Al-Hawary & Alajmi, 2017; Hu et al., 2019), in-role and extra-role performance (Al-Hawary & Nusair, 2017; Al-Hawary et al., 2013; Al-Hawary & Al-Namlan, 2018; Gürlek, 2020). Moreover, HPWS is one of the Strategic Human Resource Management (SHRM) tool used to improve employees' effectiveness through focusing on increasing their productivity, job quality, and efficiency, that drive a higher level of organizational performance (Al-Hawary, 2015; Alikaj et al., 2020).

Jordan has a highly developed infrastructure, where the telecommunications sector is growing at a breakneck fast pace, and its infrastructure is continuously being updated to keep pace with the latest technological developments in this sector. Moreover, this sector is considered the most competitive in the Middle East which includes a large number of employees at various administrative levels. Consequently, the companies operating in this sector which have the ability to engage employees possess a greater chance of staying competitive and achieving continued success, since this sector is mainly based on the human resource to provide services for clients. Therefore, this study aims to identify the role of high-performance work systems in employees' engagement at mobile telecommunication companies in Jordan.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

High Performance Work Systems

Since the emergence of HPWS concept in the eighties of last century by (Lawler, 1986), authors in managerial have focused on studying this concept and linked it with behavioral phenomena happening in organizations to provide scientific explanations and motivate managers to take in their consideration when formulating the human resource strategies oriented on superior performance which deems one of essentials factors for operating in the dynamic environment. Therefore, Alikaj, et al., (2020) referred to high-performance work systems as the human resource practices are concerned with creating an organizational context which leads employees tendencies to proactive the environmental changes by providing them with knowledge, skills, and decision-making abilities, while Do & Shipton (2019) used the strategic perspective to point at HPWS as a main strategic lever through emphasizing their role on developing and maintaining core competencies, as well as a vital condition for strategy execution through human resource bundles that seek to increase employees participation in formulating strategies and decision making. Furthermore, Han, et al., (2019) stated that HPWS is a configuration of consistent practices which are designed in order to improve employees' ability, motivation, and participation for enhancing the importance of collective contributions on achieving organization's goals. Consequently, HPWS is a set of HR practices that emphasize integrating HR efforts and enhance their abilities in order to achieve the optimal performance in an organization by suitable use of its resources.

Research papers highlight two different opinions to determine the dimensions of HPWS, where (De Reuver et al., 2019; Ma et al., 2017; Obeidat et al., 2016; Traeger & Alfes, 2019, Al-

Lozi et al., 2018) tended to take ability, motivation, and opportunities enhancing HR practices, which is called AMO model for measuring HPWS by classification all HR practices within these categories. However, (Alatailat et al., 2019; Ali et al., 2019; Alikaj et al., 2020; Caniëls & Veld, 2019; Cooke et al., 2019; Jeong & Shin, 2019; Liu & Lin, 2019) argued that HR practices have more essential issues within the organization, where the AMO model is not enough to contain them, especially the issues related to selecting talent and designing HR strategies. Thus, the dimensions of HPWS have to focus on all domains related to HR practices whether on internal or external organizational environment. Therefore, this research adopted six dimensions in order to measure HPWS at mobile telecommunication companies in Jordan. Job design is an essential part of human resource management focused on determining the specifications, methods, and relationships of the job needed to fulfil the goals of employees and organization (Juan et al., 2019; Parker, 2014, Al-Hawary & Nusair, 2017), selective staffing is the objective process to select a candidate for a vacancy in the organization based on the clear criteria (Garcia et al., 2019), extensive training is a daily activity aimed to increase employees knowledge, skills, and abilities to accomplish their work and reach the best results (Miao & Cao, 2019; Zhou et al., 2019), employee empowerment refers to giving employees a degree of autonomy and the power to make decisions related to work within the general policy framework of the organization (Potnuru et al., 2019; Yin, 2020),performance appraisal is a documented evaluation of employees work results, related to accomplishing their duties and dealing behaviours during work (Ryu & Hong, 2020), and equitable rewards is a set of financial and non-financial advantages that the organization provides to employees who have an excellence performance (Gürlek, 2020; Parveen et al., 2020).

Employee Engagement

Employee Engagement (EE) anchored on the studying of behavioral and psychological aspect of employees in their workplace by understanding the nature of relationships arising between an employee and other people. Kahn, 1990 is a pioneer of psychological approach in administrative science who defined employee engagement as "the harnessing of organization members' selves to their work roles. In engagement, people employ and express themselves physically, cognitively, and emotionally during role performances". In the same context, Djoemadi, et al., (2019) expressed EE concept as a behavioural scale intended to measure an employee emotional, physical, and cognitive utilization during work performing, as well it indicated to an energetic and positive work situation reflecting the powerful working capacity and professional identification (Wang et al., 2019). Thereby, EE refers to employee cognitive and physical capabilities exploitation through behavioural stimulation to goals achievement.

Chaudhary (2019); Dhir & Shukla (2019)considered that there are three dimensions to measuring EE based on employees' abilities, which are cognitive, emotional, and physical engagement, while Djoemadi, et al., (2019) pointed that EE is measured by say, stay, and strive. However, most research papers used Utrecht Work Engagement Scale (UWES) discussed by Schaufeli, et al., (2006) for determining employee engagement, where this scale is composed of three main dimensions: vigor refers to employees having a stamina, mental flexibility, and desire to put effort into the work (Tsaur et al., 2019) ; dedication that indicates the employees' sense of importance, enthusiasm, encouragement, pride, and challenge in their work (Rahmadani et al., 2019) ; and absorption which expresses that employees do fully focus on work through which time can go faster and individuals will have hardness in getting away from their work (Zeng et al., 2019).

High Performance Work Systems and Employee Engagement

HPWS is one of the most prominent concepts that emerged in contemporary literature explaining the role of human resource practices in enhancing organizational performance

(Alatailat et al., 2019; Ali et al., 2019; Mitchell et al., 2013; Nadeem et al., 2019; Obeidat et al., 2016; Sun et al., 2007), where empirical studies elucidated that HPWS has an effect in reducing employee absenteeism (De Reuver et al., 2019), helps to develop intellectual capital and organizational ambidexterity (Gürlek, 2020; Parker, 2014), and improves employees innovative capabilities at various managerial levels in an organization (Caniëls & Veld, 2019; Do & Shipton, 2019). Based on social exchange theory, employees are viewed as emotional beings that cognitively process the information they obtain to make decisions that determine the nature of the relationship with others and the pattern of exchange with the organization (Braganza et al., 2020). Thus, this exchange process generates a set of employees' feelings related to the social units represented by the organization in which they work (Kim & Qu, 2020, Al-Lozi et al., 2018), which increases participation behaviour and commitment to achieving its goals (Meng et al., 2019). Therefore, HPWS practices that involve providing the necessary support to develop employees' capabilities, enrich their jobs, enhance their skills, and encourage them to make participatory decisions (Traeger & Alfes, 2019) will be met by employees through increased work participation and commitment towards achieving the organization's goals (Al-Ajlouni, 2020). Accordingly, the main hypothesis can be formulated as follows:

H1: There is a positive effect of High-Performance Work Systems (HPWS) on employee engagement.

This main hypothesis is divided into three sub-hypotheses to identify the effect of the combined dimensions of HPWS on each dimension of EE, which is illustrated by Figure 1 as follows:

H1a: There is a positive effect of high-performance work systems (HPWS) on vigor.
H1b: There is a positive effect of high-performance work systems (HPWS) on dedication.
H1c: There is a positive effect of high-performance work systems (HPWS) on absorption.

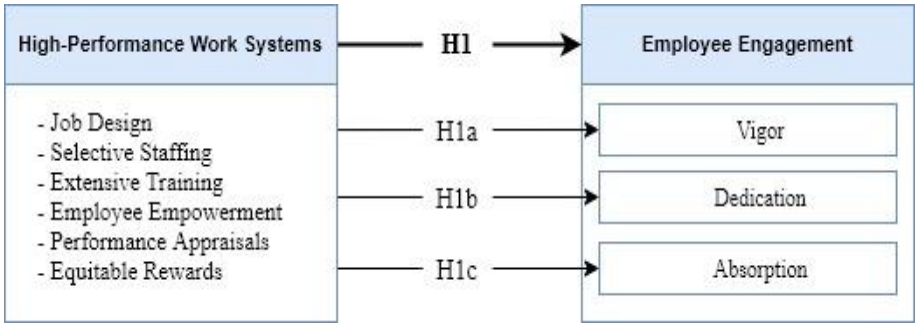

FIGURE 1
PROPOSED CONCEPTUAL MODEL

METHODOLOGY

Sample and Procedure

The research target population consisted of the mobile telecommunication companies operating in Jordan, where this industry has shown a massive growth recently in the Middle East area. According to the second report of the Telecommunications Regulatory Commission (TRC), the number of mobile subscriptions reached about 11.3 million divided into three companies licenced in Jordan which are: Zain that acquired the largest market share of 42%, followed by Orange which obtained 33% of market share, while Umniah ranked in the last position of 25% market share. These companies employ 1850 employees who represent the respondents in this study where they can provide the best answers to the research questionnaires. An appropriate sample was chosen including 460 employees from Orange and Umniah companies based on the sample size table of (Sekaran & Bougie, 2016). The questionnaires

were designed by Google Forms and sent to the sample members, where the received responses were 385 with the response ratio of 83.69%. After evaluating the responses, there were 12 ones not completed, thereby the questionnaires available for statistical analysis were 373 questionnaires.

The results related to the demographic and functional characteristics of the research sample indicated that 57% of them were employees at Umniah company, while 43% were employees at Orange company. According to the gender variable, most sample members were female with a ratio of 64.34%, while the results related to the age group referred that the category (from 30-less than 40) ranked in the first position with a ratio of 48.2%, followed by the category (Less than 30) with a ratio of 33.7%, and the last rank was for category (more than 40), where its ratio was 18.1%. Besides, most respondents hold (bachelor's degree) with a ratio of 67.5%, while the lowest ratio of 12.8% was the employees who held (doctoral degree).

Measures

A self-reported questionnaire based on a survey was used to collect data from sample members. This questionnaire was in the English language, but it was translated to the Arabic language for easy understanding on the part of employees, where it included two sections: the first one related to demographic and functional variables which were the company where employees work, gender, age group, and educational level. The second section was composed of the research variables that the respondents rated their items on a five-point Likert scale which ranged between strongly disagree (1) to strongly agree (5).

The Independent Variable (IV) was the high-performance work system that measured through 24 items developed by (Alatailat et al., 2019; Alikaj et al., 2020; Liu & Lin, 2019, Al-Hawary & Nusair, 2017). The items were distributed into six dimensions: four items for job design (e.g., I can accurately recognize my tasks and responsibility), five items for selective staffing (e.g., The company focusing on talent selection among the candidates), four items for extensive training (e.g., The company provides appropriate training programs for improving my ability), three items for employee empowerment (e.g., I can participate in problem solving and decisions making). Four items for performance appraisals (e.g., The company adopts clear indicators to measure my work results), and four items for equitable rewards (e.g., Salary basically dependant on accomplishment of my duties).

The Dependent Variable (DV) was the employee engagement which was measured through 17 items using the Utrecht Work Engagement Scale (Schaufeli et al., 2006). The items were distributed into three dimensions: six items for vigor (e.g., The work climate makes me feel the energy), five items for dedication (e.g., My work helps me in inspiring), six items for Absorption (e.g., I get carried away when I'm working).

Validity and Reliability

The statistical analysis anchored on SPSS and AMOS programs was used in this research, where the analysis began by evaluating the convergent validity for each construct through calculating Average Variance Extracted (AVE) which was based on items' loadings values, then discriminate validity by comparing the value of (AVE) per construct with values of Maximum Shared Variance (MSV) and square root of the Average Variance Extracted (√AVE). Moreover, the reliability test was dependent on two main methods that were Cronbach's Alpha Coefficient (α) to determine the internal consistency and McDonald's Omega Coefficient (C.R) for ensuring the composite reliability. Table 1 illustrates the reached values

Table 1
RESULTS OF VALIDITY AND RELIABILITY INDICATORS

Variables	Loadings Range	AVE	MSV	√AVE	α	C.R
Job Design	0.667-0.845	0.549	0.458	0.741	0.812	0.828
Selective Staffing	0.688-0.783	0.527	0.395	0.726	0.844	0.847
Extensive Training	0.652-0.768	0.517	0.442	0.719	0.802	0.810
Employee Empowerment	0.684-0.743	0.521	0.501	0.721	0.763	0.765
Performance Appraisals	0.637-0.784	0.525	0.410	0.725	0.811	0.815
Equitable Rewards	0.647-0.771	0.514	0.372	0.717	0.715	0.717
Vigor	0.668-0.802	0.544	0.476	0.738	0.871	0.877
Dedication	0.681-0.743	0.510	0.338	0.714	0.835	0.839
Absorption	0.653-0.781	0.530	0.408	0.728	0.868	0.871

The results listed in Table 1 indicated that the loadings values for all research items ranged between (0.637-0.845) which were higher than 0.50 the minimum value for acceptance (Al-Hawary et al., 2018), Also the calculated AVE value for each construct were above 0.50 which is the lowest value for accepted convergent validity (Crego & Widiger, 2016). Besides, the results indicated that the values of MAV were less than the values of AVE for the same construct and all values of √AVE were greater than the correlation coefficients among other constructs, thereby these results were considered an indicator for achieving the discriminate validity (Sung et al., 2019). Further, it was found that Cronbach's Alpha Coefficients ranged between (0.715-0.871) which were higher than 0.70 the minimum threshold for internal consistency accomplishment, as well as McDonald's Omega Coefficients ranged between (0.717-0.877), that were greater than 0.70 the lowest limit for composite reliability, thereby the research instrument Characterized by reliability (Mohamad et al., 2015).

For identifying construct validity used in this research, Confirmatory Factor Analysis (CFA) was applied to extract the indicators used to judge the goodness of model fit. Figure.2 demonstrating the measurement model used for determining construct validity.

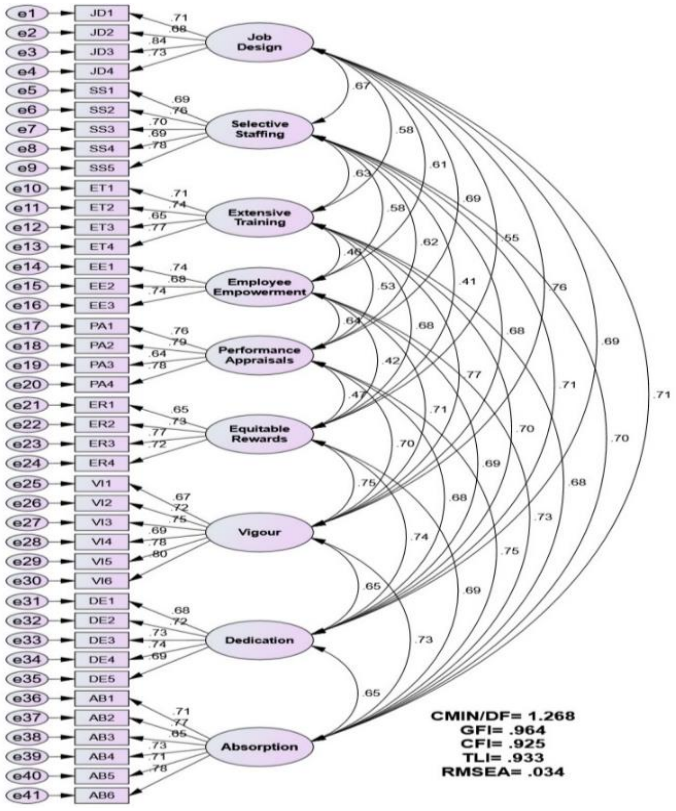

FIGURE 2
MEASUREMENT MODEL

The results that were summarized in Figure.2 indicated that the research construct validity achieved, based on the chi-square ratio (CMIN/DF) reached 1.268, which was less than 3, the highest acceptance value of this indicator, as well as the values of Goodness of Fit Indices (GFI), Comparative Fit Indices (CFI), and Tucker-Lewis indices (TLI) were greater than 0.90, which is the lowest limit for acceptance, also the Root Mean Square Error of Approximation (RMSEA) was less than the highest threshold of 0.05 (Brown, 2015).

ANALYSIS RESULTS

Before embarking on testing the research hypotheses, the study population's adoption of the dimensions related to both high-performance work systems and employee engagement was recognized through extracting the values of mean and standard deviations. Moreover, the data appropriateness for hypothesis testing was confirmed by relying on correlation coefficients between the dimensions of the research variables. Table 2 shows the results obtained.

Table 2
DESCRIPTIVE STATISTICS AND CORRELATION MATRIX

Variables	M	SD	1	2	3	4	5	6	7	8	9
Job Design	3.65	0.847	1								
Selective Staffing	3.71	0.728	0.671**	1							
Extensive Training	3.53	0.924	0.584*	0.634*	1						
Employee Empowerment	3.38	0.882	0.614**	0.582**	0.458*	1					
Performance Appraisals	3.7	0.798	0.686**	0.620**	0.531*	0.638**	1				
Equitable Rewards	3.62	0.915	0.552*	0.415*	0.682**	0.422*	0.468*	1			
Vigor	3.58	0.829	0.761**	0.680**	0.772**	0.718**	0.699*	0.750**	1		
Dedication	3.61	0.906	0.692*	0.716**	0.705**	0.688**	0.683**	0.743**	0.648**	1	
Absorption	3.48	0.748	0.715**	0.697**	0.682**	0.735**	0.748**	0.690*	0.728**	0.649**	1

Note: * referred to correlation coefficients at significance level ≤ 0.05, ** referred to correlation coefficients at significance level ≤ 0.01.

The results in Table 2 shows that overall high-performance work systems variable was at moderate level M=3.60, whereas the highest dimension according to mean was selective staffing with high level M=3.71, SD=0.728, while the lowest one was employee empowerment with moderate level M=3.38, SD=0.882. Besides, the results indicated that an employee engagement variable was also at moderate level M=3.56, whereas its dimensions were at moderate level, and the dedication dimension was the first rank M=3.61, SD=0.906, whilst absorption dimension ranked the last M=3.48, SD=0.748. Concerning data appropriateness test for analysis, the results demonstrated that all dimensions had a good correlation coefficients, where they ranged between (0.415-0.772), while the correlation coefficients between independent variable dimension were not exceeding the value of 0.80, which is considered an indicator that the data was free of multicollinearity problem (Hair, 2010).

For testing the research hypotheses, the Structural Equation Modelling (SEM) method was used to identify the effect of high-performance work systems on employee engagement. Figure 3 shows the model used for that.

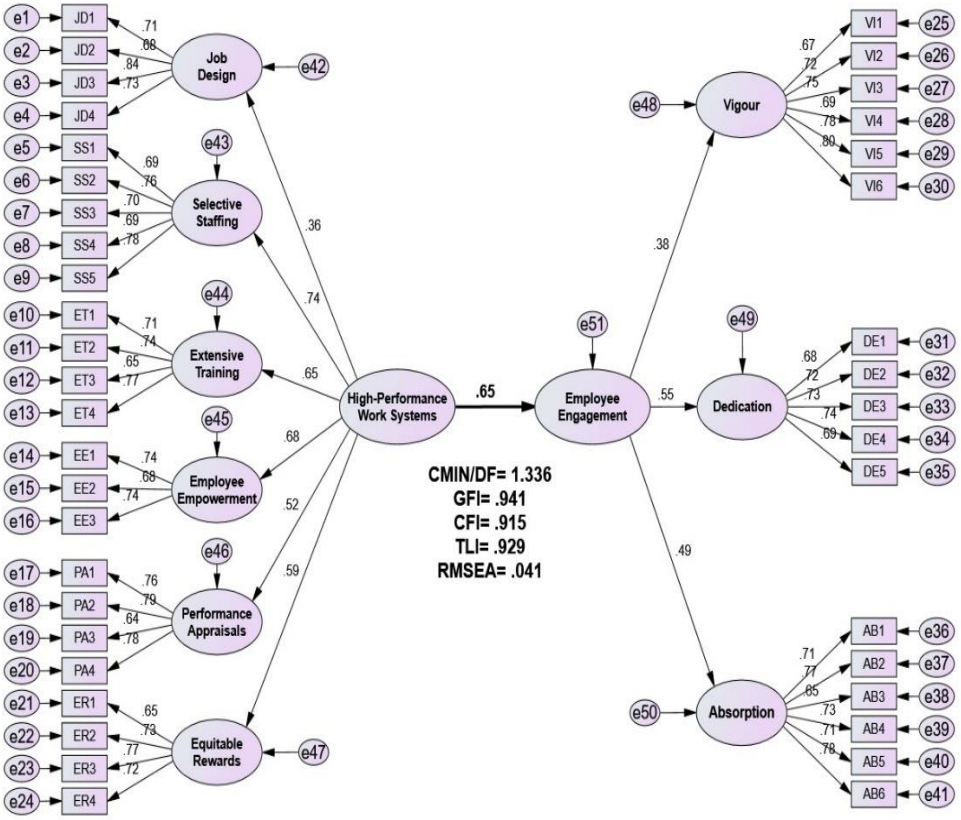

FIGURE 3
SEM FOR TESTING THE RESEARCH MAIN HYPOTHESIS

Figure 3 provided the result of the model fit indicators which referred that all of them were at acceptance level CMIN/DF=1.336, GFI=0.941, CFI=0.915, TLI=0.929, and RMSEA=0.041, thereby the effect result of high-performance work systems on employee engagement which was listed in Table 3 can be relied on to explain the relationship between these two variables

Table 3
EFFECT OF HIGH-PERFORMANCE WORK SYSTEMS ON EMPLOYEE ENGAGEMENT

Path			Unstandardized Coefficients		Standardized Coefficient	R^2	t-value	p-value
			B	S.E.	β			
High-Performance Work Systems	→	Employee Engagement	0.527	0.024	0.652	0.702	21.958	***

Note: * effect at significance level ≤ 0.05, ** effect at significance level ≤ 0.01, *** effect at significance level ≤ 0.001.

The results shown in Table 3 indicated that there was an effect of high-performance work systems on employee engagement at mobile telecommunication companies in Jordan based on the P-value that was at a significance level less than 0.001 with the standardized coefficient β=0.652, as well as the determination coefficient value R^2=0.702. This result showed that 70.2% of employee engagement variance, results from the change in application of high-performance work systems practices.

Besides, the impact of high-performance work systems on the dimensions of employee immersion was recognized by building a structural model to test the sub-hypotheses as shown in Figure 4

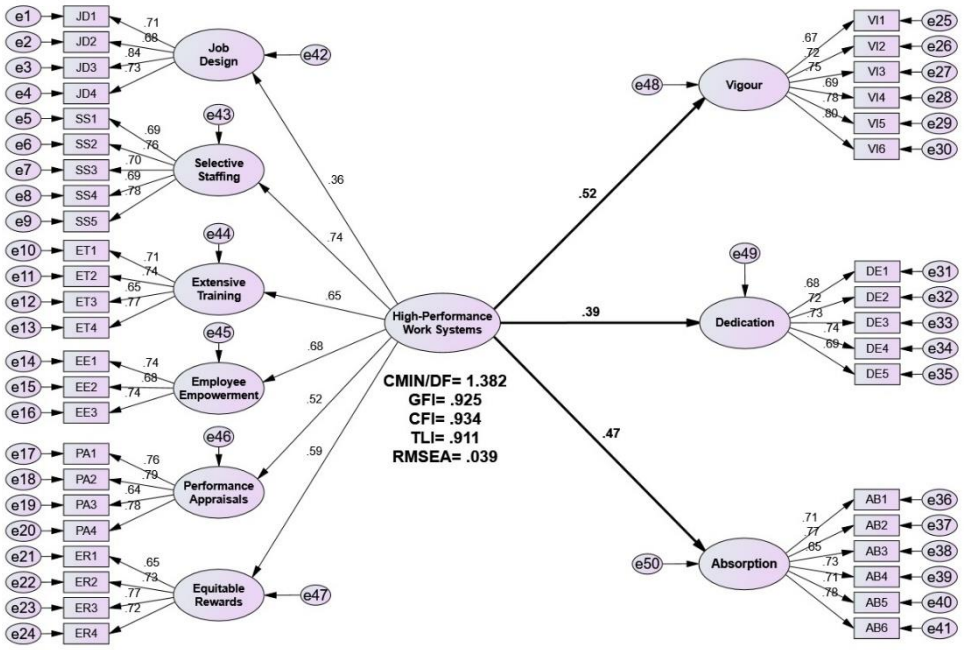

FIGURE 4
SEM FOR TESTING THE RESEARCH SUB-HYPOTHESES

The results show that the model used to test the effect of high-performance work systems on the dimensions of employee engagement was characterized by a suitable degree of reliance on the results shown in Table.4, where the values of the model fit indicators of CMIN/DF=1.382, GFI=0.925, CFI=0.934, TLI=0.911, and RMSEA=0.039 were within the appropriate limits.

Table 4
EFFECT OF HIGH-PERFORMANCE WORK SYSTEMS ON EMPLOYEE ENGAGEMENT DIMENSIONS

Path			Unstandardized Coefficients		Standardized Coefficient	t-value	p-value
			B	S.E.	β		
High-Performance Work Systems	→	Vigor	0.499	0.034	0.521	14.676	***
High-Performance Work Systems	→	Dedication	0.358	0.028	0.388	12.785	**
High-Performance Work Systems	→	Absorption	0.451	0.032	0.473	14.094	***

Note: * effect at significance level ≤ 0.05, ** effect at significance level ≤ 0.01, *** effect at significance level ≤ 0.001.

The results in Table 4 indicated that high-performance work systems have an effect on all dimensions of employee engagement depending on the P-value that were less than 0.05, where the greatest effect of high-performance work systems on vigor dimension according to the standardized coefficient of β=0.521, while the least effect of high-performance work systems on dedication which had the lowest value of the standardized coefficient of β=0.388.

DISCUSSION AND CONCLUSION

The main objective of this research was to investigate the impact of HPWS on employees' engagement at mobile telecommunication companies in Jordan. The descriptive analysis results of the research variables showed that the level of HPWS was moderate, where this result is

consistent with the studies' findings of (Al-Ajlouni, 2020; Babic et al., 2019; Caniëls & Veld, 2019; Cooke et al., 2019; Do & Shipton, 2019; Nadeem et al., 2019). Therefore, it is evident that companies select their employees based on the candidates' skills and talents that they possess, then subject them to intensive training programs with the aim of providing a set of abilities necessary to perform their jobs professionally, and increase their potential to integrate into the work environment. Moreover, these companies follow fair foundations in evaluating the performance of their employees seeking to provide financial and non-financial incentives to distinguished people.

Further, the results indicated that the level of employee engagement at mobile telecommunication companies in Jordan was moderate, and this is consistent with the studies of (Chaudhary, 2019; Uddin et al., 2019, Al-Hawary & Shdefat, 2016). Consequently, the employees of these companies are aware of their role in achieving the vision and mission of the company, and they form a set of common links to the work environment. In addition, employees have the freedom to make decisions related to the nature of work in light of the general objectives of the company, and they can control their employees' behavior to continue performing the tasks assigned to them.

With regard to hypothesis testing, the results showed an impact of HPWS on all dimensions of employee engagement, where this result confirms the results of studies (Al-Ajlouni, 2020; Cooke et al., 2019; Huang et al., 2018). Therefore, companies that choose their employees carefully can facilitate their integration in the work environment by employing intensive training programs to enhance their skills in effective communication with colleagues. Added to this, providing employees with the opportunity to express their opinions and suggestions about the decisions taken increases their sense of satisfaction and creates a strong link between them and the company and motivates them to perform their duties in the best possible way.

Managerial Implications

Through the results of this research, a set of practical recommendations related to administrative issues can be presented to telecommunications companies with the aim of increasing the employees' engagement. First, focusing on creating employees' psychological empowerment through HPWS practices based on improving their skills and capabilities such as training programs and scientific conferences that increase employees' emotional attachment to their organizations. Second, enhancing the organizational factors that affect employee engagement behaviours by reviewing the incentive systems used and developing them in line with the actual and fair evaluation of employees' performance. Third, working to integrate the employees' vision with the general vision of the organization by dealing with HPWS practices as a strategic bundle that affects the long-term employee satisfaction with the tasks they perform, and this is reflected in improving their involvement with achieving the organization's goals and improving their performance.

LIMITATIONS AND AREAS OF FUTURE RESEARCH

Despite the scientific importance of this research, it is not without some limitations, as it is based on the study of HPWS as a system without considering its dimensions, which limits the ability to generalize the results widely. Therefore, we recommend conducting studies related to testing the effect of HPWS dimensions on employees' engagement. Besides, the research population consisted of employees in an Arab environment which is largely homogeneous. Therefore, we recommend conducting future studies in less homogeneous population to isolate cultural factors associated with common values and beliefs. Finally, the current research aims to identify the impact of HPWS on employees' engagement. Therefore, future studies can identify the effect of HPWS with other variables such as competitive advantage, organizational performance, and customer satisfaction.

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