

## The effect of high involvement work systems on organizational performance: The mediating role of knowledge-based capital

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CHRONICLE

ABSTRACT

*Article history:*

Received: April 15, 2019

Received in revised format: April 28 2019

Accepted: May 14, 2019

Available online:

May 17, 2019

*Keywords:*

*High involvement work systems*

*Knowledge based capital*

*Human capital*

*Social capital*

*Organizational capital*

*Leadership style*

This study investigate the effects of high involvement human resources on organizational performance. The study is accomplished through hypothesizing the effect of high involvement work systems on performance as the main relationship. This effect is theorized to be mediated through knowledge-based capital. Additionally, leadership style is considered as the potential moderating force in the theorized model. Data is analyzed from 380 collected questionnaires distributed among hotel employees in Jordan using structural equation modelling techniques. The results show that high involvement work systems had a positive effect on performance, social and human capital. Human and social capital mediating role is also observed. Finally, leadership style is emerged as a moderating variable affecting the relationship between high involvement work systems and performance. The findings of this study show the importance of the role played by human and knowledge-based capital in achieving human resources performance goals.

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### 1. Introduction

This research looks into tourism and hospitality management linked with human resource management. The hotel industry in particular, and by extension of the related tourism sector in general, has gone through sustainable growth and change over the last decades. Consequently, it has been recognized as the main driver in the global economy, owing to the fact that tourism represents as one of the largest and the fastest-growing economic activities, as identified by the United Nations World Tourism Organization (UNWTO, 2012). Such a globally dynamic landscape, where the hotel industry is competing within, is facing changes that are increasingly more regular while frustratingly proving harder to envision. For example; one month before the Brexit vote, there had been virtually no effort made by British hotels to predict the future impact of the vote on their operations. This research builds on the understanding that hotels' leaders and managers do have their establishments and positions under constant evaluation through the continuous online assessments of their staff and services by hotels' guests. As a result, a competent framework of functionality should account for diverse clientele tastes and expectations which in turn sheds light on the value of sufficiently trained employees who are capable of providing services

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as required. The peculiarity of hotel sector makes the significance of having a fitting employee that carries hotels' values while offering services of extreme significance. The proposed understanding of hotel management, advocated for in this study, crystalizes the vitality of implementing human resource systems efficiently that is capable of surviving competitive pressures through appropriately skilled members of staff. The tourism industry in Jordan is part of the services in economic sector which contributes to more than 70% of the Jordanian Gross National Product (GDP) (department of statistics, 2018). Specifically, the Jordanian tourism industry is responsible for 17% of the GDP with hotels employing around 15000 employees on top that creates working indirect working opportunities that would add up (along with direct employment) to about 37% of the tourism industry total employment (Al-Refai, 2015; Madera et al., 2017). Thus, it constitutes a considerable source of employment in a country suffering from high unemployment rates that are leading to social and political upheavals as shown by the continuous strikes and popular protests. To this end, the research presented here focuses on the working environment within the hotel industry. In unambiguous terms, the implementation of a specific type of human resources systems as a predictor of organizational performance within the Jordanian hotel industry. This is articulated by investigating the impact of employing high involvement working systems.

This paper is organized as follows: first, the theoretical framework of the study is developed. Second, the methodological procedures are explained. Third, the results of the study are put forward. Finally, discussions and conclusions are drawn.

## **2. Theoretical literature review**

### *2.1 High Involvement Work Systems*

Understanding within Human Resource Management scholarly community commonly maintains that the effects of Human Resources practices on organizational outcomes require a focus on holistic perspective of Human Resources systems (Shin & Konrad, 2017). This is despite the fact that earlier evidence was less conclusive about the synergy requirements of Human Resource practices (Becker & Gerhart, 1996; Bowen & Ostroff, 2004). The underlying thought is that these Human Resources Systems are having more of an aggregated impact on employees that is conceivably varied across systems. Consequently, empirical studies focusing on Human resources are better suited for studying these conditions on the systems level (Ichniowski et al., 1997). This paved the way for this study to look into High Involvement Work Systems at the hotel level in our sample.

Organizations High Involvement Work Systems adoption is thought to facilitate developing knowledge, skills and abilities for employees. This is accomplished through creating training programs, empowerment initiatives and contingent rewards (Shin & Konrad, 2017). For example, studies have shown that utilizing work force training programs does lead to gains in performance (Delaney & Huselid, 1996; Shanker et al., 2017). Running initiatives for employee involvement helps to encourage voluntary contributions among staff in organizational development. Empirical results show that empowerment is related to organizational positive outcomes (Yang, & Konrad, 2011). Other features of High Involvement Works Systems such as compensation is thought to be positively associated with motivating employees to achieve higher levels of performance through stimulating skill development (Way, 2002). Confirming earlier studies have found a positive relationship between high rewards and performance (Kalleberg, & Moody, 1994), and a similar impact for payment system that is based on the employees' merits and organizational productivity (Lazear, 2000). Consequently, the authors propose the following hypotheses:

H<sub>1</sub>: High Involvement Work Systems have a positive effect on organizational financial performance in the Jordanian hotel sector.

H<sub>2</sub>: High Involvement Work Systems have a positive effect on the knowledge-based capital within the Jordanian hotel sector. In particular, this impact is studied through examining HWIS effect on (a) social capital, (b) human capital, and (c) organizational capital.

## 2.2 Knowledge-based capital

In this this research we employ three dimensions; namely social, human and organizational capital to examine knowledge-based capital. Organizational contexts do affect how members of the organization behave and their outcome. For instance, Danneels (2008) observed that the way knowledge is manifested in an organization does affect its capability to achieve the outcomes. This paper takes the view that knowledge is aggregated on an organizational level as knowledge-based capital (Youndt et al., 2004). Such a view allows this investigation a holistic perspective on how organizations maintain and accumulate knowledge within their structures and members of staff (Subramaniam, & Youndt, 2005). This paper conceptualizes knowledge-based capital as put forward by Reed et al. (2006) and Youndt et al. (2004). Knowledge-based capital represents a conceptual fit to study the effect of High Involvement Work systems on performance as it helps explain the learning outcomes from these human resources practices. Thus, we examine the following hypotheses to study the knowledge-based capital in the context of high involvement work systems.

H<sub>3</sub>: The impact of knowledge-based capital on hotels' organizational financial performance is positive. In particular, this impact is studied through examining three dimensions of knowledge-based capital effects, and they are (a) social capital, (b) human capital, and (c) organizational capital.

H<sub>4</sub>: Knowledge-based capital mediates the relationship between High Involvement Work System and hotels' financial performance. This mediation effect is studied through (a) social capital, (b) human capital, and (c) organizational capital.

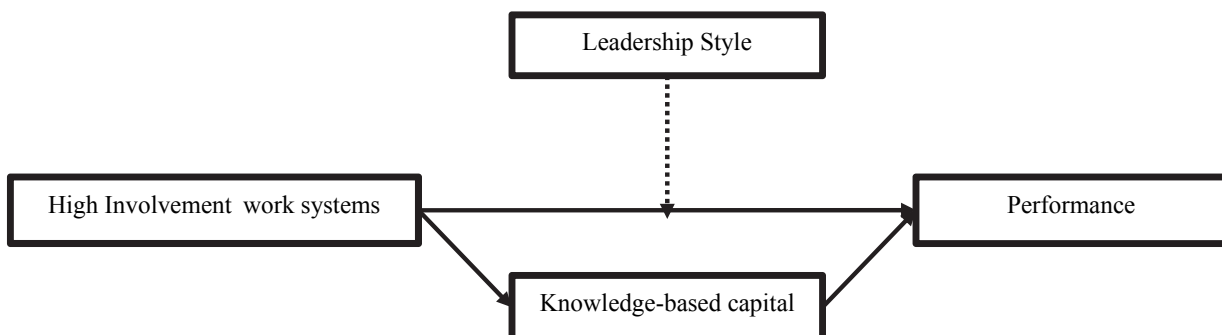
## 2.3 Leadership Style

The way leadership is operationalized in this research allows for a different possibilities of studying its effect on the theorized relationship between High Involvement Work Systems and financial performance. For instance, a shared vision articulates a preferred course of action to be followed by employees to achieve organizational goals (Bass, 1985). Leaders act as role models through idealized influence and charismatic behaviors helps in promoting desired behavioral attitudes among employees (Farahnak et al., 2019). Also, leaders provide an inspirational motivation by framing a clear and attractive vision (Tafvelin et al., 2019). Additional roles include intellectual stimulation (Galli, 2019) and individualized consideration (Eisenberg et al., 2019). These roles are theorized to affect the relationship between high involvement work systems and performance. Based on this understanding of transformational leadership in the literature we propose that:

H<sub>5</sub>: Transformational leadership styles does have a moderating impact on the relationship between High Involvement Work Systems and Hotels' financial performance.

## 2.4 Theoretical framework

Based on the scholarly literature reviewed for this paper we develop a model shown in Fig. 1.



**Fig. 1.** Research theoretical model

### 3. Methodology

#### 3.1 Study design and data collection

Data was collected from employees in the Jordanian hotel industry. 5 and 4 stars hotels were targeted in our research, as such; 419 envelopes were collected from the 1000 distributed questionnaires. Listwise deletion was used to clean the dataset from missing values. Similarly, unengaged responses were deleted. The final dataset used for the following analysis consisted of 380 responses.

#### 3.2 Constructs measurement

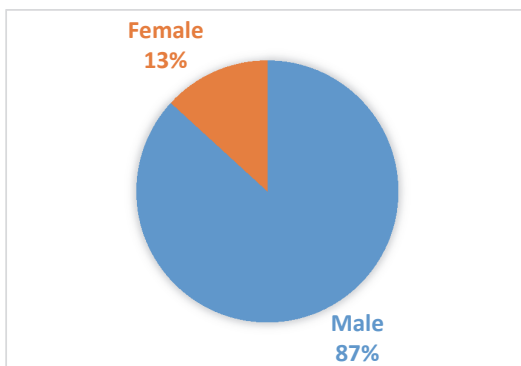
The questionnaire developed for this research was adapted from the existing leading literature in the field. A 5-Likert scale was used as followed by previous studies, and answers ranged from strongly disagree to strongly agree. High involvement work system was measured using 29 items adopted from Prieto and Santana (2012) and Oppenauer and Van De Voorde (2018). Knowledge-based capital was measured using 16 items adopted from (Youndt, 2004), Simsek and Heavey (2011) and Bendig et al. (2018). Leadership style was measured using 7 items adopted from Carless et al. (2000) and Nielsen et al. (2008). Organizational financial performance was measured using 8 items based on Garg et al. (2003) and Lin and Lin (2019).

### 4. Data analysis

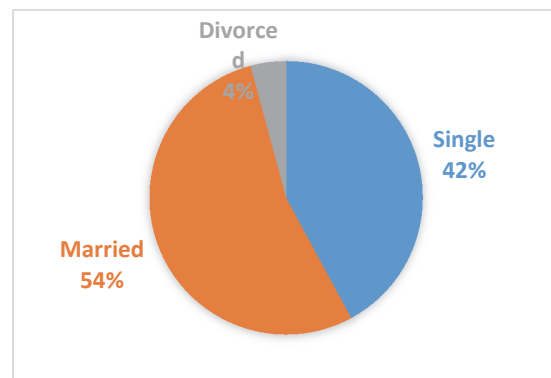
In this section, data which has been collected from the survey is presented and analyzed statistically. First, demographic information is analyzed using descriptive analysis such as frequency and mean were used in the analyses, second, analysis of data is presented for each variable and its indicators, third the generated hypotheses is tested, using structural equation modeling (SEM). In order to interpret and summarize the collected data, IBM SPSS and AMOS software were used and also to gauge the mediation and moderation effects, descriptive statistical techniques were utilized to calculate the means, frequency, percentage and standard deviation of respondents. Given the nature of the conceptual research model developed for this research, a structural equation modeling (SEM) technique was adopted, due to the fact that, SEM is the common methods used by the practitioners in strategic human resource management research, especially in order to assess the causal research model and research hypotheses (Ringle et al., 2018). SEM allows researchers to jointly test a bunch of interrelated hypotheses by evaluating the relationships between multiple independent and dependent constructs in a structural model (Gefen & Straub, 2000). AMOS software version 24 was used in this research in order to estimate model measurement and structural models (Byrne, 2013).

#### 4.1 Descriptive analysis

According to Fig. 2, the composition of respondent's gender was found to be mainly males which constituted 87% while females also represented 13%, this structure is due to the fact that, the males were more willing to respond to the questionnaires than the females.

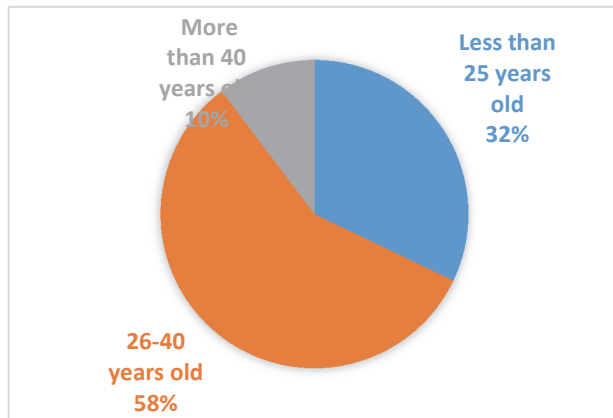


**Fig. 2.** Gender distribution chart

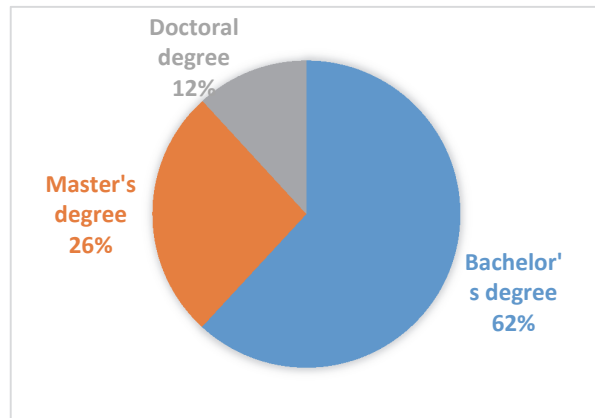


**Fig. 3.** Marital status distribution chart

According to Fig. 3, the composition of respondent's marital status was found to be mainly married which constituted 54% whiles single also represented 42%, and 4% were divorced.

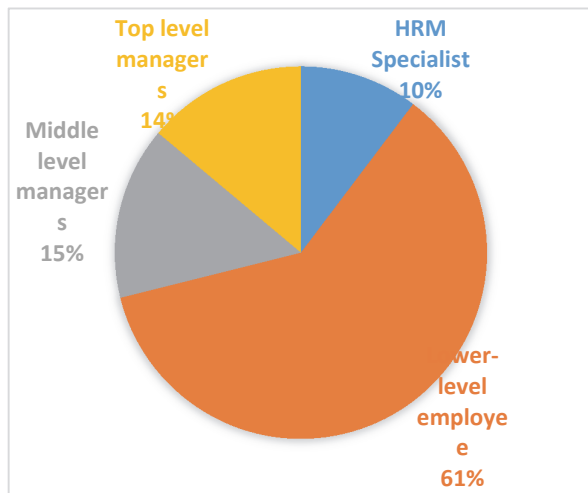


**Fig. 4.** Age distribution chart

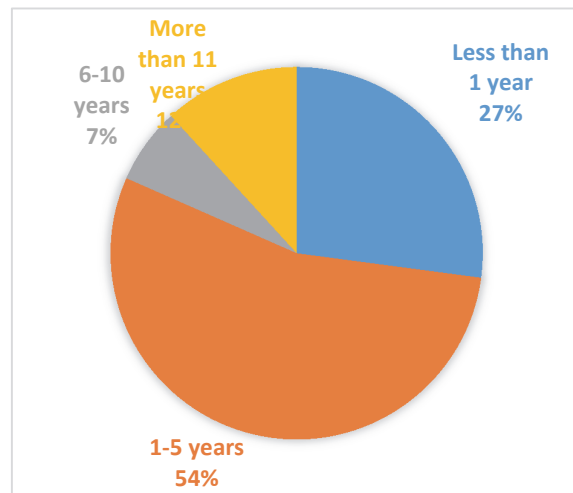


**Fig. 5.** Educational level distribution chart

According to Fig. 4, the demographics characteristics of age distribution included the following; the study is composed of mainly middle youth within the ages of 26-40 years old which constitute of 58%, followed by youth within less than 25 years old representing 32%, and more than 40 years also constitute of 10%. According to Fig. 5, the demographics characteristics of educational level distribution included the following; 62% hold bachelor degrees, 26% had master degrees, and 12% hold doctoral degrees. This indicates that the professionalism of the staff and the management of the hotels, as all respondents have the certificates necessary to take the different positions within the hotel and can confidently attest to the strategic human resource management on the high involvement work system of the hotel in enhancing the hotel financial performance.



**Fig. 6.** Position at work distribution chart



**Fig. 7.** Tenure distribution chart

According to Fig. 6, the composition of respondent's positions in the hotel was found to be mainly front-line employees which constituted 61% while middle level managers also represented 15%, and 14% were top level managers. Finally, 10% were specialist in human resource management department within the hotel. According to Fig. 7, the demographic characteristics of work experience distribution included the following; this finding is consistent with the quality of staff of the hotel since the industry requires a high caliber of working force to operate the activities of the hotel. However, the majority of the respondents have adequate work experience which composed of 54% were less than 5 years, 27% were less than one year, 12% were more than 11 years, and 7% were from 6 years to less than 10 years.

#### 4.2 Model Measurement

A confirmatory factor analysis (CFA) was carried out. This is because CFA is a statistical technique used to verify the factor structure of a set of observed variables as noted by Harrington (2008). Bagozzi and Yi (1988) added that CFA assists scholars and researchers in identifying and determining construct validity (i.e., convergent, discriminant, and nomological validity). CFA was conducted on the overall model.

**Table 1**  
CFA standardized loading, AVE, CR

Variables	Indicators	Standardize loading ( $\lambda$ )	AVE	CR
Organizational financial performance	1. The growth in my hotel market share relative to competitors during the last three years has been....	.877	0.843	0.956
	3. Return on sales in my hotel relative to competitors during the last three years has been....	.938		
	5. Return on equity in my hotel relative to competitors during the last three years has been....	.917		
	7. Market return in my hotel relative to competitors during the last three years has been....	.939		
Organizational capital	1. I provide constructive suggestions about how my department can improve its effectiveness.	.734	0.639	0.914
	2. For issues that may have serious consequences, I express my opinions honestly even when others may disagree.	.817		
	3. I "touch-base" with my coworkers before initiating actions that might affect them.	.862		
	4. I encourage others to try new and effective ways of doing their job.	.834		
	5. I help others who have large amounts of work.	.777		
	6. I willingly share my expertise with my coworkers.	.765		
Motivation-Enhancing HR Practices	1. Employees in this hotel receive monetary rewards based on their individual performance.	.720	0.567	0.865
	2. Employees in this hotel receive monetary rewards based on their group performance.	.867		
	3. Employees in this hotel receive monetary rewards based on the organizational performance.	.653		
Ability-Enhancing HR Practices	1. Employees' performance appraisal is based on individual behaviors and attitudes at work.	.888	0.552	0.879
	2. Employees' performance appraisal is oriented toward their development and progress at work.	.593		
	2. Our hotel uses extensive procedures in recruitment and selection, including a variety of tests and interviews.	.792		
	4. Our hotel takes care of its image when recruiting and selecting employees.	.786		
	5. Employees are selected based on their overall fit with the hotel.	.848		
Opportunity-Enhancing HR Practices	1. Employees will normally go through ongoing training programs.	.583	0.504	0.835
	2. The hotel provides training focused on team building and teamwork skills training.	.727		
	5. Our hotel has a good mentoring system	.690		
	4. Employees in this hotel have broadly designed jobs requiring a variety of skills.	.721		
	5. Employees in this hotel are allowed to make decisions.	.671		
Transformational leadership style	1. Employees are provided the opportunity to suggest improvements in the way things are done.	.777	0.506	0.857
	2. Employees are invited to participate in a wide range of issues, including performance standards, quality improvement, benefits, etc.	.647		
	3. Employees are invited to participate in problem solving and decisions.	.726		
	1. My leader communicates a clear and positive vision of the future.	.749		
	2. My leader treats staff as individuals, supports and encourages their development.	.755		
	3. My leader gives encouragement and recognition to staff Empowerment.	.834		
Human capital	4. My leader fosters trust, involvement and cooperation among team members.	.759	0.678	0.912
	5. My leader encourages thinking about problems in new ways and questions assumptions.	.584		
	6. My leader is clear about his/her values and practices what he/she preaches.	.539		
	1. Our employees are highly skilled.	.865		
	2. Our employees are widely considered the best in our industry.	.920		
Social capital	3. Our employees are creative and bright.	.867	0.517	0.842
	4. Our employees are experts in their particular jobs and functions.	.714		
	5. Our employees develop new ideas and knowledge.	.731		
	1. Our employees are skilled at collaborating with each other to diagnose and solve problems.	.779		
	2. Our employees share information and learn from one another.	.696		
Social capital	3. Our employees interact and exchange ideas with people from different areas of the hotel.	.783	0.517	0.842
	4. Our employees' partner with customers, suppliers, alliance partners, etc., to develop solutions.	.655		
	5. Our employees apply knowledge from one area of the hotel to problems and opportunities that arise in another.	.672		

As shown in Table 1 all the items loading on their corresponding factors are above 0.7, which represent a highly respectable level of convergent validity (Hair, 2010). Also, loadings among factor observed in the analysis was below 0.5 pointing to an acceptable levels of discriminant validity. Then, we looked at composite reliability (CR) value must be greater than 0.7 for a significant internal reliability (Fornell & Larcker, 1981; Hair et al., 2010). All the variables were above the cut-offs point of 0.70. Our model measurement meets this criterion for reliability and validity. Finally, the data represent a good fit as shown in Table 2 below model fit indices were used judge the developed Confirmatory Factor Model.

**Table 2**

CFA goodness of fit indices

Measure	Estimate	Threshold	Interpretation
CMIN	2571.886	--	--
DF	1361.000	--	--
CMIN/DF	1.890	Between 1 and 3	Excellent
CFI	0.904	>0.95	Acceptable
SRMR	0.052	<0.08	Excellent
RMSEA	0.048	<0.06	Excellent
PClose	0.812	>0.05	Excellent

### 4.3 Structural Model

As the final step after model measurement, the assessment of the structural model must be the final step. As mentioned earlier, SEM was chosen because of the nature of the research model, the mediating and moderating effects.

#### 4.3.1 Direct effects

For  $H_1$  which was hypothesized that high involvement work system has a positive direct effect on organizational financial performance we have found ( $\beta = 2.24$ ,  $p < 0.59^{***}$ ). Therefore,  $H_1$  is accepted. The result of hypothesis 2a ( $\beta = 0.237$ ,  $p < 0.014$ ) indicates that high involvement work system had a positive direct effect on knowledge based social capital, thus, hypothesis two is accepted. Pertaining to  $H_{2b}$  predicting a positive impact of HIWS on knowledge based human capital ( $\beta = 0.724$ ,  $p < 0.21^{***}$ ). Therefore,  $H_{2b}$  is accepted. The result show that there was no relationship between HIWS and knowledge based organizational capital ( $\beta = -0.020$ ,  $p < 0.827$ ) was rejected.

For hypothesis 3a, the result shows a positive effect of social capital on organizational financial performance (beta  $\beta = 0.217$ ,  $p < 0.004$ ) and the hypothesis is accepted. Next, the result of  $H_{3b}$  ( $\beta = 0.148$ ,  $p < 0.006$ ) implies that human capital had a significant direct impact on organizational financial performance and it is accepted. In contrast, the hypothesis 3c proposes a negative effect of organizational capital on organizational financial performance ( $\beta = -0.515$ ,  $p < -0.30^{***}$ ). Therefore,  $H_{3c}$  is accepted negatively. These results are summarized in Table 3 below.

**Table 3**

Direct hypothesis testing

Hypothesized relationships	Estimate	CR	P	Result
$H_1$ . HIWS $\rightarrow$ Organizational financial performance	2.239	15.213	0.59***	Supported
$H_{2a}$ . HIWS $\rightarrow$ Social capital	0.237	2.447	0.014	Supported
$H_{2b}$ . HIWS $\rightarrow$ Human capital	0.724	4.252	0.21***	Supported
$H_{2c}$ . HIWS $\rightarrow$ Organizational capital	-0.020	-0.219	0.827	Not Supported
$H_{3a}$ . Social capital $\rightarrow$ OFP	0.217	2.905	0.004	Supported
$H_{3b}$ . Human capital $\rightarrow$ OFP	0.148	2.733	0.006	Supported
$H_{3c}$ . Organizational capital $\rightarrow$ OFP	-0.515	-6.282	-0.30***	Supported

### 4.3.2 Indirect effects

Following Baron and Kenny recommendations for testing the mediation effects, we have found that human ( $\beta = 0.051$ ,  $p < 0.011$ ) and social capital ( $\beta = 0.107$ ,  $p < 0.002$ ) exhibited partial mediation effects while organizational capital did not show any mediation effect as shown in Table 4 below. Thus,  $H_{4a}$  and  $H_{4b}$  were accepted while  $H_{4c}$  was rejected.

**Table 4**

Mediation analysis results

Hypothesized relationships		Estimate	P	Mediation
$H_{4a}$ . HIWS	Social capital → OFP	$\beta = 0.051$	$P = 0.011$	Partially mediated
$H_{4b}$ . HIWS	Human capital → OFP	$\beta = 0.107$	$P = 0.002$	Partially mediated
$H_{4c}$ . HIWS	Organizational capital → OFP	$\beta = 0.010$	$P = 0.816$	Not mediated

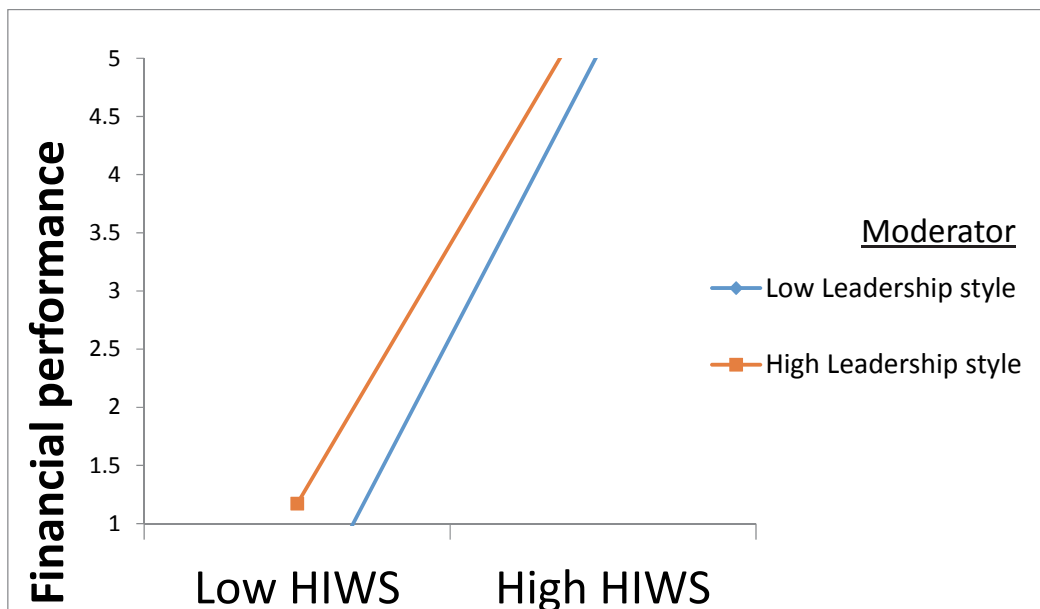
### 4.3.3 Moderation

Hence, regarding hypothesis 5, the result shown in Table 5 indicates that transformational leadership style dampens the positive relationship between HIWS and financial performance ( $\beta = -0.148$ ,  $p < 0.05$ ). Therefore,  $H_5$  is accepted. Fig. 8 explains the interaction effect of transformational leadership style on the linkage between HIWS and organizational financial performance and has illustrated that higher involvement work system associated with greater leadership style weaken the positive relationship between HIWS and organizational performance. Therefore, these variables play a significant role in the development and enhancement of strategic HRM research.

**Table 5**

Interaction effect of leadership

Hypothesized relationships		Estimate	CR	P	Result
<i>Interaction effect</i>					
$H_5$ . HIWS	XX Leadership style → OFP	-0.148	-4.371	0.05***	Accepted



**Fig. 8.** Leadership style interaction effect



## 5. Discussions

The purpose of this paper was to investigate the effect of high involvement work systems and organizational financial performance by opening the black box through knowledge-based capital. This research responds to calls for investigating enriching novel models in SHRM, especially in the hotel industry (Mader et al., 2017). In doing so, in this study we are filling the gaps in the literature by empirically investigating how HIWS, knowledge-based capital affects organizational performance, and then we examine transformational leadership style as a moderator in the proposed model in order to strengthen the relationship between HIWS and organizational financial performance in the context of Jordanian tourism and hospitality sector.

HIWS is a set of modern management models consisting of an improved HR practices such as (staffing, training, compensation, work design, and participation) which are expected to enhance organizational performance (Appelbaum et al., 2000; Boxall & Macky, 2009). Our results confirmed that when adapting a HIWS, hotels will be able to improve and build organizational financial performance (H1), especially in adapting the ability-motivation-opportunity (AMO) framework of applied HRM practices (Appelbaum et al., 2000). This finding is in line with the results of Song et al. (2018); Wood et al. (2012) who found a positive and direct effect between HIWS and organizational performance. However, our results offered a new perspective as we conducted the first empirical research linking the relationship between HIWS and organizational financial performance within the tourism and hospitality sector. Furthermore, we contributed to the strategic HRM literature by investigating a more general framework of HIWS through disaggregating the model into ability (staffing and training), motivation (performance appraisal and compensation) and opportunity (participation and work design) sub-dimensions, which aimed to improve employee and organizational performance (i.e. Butts et al., 2009; Guthrie, 2001).

### 5.1 Theoretical implications

We have tested and constructed the proposed model of how high involvement work system effecting organizational financial performance in Jordanian hospitality and tourism sector. Prior research for example has investigated the relationship between HIWS and financial performance in large firms on French (Guerrero & Barraud-Didier, 2004), and also have been tested in China's contexts (Shih et al., 2010; Song et al., 2018). In addition, some previous researchers have found that there is no relationship between HIWS and organizational performance in Spanish firms (Camps & Luna-Arocas, 2009). Hence, in this dissertation we have found that HIWS had a positive relationship with organizational financial performance in Jordanian contexts. Our result is in line with prior research where the researchers showed that high involvement work system was positively related to organizational performance (Wood et al., 2012; Song et al., 2018).

### 5.2 Limitations and future research directions

First limitation, is the cross-sectional research design. The strong relationship between high involvement work system and organizational financial performance, may be differ if we collected data in a different period of times. Thus, future research is encouraged in conducting a long attitudinal study design in order to dig deeper insight the linkage between HIWS, knowledge-based capital, employee attitude and behavior, which in turn can improve and enhance organizational performance, can also be explored in other research design such as causality relationship.

We hope future research may incorporate other mechanisms in explaining the relationship between HIWS and organizational financial performance beyond knowledge-based capital. The studies may investigate the idea of the "black box" for the link between HIWS and organizational performance.

Finally, this research has been conducted on Jordanian hospitality and tourism industry, thus, the results must be compared with studies in other industries such as other services sector or manufacturing industries operating in different contexts other than Jordanian context in order to generalize the results. Further

studies, therefore, must investigate these limitations in order to provide further insights into the nature of the relationships between HIWS, knowledge-based capital

### Acknowledgement

The authors would like to thank the anonymous referees for construction comments on earlier version of this paper.

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