DOI: https://doi.org/10.7341/20231922
JEL codes: M140, M500, O150, J240, M150, L250, I230, O530 /

Sustainable human resource management practices in organizational performance: The mediating impacts of knowledge management and work engagement

Shatha Abu-Mahfouz[1]
Mutia Sobihah Abd Halim[2]
Ayu Suriawaty Bahkia[3]
Noryati Alias[4], ***Abdul Malek Tambi***[5]

Abstract

PURPOSE: *Modern business and global organizations are regularly presented with challenges caused by unpredictable competitive environments. Human resource management (HRM) practices give sustainable opportunities for employees to use their abilities and express their enthusiasm to obtain skills and knowledge and to apply them at the workplace with a view to achieving engaged individuals and increasing organizational performance. This article presents a recent study outcome to examine (i) the mediating role of knowledge management and work engagement and (ii) the effect of sustainable HRM practices on organizational performance.* ***METHODOLOGY:*** *500 self-reported questionnaires were distributed to Jordanian university lecturers (research population) for data collection. The study data were assessed with structural equation modeling (SEM) using IBM-SPSS-AMOS 25.0.*

1 Shatha Abu-Mahfouz, Ph.D. in Business Administration, Assistant Professor of the Department of Business, Management, and Technology, ALFA University College, Malaysia, e-mail: s.a_mahfouz@yahoo.com (ORCID: https://orcid.org/0000-0002-8611-5233).
2 Mutia Sobihah Abd Halim, Ph.D. in Management, Associate Professor of the Department of Business and Management, Universiti Sultan Zainal Abidin, Malaysia, e-mail: mutiasobihah@unisza.edu.my (ORCID: https://orcid.org/0000-0003-1614-9398)
3 Ayu Suriawaty Bahkia, Ph.D. in Management, Senior Manager at Indah Water Konsortium Sdn. Bhd., Malaysia (ORCID: https://orcid.org/0000-0001-8519-4163).
4 Noryati Alias, Ph.D. in Management, Senior Lecturer at SEGI University, Malaysia (ORCID: https://orcid.org/0000-0002-0967-1615).
5 Abdul Malek Tambi, Professor of the Department of Business and Management, Universiti Sultan Zainal Abidin, Malaysia (ORCID: https://orcid.org/0000-0003-2486-1078).

Received 1 April 2022; Revised 20 June 2022; Accepted 17 October 2022.
This is an open access paper under the CC BY license (https://creativecommons.org/licenses/by/4.0/legalcode).

FINDINGS: *Two pivotal outcomes were identified: (i) sustainable HRM practices, knowledge management, and work engagement were positively associated with organizational performance; (ii) knowledge management and work engagement played a mediating role in the sustainable HRM practice-organizational performance correlation.* ***IMPLICATIONS:*** *Overall, employee cooperation proved essential to optimize organizational performance, specifically during their engagement in sustainable HRM practices and knowledge management. Finally, the research proposed several practical recommendations and interventions on sustainable HRM for future research.* ***ORIGINALITY AND VALUE:*** *The research has provided proof of five variable relationships contained in the model. Firstly, organizational performance increased with sustainable HRM practices through knowledge management. Secondly, organizational performance increased with sustainable HRM practices through work engagement. Thirdly, work engagement increased with sustainable HRM through knowledge management. Fourthly, organizational performance increased with knowledge management through work engagement. Fifthly, organizational performance increased with sustainable HRM through knowledge management and work engagement.*

Keywords: *sustainable HRM practices, organizational performance, knowledge management, work engagement, Ability-Motivation-Opportunity (AMO) theory*

INTRODUCTION

Organizations from various industries have faced complex tendencies and challenges like high-performance expectations, demographic changes, and globalization (El-Kot & Leat, 2008; Chandrakumara & Sparrow, 2004). Those difficulties have created a dire need to manage human resources (HR) to survive in the market and to accomplish competitive advantage. Those developments called for adequately managing human resources in assorted areas, including work engagement (Aboramadan, Albashiti, Alharazin, & Abed Dahleez, 2020; Chew, 2004), knowledge management (Gope, Elia, & Passiante, 2018; Minbaeva, 2005; Mohanapriya & Sasikala, 2015; Monteiro & Pais, 2014), and organizational performance (Chew, 2004; Wall & Wood, 2005; Al-Qudah et al., 2014; Abu-Mahfouz, 2019).

HRM practices have become a well-known field of investigation for practitioners and researchers because of the huge impact on innovative performance and organizational performance (Abu-Mahfouz, 2019; Al-Bahussin & Elgaraihy, 2013; Hashemi & Dehghanian, 2017; Jiang, Wang, & Zhao, 2012; Laursen, 2002). However, the sustainable HRM phenomenon highlights the importance of HR practices on organizational results (Ehnert, Parsa, Roper, Wagner, & Muller-Camen, 2016).

As a necessary and novel means of people management beyond strategic HRM, sustainable HRM (Kramar, 2014) has induced HR capacity re-

orientation and towards organizational sustainability (Ehnert, 2009; De Prins et al., 2014). In other words, sustainable HRM denotes an innovative notion in its preliminary stage that strives to associate sustainability with HRM. Realistically, organizations prioritized employees as a long-term asset rather than a mere financial cost through sustainable HRM practices to effectively execute sustainability initiatives (Ehnert et al., 2016).

The experience of developed nations featured the imperative role of higher education institutions (HEIs) in societal and economic developments (Fullwood & Rowley, 2017; Lilles & Rõigas, 2017). The research literature has shown that the performance of educational institutions depends fundamentally on the quality of HR (Amin, Wan Ismail, Abdul Rasid, & Selemani, 2014), knowledge management (Sahibzada, Jianfeng, Latif, & Sahibzada, 2020), and work engagement (Gupta, Acharya, & Gupta, 2015). In that capacity, HEIs need to retain, develop, and recruit employees. University staff who are well trained, motivated, and skilled are bound to be committed to their research work and training that contribute to the development of nations (Lew, 2009).

HEIs are viewed as knowledge-intensive institutions, not just on account of their huge contribution to knowledge creation and development, but additionally, their engagement in knowledge dispersion through research, learning, and teaching (Fullwood & Rowley, 2017).

Thus, researchers have progressively accentuated the requirement for effective implementation of knowledge management initiatives in HEIs during the past few years (Al-Husseini & Elbeltagi, 2016; Ramjeawon & Rowley, 2017; Al-Kurdi, El-Haddadeh, & Eldabi, 2020; Quarchioni, Paternostro, & Trovarelli, 2020).

Given the importance of promoting academic pursuits, a few HEIs are gaining from HRM and achieving high performance (Amin et al., 2014), advancing positive collaboration (Wall & Wood, 2005), encouraging work engagement (Hughes & Rog, 2008; Aboramadan et al., 2020), and implementing many cycles of knowledge management (Brewer & Brewer, 2010; Sahibzada et al., 2020).

Albeit a few researchers have approached the aspects of HRM practices in HEIs (such as Huxley & Hall, 1996; Chen, Wang, & Yang, 2009; Lew, 2009; Khasawneh, 2011; Amin et al., 2014; Aboramadan et al., 2020), the research regarding work engagement in HEIs is exceptionally restricted (Aboramadan et al., 2020), as is research on knowledge management (Brewer & Brewer, 2010; Sahibzada et al., 2020), and organizational performance (Amin et al., 2014; Sahibzada et al., 2020).

Jordanian universities have a problem with a lack of clarity of their vision for independence, which has affected their efficiency and performance (Economic and Social Council, 2017).

Despite reform endeavors to accomplish high-quality education, many HEIs in Jordan are still struggling to achieve excellent performance in their annual evaluation on the basis of certain key performance indices (Alshatnawi & Abd Ghani, 2018). Among the challenges that have contributed to hindering job performance and competitiveness of universities around the world, especially in Jordanian universities, was the growing demand for a place to study (Economic and Social Council, 2017). Universities in Jordan were unable to accommodate the demand due to limitations in facilities or/and employee capacity (Khasawneh, 2011; Badran, 2014; Alawin et al., 2016).

While institutions are seeing knowledge management as a basic achievement factor in the present dynamic environment (Yeh, 2005; Ju, Lin, Lin, & Kuo, 2006), knowledge management activities in HEIs in Jordan are however inadequate (Alshatnawi & Abd Ghani, 2018). The improvement of employee work engagement is one of the vital stages to improve sustainable HRM (Xu, Zhang, Yang, & Wu, 2020). From this perspective, engagement needs to be tested further in Jordanian HEIs because it is expected to contribute to the growth of the institution, job performance, and new knowledge (Dhir & Shukla, 2019).

In summary, the recent research will not be exhaustive enough without testing the relevance between sustainable HRM practices and organizational performance in Jordanian universities. Furthermore, the study sought to determine the mediating influence of knowledge management and work engagement on the link between sustainable HRM practices and organizational performance in universities. In addition, the study also purports to determine the mediating influence of knowledge management on the link between sustainable HRM practices and work engagement. Universities need to realize how sustainable HRM practices, knowledge management, and work engagement affect organizational performance. The bonds between sustainable HRM practices, knowledge management, work engagement, and organizational performance have not been previously studied. The study destines to examine the ensuing relationships with the use of AMO theory to fill the knowledge gaps that, in turn, will facilitate the proffering of the solution to the impending problem.

THEORETICAL BACKGROUND

AMO theory

Scholars have broadly followed the AMO theory to investigate the effect of HRM practices on employee and organizational performance (Shin & Konrad, 2014; Obeidat, Mitchell, & Bray, 2016; Zhang & Morris, 2014; Jerónimo, De Lacerda, & Henriques, 2020). The AMO theory claims that the practices affect individuals into accomplishing organizational aims through their skills, knowledge, and abilities; motivation; and opportunity (AMO) that influence the employee and organizational performance (Lepak et al., 2006; Appelbaum et al., 2000) and accomplishment of organizational objectives (Buller & McEvoy, 2016).

Sustainable HRM practices have been utilized to allude to HRM activities that improved positive environmental results, green HRM results, and positive human and social results. Green HRM is considered in the assessment of sustainable HRM (Kramar, 2014). Sustainable HRM is instrumental in enhancing green performance through individual staff and has direct and indirect consequences on the workforce and the organization (Paillé, Chen, Boiral, & Jin, 2014).

Thus, in AMO theory, sustainable HRM contains 1) ability-enhancing practices such as green training (Jerónimo, De Lacerda, & Henriques, 2020; Renwick, Redman, & Maguire, 2013), development, selection, and green knowledge management (Renwick et al., 2013); 2) motivation-enhancing practices, e.g., pay and reward systems and green benefits (Renwick et al., 2013), and incentives for green performance (Renwick et al., 2013; Jerónimo et al., 2020); and 3) opportunity-enhancing practices, e.g., employee' exchange knowledge (Jerónimo et al., 2020), employee involvement, engagement, groups for solving a problem, and encouraging individuals to generate suggestions for enhancements (Renwick et al., 2013).

In AMO theory, sustainable HRM may enhance the abilities, skills, and knowledge of individuals to reach an undeniable level. It can enhance the opportunity for them to share, disseminate, and transfer knowledge among employees. Ishak, Eze, and Ling (2010) proposed that firms that developed and extensively applied knowledge management would be able to achieve consistently high performance; consequently, reinforcing the organizations' ability to develop its sustainability further.

When employees were exposed to a high level of knowledge management, they would consistently experience a high level of engagement. Employee and organizational performance were among the results of work engagement because engaged individuals were more productive, more

creative, and were more able to exceed everyone's expectations (Bakker & Demerouti, 2007). Those qualities impacted work performance in a manner that fortified an organizations' ability to enhance its sustainability (Macey & Schneider, 2008). According to the AMO theory, HRM practices give sustainable opportunities for individuals to use their abilities and express their enthusiasm to acquire the necessary skills and knowledge and apply them in the workplace. The ultimate goals are to create engaged employees and increase organizational performance.

Sustainable HRM practices

Innovative organizations should implement sustainability to establish optimization approaches (Manzoor, Wei, Bányai, Nurunnabi, & Abdul Subhan, 2019). Sustainable HRM is defined as the adaption of HRM strategies and practices that enables the achievement of financial, social, and ecological goals, with an impact inside and outside of the organization and over a long-term time horizon, while controlling for unintended side effects and negative feedback (Ehnert et al., 2016, p.90). The term 'sustainable HRM practice' provides a two-fold connection between sustainability and HRM practices. Overall, HRM practices catalyze sustainability for long-term organizational performance (Manzoor et al., 2019).

The frequently referred to dimensions of sustainable HRM practices were selection (Manzoor et al., 2019), training (Macini, Alves, Cezarino, Liboni, & Caldana, 2020; Manzoor et al., 2019), development (Glot, 2006; Zaugg, Blum, & Thom, 2001), employee participation (Baum et al., 2016; Manzoor et al., 2019), and compensation and rewards (Macini et al., 2020; Zaugg et al., 2001). Thus, those dimensions are considered in the research. The selection is described as a procedure that involves the possibility of work, resulting in the partition of two classes, namely, individuals who are offered the job and those who are not (Yoder, 1942). Training and development allude to irreplaceable vital instruments for successful individuals and organizational execution—the organization provides substantial funding for training and development with the certainty that it will give them an upper hand in the realm of business (Weil & Woodall, 2005; Birdi et al., 2008). Employee participation is characterized as an employee's involvement in problem solving and reaching a decision through a loyal and motivated workforce, who work together in teams to apply discretionary effort and share common experiences. Such endeavors enable the organization to accomplish its objectives and upgrade individuals' results (Gürbüz, 2009). Finally, compensation and rewards are described as aggregate monetary and non-money related prizes for individuals as a side-effect of their performance (Lim & Ling, 2012).

Work engagement

In the education sector, work engagement enables the creation of guidelines for a task-shared objective, preparedness to spend effort, and the productive attitudes including flexibility, the satisfaction to perform tasks that increase a team's thought action level and, hence, lead to high performance and capability to address work challenges (Dubbelt, Rispens, & Demerouti, 2016). For HEIs, the work engagement in an academic workforce encourages more research publications and achievements (Christensen, Dyrstad, & Innstrand, 2018).

In a recent study, work engagement is considered as a "multi-dimensional latent motivational construct" as coined by Alfes, Shantz, Truss, and Soane (2013, p. 2610) and defined by Schaufeli et al. (2002, p. 74) as "a positive, fulfilling, work-related state of mind" that is portrayed by vigor, dedication, and absorption. Vigor includes high levels of energy and mental resilience while working; dedication alludes to being strongly involved in one's work and experiencing a sense of enthusiasm, significance, and challenge, and absorption alludes to being completely concentrated and engrossed in one's work (Schaufeli et al., 2002, pp. 74–75).

Organizational performance

As a definitive and dependent construct across various disciplines, organizational performance implies the degree to which organizations successfully attain their goals (Zhang, Wan, & Jia, 2008). The measurement methods that are employed to assess organizational performance in multiple examinations differed substantially (Kirby, 2005). So, organizational performance is a multi-dimensional concept and complex. In this research, the organizational performance is defined as the outcomes of different educational interconnected processes that occur during its daily operations (Hussein, Mohamad, Noordin, & Ishak, 2014). For Jordanian HEIs, the organizational performance is represented by several dimensions, for instance, student quality, faculty resources, development target and characteristics, teaching activities, research results, and teaching quality (Chen et al., 2009).

HRM practices influence the behaviors of employees toward achieving organizational objectives. Thus, HRM practices can enhance organizational performance (Aguta & Balcioglu, 2015; Al-Tit, 2016; Chahal, Jyoti, & Rani, 2016; Otoo, 2019). As a big part of what we think we realize nowadays, will be out of date in a couple of years (Newman, 2011), previous HRM practices are now inadequate. Consequently, people and organizations are required to behave as persistent and adaptable students who are prepared to travel new

roads as conditions dictate (Newman, 2011); fortifying the organizations' capacity to enhance its sustainability in the long term. Such organizations perceive employees as a long-term investment instead of solely a financial cost with sustainable HRM practices (Ehnert et al., 2016).

Knowledge management

In the education sector, knowledge management can be characterized as a device that gives clues to staff and managers of educational institutions in the arising universe of knowledge management to address the difficulty of the knowledge period. Knowledge management assists educational institutions with understanding the beauty and merits of knowledge creation and sharing as a method for upgrading the learning and teaching process (Alshatnawi & Abd Ghani, 2018).

Like other productive institutions, the job of knowledge-based assets in HEIs is fundamental since HEIs are the focal point of intangible activities: professors are storehouses of knowledge and transfer it to students (Veltri & Silvestri, 2015). Nonetheless, in this era of competition, the job of HEIs should not be restricted to spreading knowledge only, but appreciating it (Feng, Chen, Wang, & Chiang, 2012; Ramírez & Gordillo, 2014; Secundo et al., 2015), and creating it (Lee & Choi, 2003) as well.

In recent research, four components of knowledge management had been considered. Knowledge creation characterizes as an organization creating new knowledge through the interaction and conversion between its explicit and tacit knowledge. Understanding the reciprocal relevance between those two sorts of knowledge would be the way to understanding the knowledge-creating process. The conversion of explicit and tacit knowledge is a social practice among people and isn't bound to a solitary individual (Nonaka & Takeuchi, 1995). Knowledge acquisition (tacitly possessed by human specialists) depicts knowledge-engineering for explicit decision-making processes (Gaines, 2013). Knowledge sharing portrays as a bunch of behaviors that help the exchange of acquired knowledge. An organization can be viewed as a social community creating, transferring, and sharing tacit and explicit knowledge (Li, 2006). Knowledge transfer is a systematic strategy employed to determine, gather, and exchange implicit knowledge for conversion into explicit information to be accessed and utilized by employees or organizations instead of designated groups or individuals (Graham et al., 2006).

HYPOTHESES DEVELOPMENT

Many past studies have broken up the connection between HRM practices and work engagement (Aboramadan et al., 2020; Aybas & Acar, 2017; Sani & Ibrahim, 2005). Those that have examined the relationship between sustainable HRM practices and work engagement are extremely restricted (Jerónimo et al., 2020). HRM practices can increase performance, learning, and innovation; reemphasizing the significance of work engagement as a triumphant variable of the institution (Shuck, Rocco, & Albornoz, 2011). In synopsis, thinking about the above explanation, it is hypothesized that:

H$_1$: Sustainable HRM practices have a significant and positive effect on work engagement.

Based on multiple studies, work engagement was associated with work and company performance (Bakker & Bal, 2010; Bhatti, Hussain, & Al Doghan, 2018; Gutermann, Lehmann-Willenbrock, Boer, Born, & Voelpel, 2017; Bailey, Madden, Alfes, & Fletcher, 2017; Junça-Silva, Caetano, & Lopes, 2017; Rofcanin, Heras, & Bakker, 2017; Schneider, Yost, Kropp, Kind, & Lam, 2018) as highly-engaged employees have undeniable degrees of energy regarded organizational tasks to be satisfying, positive, emotionally motivating, and rewarding (Bakker, Schaufeli, Leiter, & Taris, 2008). Work engagement is considered one of the important variables for improving performance (Demerouti & Bakker, 2011). Mirroring the above clarification, it is hypothesized that:

H$_2$: Work engagement has a significant and positive effect on organizational performance.

Much research demonstrated that HRM practices positively impacted organizational performance (Aguta & Balcioglu, 2015; Al-Tit, 2016; Chahal, Jyoti, & Rani, 2016; Otoo, 2019). For example, Delaney and Huselid (1996) asserted that HRM practices induce high company performance by influencing employee skills and motivation, and work structure. Specifically, when individuals believed that their work is meaningful and significant, they are more able to start activities that add to organizations' sustainability objectives (Jerónimo et al., 2020). Consequently, the following hypothesis is established in the research under review:

H$_3$: Sustainable HRM practices have a significant and positive effect on organizational performance.

Essentially, HRM and knowledge management reflected both direct and indirect connections with intangible resources: strategic organizational assets (Geiger & Schreyögg, 2012). The HRM denoted competent people management within an organization to catalyze knowledge-sharing, interactions, and organizational objective attainment (Al-Tit & Hunitie, 2015; Fong, Ooi, Tan, Lee, & Chong, 2011). Knowledge management is about developing, capturing, sharing, organizing, exploiting, and applying knowledge resources inside the organization to acquire productivity and sustain the competitive advantage, where employees played focal roles (Inkinen, Kianto, & Vanhala, 2015; Omotayo, 2015).

HRM and knowledge management are two individually focused concepts and most scholars recommended it as being critical for knowledge management execution to accomplish business success (Mohanapriya & Sasikala, 2015; Monteiro & Pais, 2014). Specifically, HRM upholds individuals in managing and creating knowledge through the sharing of experiences, opinions, and ideas (Theriou & Chatzoglou, 2008; Monavvarian & Khamda, 2010). Additionally, knowledge management can also be deciphered as an HRM type by employing information technology as a supporting tool in human collaborations and interactions (Yahya & Goh, 2002).

Different studies demonstrated that HRM practices positively impacted knowledge management (Theriou & Chatzoglou, 2008; Al-Bahussin & Elgaraihy, 2013; Gope et al., 2018). Regarding sustainable HRM practices, the 'knowledge as substance' notion is substituted by 'knowledge as participation.' Knowledge is spread, developed, and applied inside dynamic working connections between the individuals of a sustainable HRM-practicing community (De Prins et al., 2014). Thus, the sustainability-HRM link can be leveraged with the incorporation of strategic provisions for human capital development in terms of knowledge-oriented competencies and the cultural infrastructure which upholds knowledge creation and sharing, learning, networking, and communication, and social development (Glot, 2006). Reflecting the above clarification, it is theorized that:

H$_4$: Sustainable HRM practices have a significant and positive effect on knowledge management.

The influence of knowledge management on work engagement has transformed into a warmed research point. Past results revealed that knowledge management fundamentally affected work engagement (Rožman, Shmeleva, & Tominc, 2019; Hanif, Waheed, & Ahmad, 2020; Qureshi, Awan, & Perveen, 2020). The best main outcome of a great level of engagement is an enhancement in well-being (Figurska, 2015). As "engaged employees

are physically, cognitively, and emotionally connected with their work roles, they feel full of energy, are dedicated to reaching their work-related goals, and are often fully immersed in their work" (Bakker, 2011, p. 268). So, those organizations that carrying out the primary acts of knowledge management can see the positive effects in terms of the level of engagement of their individual workers (Hughes & Rog, 2008). As a result, a significant degree of individuals' engagement carries advantages to themselves and to the organization where they work (Figurska, 2015). One advantage is the retention of older workers who are completely engaged to impart knowledge, thus creating flexible capacity (Newman, 2011). In the light of findings from previous studies, it is hypothesized that:

H$_5$: Knowledge management has a significant and positive effect on work engagement.

A firm that is knowledge-based will obtain a bunch of distinguishing capabilities that improve the opportunities for competitive expansion and endurance (Claycomb, Dröge, & Germain, 2001). Additionally, organizations that have the capability to apply knowledge can likewise essentially reduce expenses and accomplish better performance results (Claycomb et al., 2001; Pauleen, Corbitt, & Yoong, 2007). Yeh, Lai and Ho (2006) led the research to discover the impact of knowledge management dynamics, prompting better organizational capacity in implementing, developing, and maintaining suitable practices that would enable firms to select, organize, find, transfer, and disseminate significant information for better performance (Demerouti & Bakker, 2011). Research has shown that knowledge management positively affected organizational performance (Al-Bahussin & Elgaraihy, 2013; Kinyua, 2015; Kılıç & Uludağ, 2021). Thus, knowledge management enhances the quality of decision-making and increases organizational performance sustainability (Mosconi & Roy, 2013). Hence, the recent research proposes the following hypothesis:

H$_6$: Knowledge management has a significant and positive effect on organizational performance.

Knowledge management was found to be the mediator that provided a beneficial outcome to the organization and the organization's individuals (Al-Bahussin & Elgaraihy, 2013; Iqbal & Malik, 2019; Kılıç & Uludağ, 2021). Some investigations exhibited that knowledge management had a mediator role linking HRM practices and organizational performance (Al-Tit, 2016; Gope et al., 2018). Research had tracked down a positive relevance between

knowledge management and work engagement (Hanif et al., 2020; Qureshi et al., 2020). Work engagement was found to be the mediator that kept a positive behavior among an organization's individuals (Karatepe, 2013; Luu, 2019; Aboramadan et al., 2020; Sani & Ibrahim, 2020). Some studies showed that work engagement had a mediator role linking HRM practices and organizational performance (Ahmad, Hashmi, Ali, & Faheem, 2021; Pombo & Gomes, 2018). Consequently, the following hypotheses have been proposed in recent research:

H$_7$: Knowledge management mediates the effects of sustainable HRM practices on organizational performance.
H$_8$: Work engagement mediates the effects of sustainable HRM practices on organizational performance.
H$_9$: Knowledge management mediates the effects of sustainable HRM practices on work engagement.
H$_{10}$: Work engagement mediates the effects of knowledge management on organizational performance.

METHODOLOGY

Pretest and pilot testing of the instruments

The study tools were expert reviewed for face, content, and criterion validity. A pilot study was subsequently performed with the dissemination of 109 self-reported questionnaires for arbitrarily-selected respondents for data gathering purposes (Mahfouz, 2019; Mahfouz, Awang, & Muda, 2019; Mahfouz, Awang, Muda, & Bahkia, 2020; Mahfouz, Bahkia, & Alias, 2021; Mahfouz, Halim, Bahkia, & Alias, 2022a, 2022b, 2022c).

Method of sampling and data collection

Simple random sampling was employed to select 500 respondents from the sampling frame of general Jordanian public university lecturers. The questionnaires were emailed to the chosen individuals to be addressed at their convenience. If necessary, the researcher made phone calls to remind respondents to complete the questionnaire. Eventually, a total of 301 completed and usable questionnaires were gathered. The response rate was 60.2%. Albeit Arabic being the official language in Jordan, the instrument was circulated in English as it is the most ordinarily used language in Jordanian universities.

Of the 301 respondents, 63.12% were males and 36.88% were females. An aggregate of 82% of the respondents held an academic position, while 18% held administrative and academic positions simultaneously. An aggregate of 16% of the respondents had 1–5 years of academic experience, 22% had 6–10 years, and 62% had more than 10 years. The average age of the respondents was 47.5 years old (see Table 1).

Table 1. Profile of respondents

Category		Frequency	Percentage %
Gender	Male	190	63.12
	Female	111	36.88
	Total	301	100.00
Position	Academic position	247	82
	Administrative and academic positions	54	18
	Total	301	100.0
Academic experience	1-5 years	48	16
	6-10 years	66	22
	More than 10 years	187	62
	Total	301	100.0
Age	Less than 30 years	7	2.33
	31-40	41	13.62
	41-50	168	55.82
	51-60	56	18.6
	More than 60 years	29	9.63
	Total	301	100.0

Measurement of construct

A total of 18 sustainable HRM practice items were adapted from Zhang et al. (2008) and Al Damoe, Hamid, and Sharif (2017). A total of 25 knowledge management items were adapted from Li Sa, Choon-Yin, Chai and Aik Joo (2020), Hult, Ketchen, and Slater (2004), Choi, Lee, and Yoo (2010), and Reagans and McEvily (2003). A total of 17 work engagement items were adapted from Schaufeli, Bakker, and Salanova (2006). Organizational performance was evaluated (as subjective performance) with 35 items adapted from (Chen et al., 2009). This study used a five-point Likert scale ranging from (1) strongly disagree to (5) strongly agree.

RESULTS

The Confirmatory Factor Analysis (CFA)

Parceling technique

The research used the parceling model for the second-order constructs, namely, sustainable HRM practices, knowledge management, work engagement, and organizational performance. The CFA result is shown in Table 2 where every inclusive fit index exceeds their threshold value, i.e., CFI > 0.90, TLI > 0.90, RMSEA < 0.08, and ChiSq/df (< 3.0) (Hair, Black, Babin, & Anderson, 2014). Accordingly, the measurement model of sustainable HRM practices, knowledge management, work engagement, and organizational performance was viewed as statistically adequate.

Table 2. Inclusive fit of the second order constructs via a parceling model of the CFA

Measurement model	CFI	TLI	RMSEA	ChiSq/df	p-value
Su-HRMP	0.975	0.971	0.049	1.868	0.000
KM	0.942	0.936	0.054	2.067	0.000
WE	0.954	0.946	0.056	2.137	0.000
OP	0.950	0.945	0.052	1.803	0.000

Note: Sustainable HRM Practices (Su-HRMP), Knowledge Management (KM), Work Engagement (WE), Organizational Performance (OP).

The items for the second-order constructs exceed their threshold value (above 0.60), indicating good measurement validity. All values of average variance extracted (AVE) and composite reliability (CR) were found to surpass their edge estimations of 0.5 and 0.6, respectively, which reaffirm convergent validity for a sustainable HRM practices construct, knowledge management construct, work engagement, and organizational performance construct as summarized in Table 3.

Table 3. The AVE and CR for the Sustainable HRM Practices, Knowledge Management, Work Engagement, and Organizational Performance Constructs

	Number of items	AVE	CR
Sustainable HRM Practices	**18**	**0.55**	**0.83**
Selection (Zhang et al., 2008)	4	0.71	0.91
Training and Development (Al Damoe et al., 2017)	7	0.60	0.91
Employee Participation (Zhang et al., 2008)	4	0.69	0.90
Compensation and Rewards (Al Damoe et al., 2017)	3	0.73	0.89
Knowledge Management	**25**	**0.64**	**0.88**
Knowledge Creation (Li Sa et al., 2020)	12	0.501	0.92
Knowledge Acquisition (Hult et al., 2004)	5	0.55	0.86
Knowledge Sharing (Choi et al., 2010)	3	0.73	0.89
Knowledge Transfer (Reagans & McEvily, 2003)	5	0.60	0.88
Work Engagement (Schaufeli et al., 2006)	**17**	**0.63**	**0.83**
Vigor	6	0.51	0.86
Dedication	5	0.55	0.86
Absorption	6	0.53	0.87
Organizational Performance (Chen et al., 2009)	**35**	**0.59**	**0.90**
Student Quality	3	0.72	0.88
Faculty Resources	6	0.51	0.86
Development Target and Characteristics	4	0.71	0.91
Teaching Activities	6	0.55	0.88
Research Results	9	0.56	0.87
Teaching Quality	7	0.61	0.91

Pooled CFA

The CFA technique was then applied on the simplified pooled first-order constructs. As shown in Figure 1, all fitness indexes meet the cut-off standards and, hence, the assessment of the measurement model of all latent constructs accomplishes the requirements of construct validity. The factor loading for all items is above 0.60, which meets the requirements for factor uni-dimensionality.

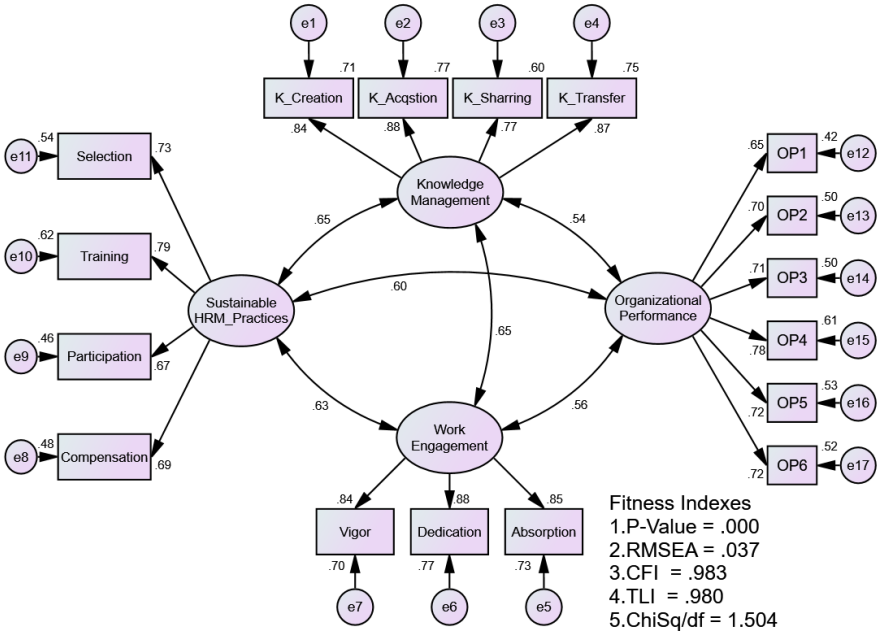

Figure 1. The Pooled CFA Results.

Source: IBM-SPSS-AMOS 25.0.

As shown in Table 4, all values of AVE and CR surpass their edge estimations. The research reaffirmed adequate convergent validity and CR for all latent constructs based on these values.

Table 4. AVE and CR

Variables	Factor loading	AVE	CR
Sustainable HRM Practices (α = 0.899)		**0.52**	**0.81**
Selection	0.73		
Training	0.79		
Participation	0.67		
Compensation	0.69		
Knowledge Management (α = 0.880)		**0.71**	**0.91**
K_Creation	0.84		
K_ Acquisition	0.88		
K_Sharing	0.77		

Variables	Factor loading	AVE	CR
K_Transfer	0.87		
Work Engagement (α = 0.852)		**0.73**	**0.89**
Vigor	0.84		
Dedication	0.88		
Absorption	0.85		
Organizational Performance (α = 0.955)		**0.51**	**0.86**
OP1 (Student Quality)	0.65		
OP2 (Faculty Resources)	0.70		
OP3 (Development Target and Characteristics)	0.71		
OP4 (Teaching Activities)	0.78		
OP5 (Research Results)	0.72		
OP6 (Teaching Quality)	0.72		

The outcomes of the data analysis indicated that the constructs possessed internal consistency as their reliability measurement, based on Cronbach's alpha (α) value, ranged from 0.852 to 0.955. Besides, the bivariate Pearson correlations among latent variables were under 0.85, thus portraying the model to be unaffected by multi-collinearity issues following Lei & Wu (2007). The model's discriminant validity index is summarized in Table 5, where the correlation among constructs is less than the square root of AVEs according to Awang, SH., & Zainudin (2018).

Table 5. Discriminate validity index summary

	Su-HRMP	KM	WE	OP
Su-HRMP	**0.72**			
KM	0.65	**0.84**		
WE	0.63	0.65	**0.85**	
OP	0.60	0.54	0.58	**0.71**

The skewness values were within the range of between -0.809 and 0.053, whereas the kurtosis values were between -0.420 and 1.309. Those values indicated that all data were normally distributed, hence meeting the assumption for utilizing parametric statistical analyses (Hair et al., 2014).

The common method bias may have possible significant effects on the results of the study. Thus, the current study conducted Harman's single-factor test to limit all the study items to one measure. Resultantly, 43.43% of the variance was represented by one construct. The variance was below

Harmans' single factor test cut-off point of 50%, indicating the absence of common method bias (Tehseen, Ramayah, & Sajilan, 2017).

The SEM

The SEM, through analysis of moment structures (AMOS) 25.0, accessed the path relationships among the study constructs in line with Anderson and Gerbing (1988). Figure 2 shows the SEM graphic output.

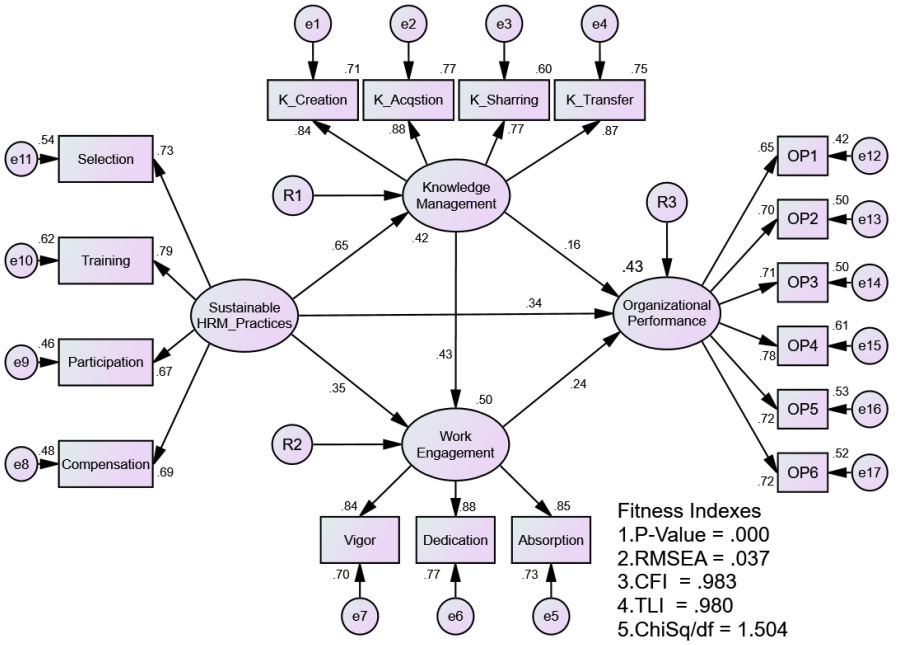

Figure 2. The Standardized Regression Path Coefficient in the Model.

Source: IBM-SPSS-AMOS 25.0.

Figure 2 shows the regression coefficients of the multiple-determinant model. The results examined that sustainable HRM practices have caused a 42 percent variance in knowledge management of university employees. Secondly, the two constructs, sustainable HRM practices and knowledge management, have caused a 50 percent change in work engagement of university employees. Finally, sustainable HRM practices, knowledge management, and work engagement have caused a 43 percent change in the organizational performance of Jordanian universities.

The regression path coefficients were derived from SEM (see Table 6). Notably, H_1 was supported as the sustainable HRM practices impact on work engagement was proved to be positive and significant (β = 0.521, p = 0.001). The work engagement impact on organizational performance was positive and significant (β = 0.183, p = 0.002) consequently supporting H_2. The sustainable HRM practices effect on organizational performance proved positive and significant (β = 0.380, p = 0.001) therefore supporting H_3. Besides, the sustainable HRM practices impact on knowledge management was positive and significant (β = 0.936, p = 0.001) therefore supporting H_4. Additionally, the knowledge management effect on the work engagement proved positive and significant (β = 0.438, p = 0.001) therefore supporting H_5. Lastly, the knowledge management impact on organizational performance was positive and significant (β=0.123, P=0.038), therefore supporting H_6.

Table 6: The regression path coefficient and its significance

			Std Beta	Estimate	SE	CR	p-value	Result
WE	←	Su-HRMP	0.35	0.521	0.107	40.881	***	significant
OP	←	WE	0.24	0.183	0.058	30.172	0.002	significant
OP	←	Su-HRMP	0.34	0.380	0.094	40.040	***	significant
KM	←	Su-HRMP	0.65	0.936	0.096	90.770	***	significant
WE	←	KM	0.43	0.438	0.070	60.294	***	significant
OP	←	KM	0.16	0.123	0.059	20.073	0.038	significant

Mediation tests

Knowledge management has mediating effects on the relationship between sustainable HRM practices and organizational performance. Sustainable HRM practices positively affected organizational performance using knowledge management and supported hypothesis 7. Work engagement has a mediating effect on the relationship between sustainable HRM practices and organizational performance. Sustainable HRM practices positively affected organizational performance using work engagement and supported hypothesis 8. Knowledge management has mediating effects on the relationship between sustainable HRM practices and work engagement. Sustainable HRM practices positively affected work engagement using knowledge management and supported hypothesis 9. Work engagement has a mediating effect on the relationship between knowledge management and organizational performance. Knowledge management positively

affected organizational performance using work engagement and supported hypothesis 10 (refer to Table 7).

Furthermore, knowledge management and work engagement had a mediating effect on the relationship between sustainable HRM practices and organizational performance. Sustainable HRM practices had a positive effect on organizational performance using knowledge management and work engagement (H_9 and H_{10}). Hypotheses 7, 8, 9, and 10 were all supported. Summarily, all research hypotheses were supported by the data.

Table 7. Testing the mediators

H	Path	Direct effect	Indirect effect	Total effect	Results on mediation	Mediation type
H_7	Su-HRMP→KM→OP	0.34	0.104	0.44	Sig.	Partial
H_8	Su-HRMP→WE→OP	0.34	0.084	0.42	Sig.	Partial
H_9	Su-HRMP→KM→WE	0.35	0.28	0.63	Sig.	Partial
H_{10}	KM→WE→OP	0.16	0.103	0.26	Sig.	Partial

The mediation test implications were affirmed through bootstrapping by selecting n = 5000 bootstrap sample. The bootstrapping results are displayed in Table 8.

We included all the possible indirect effects that were present in the model. H_7, H_8, H_9, and H_{10} were all supported in our data. Therefore, we found that knowledge management (KM) has a significant mediating effect between sustainable HRM practices (Su-HRMP) and organizational performance (OP) (H7). Work engagement (WE) has a significant mediating effect on the relationship between sustainable HRM practices (Su-HRMP) and organizational performance (OP) (H_8). Knowledge management (KM) has a significant mediating effect on the relationship between sustainable HRM practices (Su-HRMP) and work engagement (WE) (H_9). Work engagement (WE) has a significant mediating effect on the relationship between knowledge management (KM) and organizational performance (OP) (H_{10}). Finally, we found that knowledge management and work engagement have a significant mediating effect on the relationship between sustainable HRM practices and organizational performance. Summarily, all the proposed study hypotheses involving the direct and mediation effects of the model constructs were supported by the research data.

Table 8. Bootstrap estimates of the mediating effects of Knowledge Management and Work Engagement

H		Direct effect		Indirect effect		Results on med.	Type of med.
		Bootstr value	p-value	Bootstr Value	p-value		
H_7	Su-HRMP→KM→OP	0.34	0.001	0.104	0.039	Sig.	Partial
H_8	Su-HRMP→WE→OP	0.34	0.001	0.084	0.041	Sig.	Partial
H_9	Su-HRMP→KM→WE	0.35	0.001	0.28	0.002	Sig.	Partial
H_{10}	KM→WE→OP	0.16	0.038	0.103	0.022	Sig.	Partial

Note: Probability value (p-value), Bootstrapping Value (Bootstr value), Results on mediation (Results on med.), Type of mediation (Type of med.), Significant (Sig.).

DISCUSSION AND CONCLUSION

The research has made several important contributions to knowledge concerning an empirical examination of a conceptual model linking sustainable HRM practices, knowledge management, work engagement, and organizational performance. It has provided proof of five variable relationships contained in the model. Firstly, organizational performance increased with sustainable HRM practices through knowledge management. Secondly, organizational performance increased with sustainable HRM practices through work engagement. Thirdly, work engagement increased with sustainable HRM through knowledge management. Fourthly, organizational performance increased with knowledge management through work engagement. Fifthly, organizational performance increased with sustainable HRM through knowledge management and work engagement.

It could be inferred that sustainable HRM practices are an important factor in increasing the efficiency of universities in Jordan, where the research was conducted. Although universities typically constitute a large number of employees with standard wages, complete and accurate employee performance assessments were not conducted for high organizational performance, thus increasing organizational performance and maintaining it at high levels may pose some challenges insofar as employee productivity is concerned. In examining the study model in Figure 2, knowledge management substantially affected work engagement, while sustainable HRM practices significantly influenced knowledge management, work engagement, and organizational performance. Additionally, the highest organizational performance impact originated from sustainable HRM practices. The outcomes would have been affected by sample attributes where most (62.0%) employees constituted an average of 47.5 years old with over 10

years of working experience and tertiary (including postgraduate) education. The fundamental role of sustainable HRM practices for high organizational performance was assumed as the study respondents were predominantly mature and highly educated adults with adequate working experience.

The research has proven the positive and significant effect of sustainable HRM practices on organizational performance through knowledge management. That finding was in line with the results of previous research by Al-Tit (2016) involving manufacturing firms in Jordan, and another by Gope et al. (2018), who surveyed employees of IT companies in India. The research has also proven the positive and significant effect of sustainable HRM practices on organizational performance through work engagement. That finding was in line with the results of previous research by Ahmad et al. (2021), who surveyed employees of SMEs in Pakistan, and by Pombo and Gomes (2018) whose survey spanned several industry sectors, ranging from energy and water to transport, communication, and finance and businesses in Portugal, Norway, and Denmark.

The result of the recent study indicated how sustainable HRM practices could enhance work engagement and knowledge management. As espoused by Al-Bahussin and Elgaraihy (2013), Gope et al. (2018), and Theriou and Chatzoglou (2008), HRM practices were found to affect knowledge management. Consistent with the findings of Hanif et al. (2020) and Qureshi et al. (2020), knowledge management was found to affect work engagement. The first gap explored in the recent research was the mediating role of knowledge management on the relationship between sustainable HRM practices and work engagement. The result of using SEM to scrutinize the gap revealed that sustainable HRM practices, directly and indirectly, influence work engagement through knowledge management. The direct effect of sustainable HRM practices on work engagement ($\beta = 0.35$) was stronger than its indirect effect through knowledge management ($\beta = 0.28$). That could be explained by the fact that most respondents (62.0%) were academic staff of Jordanian universities who were already accustomed with knowledge management, having had more than 10 years of experience and were highly educated, including owning a postgraduate qualification.

The research result indicated how knowledge management could improve and increase organizational performance. It positively affected and increased the level of work engagement, as Hanif et al. (2020) and Qureshi et al. (2020) had proven, and work engagement had an effect on organizational performance; consistent with the research findings of Bakker and Bal (2010), Bhatti et al. (2018), Dubbelt et al. (2016); Gutermann et al. (2017), Junça-Silva et al. (2017) and Rofcanin et al. (2017). For example, a study conducted by Dubbelt et al. (2016), found that academic females spent more time on

activities associated with performance during days when they felt more engaged. The second research gap addressed was the mediating role of work engagement on the relationship between knowledge management and organizational performance. The direct effect of knowledge management on organizational performance (β = 0.16) was found to be stronger than its indirect effect through work engagement (β = 0.10). Hence knowledge management was significantly instrumental in improving organizational performance. The academic staff of the universities produced knowledge, which was applied at their university to improve its performance. The staff may transfer their experience to future generations, who may further enhance university performance.

The result of the recent study was consistent with the findings from previous research (Gope et al., 2018; Theriou & Chatzoglou, 2008) in that HRM practices positively affect knowledge management. In fact, it had the effect that was shown to be the largest. According to the literature, the effect increased the efficiency of knowledge acquisition (Soliman & Spooner, 2000; Gope et al., 2018); knowledge sharing (Currie & Kerrin, 2003; Soliman & Spooner, 2000; Gope et al., 2018); knowledge transfer (Minbaeva, 2005; Tuan, 2011); absorption, using, and re-using employees' knowledge (Soliman & Spooner, 2000); and the processes of generating, distributing, developing, and retaining knowledge (Gope et al., 2018). Knowledge creation and application initiated organizational innovation (Johannessen, Olsen, & Olaisen, 1999), so did knowledge integration and vision (Johannessen et al., 1999). Hence, overall, organizational innovation was supported by knowledge management, following Al-Bahussin and Elgaraihy (2013) and Alfawaire and Atan (2021), and HRM practices (Al-Bahussin & Elgaraihy, 2013; Jiang et al., 2012; Laursen, 2002).

HRM practices were found to impact the knowledge creation process (Soliman & Spooner, 2000; Oltra, 2005; Osterloh, 2005) at the core of knowledge management (Lee & Choi, 2003). Knowledge creation is an impulse in the quest for more sustainability in organizational operations (López-Torres et al., 2019). Universities that belong to the service sector should have the capability to innovate as a result of sustainable HR practices, as hinted by Wikhamn (2019).

Sustainable HRM practices foster a workplace dialogue, which can also increase knowledge and skills in an organization (Manzoor et al., 2019). As a result, sustainable HRM practices can improve the implementation of knowledge management. From that perspective, knowledge management offers an alternative impulse in the quest for more long-term sustainability (Martins, Rampasso, Anholon, Quelhas, & Leal Filho, 2019) in organizational

operations (López-Torres et al., 2019) and organizational performance (Kordab, Raudeliūnienė, & Meidutė-Kavaliauskienė, 2020).

Efficient and effective knowledge management in organizations improves work engagement. Engaged employees should be able to easily access and exploit generated knowledge and uncover new ones (Hanif et al., 2020; Qureshi et al., 2020). Work engagement is being considered as an end result or an effect of HRM practices (Aboramadan et al., 2020; Karatepe, 2013; Saks, 2006; Sani & Ibrahim, 2005). Thus, knowledge management is vital in determining work engagement. The improvement in employee work engagement can enhance by way of sustainable HRM (Xu et al., 2020).

Moreover, knowledge management affected organizational performance (Al-Bahussin & Elgaraihy, 2013; Kinyua, 2015). It improved followers' engagement as well as organizational performance. It boosted organization and work engagement by initiating discussions on task-related issues and improved the acquisition and sharing of knowledge (Gope et al., 2018; Soliman & Spooner, 2000). Work engagement additionally has a significant effect on organizational performance (Demerouti & Bakker, 2011) presumably because personnel with positive attitudes at their workplace can promote organizational success (Gruman & Saks, 2011; Al Mehrzi & Singh, 2016). Recent research has proven that work engagement mediated the relationship between knowledge management and organizational performance.

The research results indicated the importance of sustainable HRM practices as a direct antecedent of organizational performance. In addition, the perception of knowledge management and work engagement also exerted a direct effect on organizational performance. Thus, employees' perception of appropriate HRM practices could support the implementation of knowledge management processes. Hence, they would be more inclined to engage in their work and participate in improving organizational performance. This generalization coincides with AMO theory (Appelbaum et al., 2000; Lepak et al., 2006; Jerónimo et al., 2020) that reinforced how sustainable HRM practices could make more noteworthy degrees of knowledge and engagement and they, thus, would create an environment that boosts organizational performance. Along those lines, individuals who saw appropriate sustainable HRM practices in their organization would be greater prepared to implement knowledge management and would be better engaged in their work. This feeling of engagement would influence organizational performance.

Nevertheless, the research result showed the mediating effect of employees' perception of knowledge management and work engagement that reinforced the direct relationship between sustainable HRM practices and organizational performance. It confirmed that, beyond HRM practices, knowledge management, and work engagement, organizations could

weave a set of interactions that further favored their performance. Hence sustainable HRM practices were important for generating further organizational performance.

MANAGERIAL IMPLICATIONS

The aim of the research was to derive some guidelines for universities on how they could capitalize on sustainable HRM to improve their organizational performance coupled with knowledge management and work engagement. It was empirically proven that sustainable HRM practices affected organizational performance through knowledge management followed by work engagement. The research has made substantial contributions to existing theories by way of a logical model; constructs, their domains, measurement instrument, and relationships. These are potential means for developing practical applications such as a university planning and control model that is based on index measures of constructs.

Sustainable HRM practices proved influential to optimizing organizational performance with essential implications in creating, acquiring, sharing, and transferring organizational knowledge. As knowledge management influences work engagement effectiveness and catalyzes organizational performance, universities should utilize sustainable HRM practices for high organizational attainment and a productive working environment. In Lew (2009), employees significantly improved university ratings in key areas: faculty academic reputation, research quality, empirical contributions to society, academic program and graduate quality, and leadership training. As knowledge-producers, employees would generate reputable knowledge in a conducive, working environment.

Sustainable HRM practices are highly necessary to maintain the pertinence of HR roles. The term sustainability implies ‘durable’ or ‘longer,’ where current actions induce positive implications. Notwithstanding, few companies could be fully bound to sustainable HRM potentiality (Manzoor et al., 2019). Following recent investigations on the impact of sustainable HRM practices on organizational performance through knowledge management and work engagement using SEM, sustainable HRM practices proved significant for sustainable organizational success with a focus on the significance of knowledge and variables associated with the rise of the information age. Rapid knowledge processing and novel information generation implied the need to train competent workers as employee experiences reflect intangible university properties. Thus, universities aim to transfer such experiences to future generations through effective storage in line with the current

study area. Recent research has proven that knowledge grew as a result of sustainable HRM practices at universities. Knowledge management positively affected work engagement and organizational performance. Sustainable HRM practices elevate work engagement levels with personal development, while their implementation could induce employee well-being as academic research indicated enthusiastic workers to be productive. The ultimate aim of universities is to become more efficient and effective through performance improvement. To boost their performance, universities should implement sustainable HRM practices and adapt to the conditions that create knowledgeable as well as engaged employees.

LIMITATIONS AND FUTURE RESEARCH

Even though this study gives a few theoretical and practical consequences, a few limitations highlight several opportunities for future contributions to this stream of research. The first is the high subjectivity of respondents' judgments (especially in the area of organizational performance). The second is the simplified measurement of latent constructs through selected dimensions (items) only. The third is the lack of assessment of the representativeness of the research results.

Replication and expansion of the current research could provide a better comprehension and generalizability of its conclusions. Future research may test the relevance between sustainable HRM practices, knowledge management, work engagement, and organizational performance in various countries, cultures as recommended by Al-Bahussin and Elgaraihy (2013), and organizational creativities according to Jiang et al. (2012) and Shin, Jeong, and Bae (2016) that could augment the theoretical model. Future research may opt for a longitudinal design rather than the cross-sectional design employed to avoid confining data collection to a single point in time. Moreover, in order to capture organizational performance fully and comprehensively, objective organizational performance is recommended for future research.

References

Aboramadan, M., Albashiti, B., Alharazin, H., & Abed Dahleez, K. (2020). Human resources management practices and organizational commitment in higher education: The mediating role of work engagement. *International Journal of Educational Management*, *34*(1), 154–174. https://doi.org/10.1108/IJEM-04-2019-0160

Abu-Mahfouz, S. (2019). TQM practices and organizational performance in the manufacturing sector in Jordan mediating role of HRM practices

and innovation. *Journal of Management and Operation Research*, *1*(22), 1–12.

Aguta, U. I., & Balcioglu, H. (2015). The impact of human resource management practices on organizational performance : A case of private banks in North Cyprus. *International Journal of Business and Social Science*, *6*(6), 251–268. https://doi.org/10.2307/256712

Ahmad, M. A., Hashmi, A., Ali, W., & Faheem, M. (2021). The influence of human resource management practices on the SMEs performance: Mediating role of employee engagement. *Review of Education, Administration and Law*, *4*(1), 79–91. https://doi.org/10.47067/real.v4i1.113

Al-Bahussin, S. A., & Elgaraihy, W. H. (2013). The impact of human resource management practices, organisational culture, organisational innovation and knowledge management on organisational performance in large Saudi organisations: Structural equation modeling with conceptual framework. *International Journal of Business and Management*, *8*(22), 1–19. https://doi.org/10.5539/ijbm.v8n22p1

Al-Husseini, S., & Elbeltagi, I. (2016). Transformational leadership and innovation: A comparison study between Iraq's public and private higher education. *Studies in Higher Education*, *41*(1), 159–181. https://doi.org/10.1080/03075079.2014.927848

Al-Kurdi, O. F., El-Haddadeh, R., & Eldabi, T. (2020). The role of organisational climate in managing knowledge sharing among academics in higher education. *International Journal of Information Management*, *50*(February), 217–227. https://doi.org/10.1016/j.ijinfomgt.2019.05.018

Al-qudah, M. K., Osman, A., Ab Halim, M. S., & Al-shatanawi, H. A. (2014). The effect of human resources planning and training and development on organizational performance in the government sector in Jordan. *International Journal of Academic Research in Business and Social Sciences*, *4*(4), 79–85. https://doi.org/10.6007/IJARBSS/v4-i4/755

Al-Tit, A. A. (2016). The mediating role of knowledge management and the moderating part of organizational culture between HRM practices and organizational performance. *International Business Research*, *9*(1), 43–54. https://doi.org/10.5539/ibr.v9n1p43

Al-Tit, A., & Hunitie, M. (2015). The mediating effect of employee engagement between its antecedents and consequences. *Journal of Management Research*, *7*(5), 47–62. https://doi.org/10.5296/jmr.v7i5.8048

Al Damoe, F. M., Hamid, K., & Sharif, M. (2017). The mediating effect of organizational climate on the relationship between HRM practices and HR outcomes in the Libyan public sector. *Journal of Management Development*, *36*(5), 1–25. https://doi.org/10.1108/JMD-04-2015-0055

Al Mehrzi, N., & Singh, S. K. (2016). Competing through employee engagement: a proposed framework. *International Journal of Productivity and Performance Management*, *65*(6), 831–843. https://doi.org/10.1108/IJPPM-02-2016-0037

Alawin, A. A., Abu Rahmeh, T., Jaber, J. O., Loubani, S., Abu Dalu, S., Awad, W., & Dalabih, A. (2016). Renewable energy education in engineering schools in Jordan: Existing courses and level of awareness of senior students. *Renewable and Sustainable Energy Reviews*, *65*, 308–318. https://doi.org/10.1016/j.rser.2016.07.003

Alfawaire, F., & Atan, T. (2021). The effect of strategic human resource and knowledge management on sustainable competitive advantages at Jordanian universities: The mediating role of organizational innovation. *Sustainability*, *13*(15), 8445. https://doi.org/10.3390/su13158445

Alfes, K., Shantz, A., Truss, C., & Soane, E. C. (2013). The link between perceived HRM, engagement and employee behavior: A moderated mediation model. *The International Journal of Human Resource Management*, *24*(2), 330–351. https://doi.org/10.1080/09585192.2012.679950

Alshatnawi, H., & Abd Ghani, M. (2018). The effect of total quality management and knowledge management on organizational performance in higher education institution in Jordan. In *National Conference on the Sciences and Social Sciences 2018 (NACOSS 18) (USIM NILAI 2 MEI 2018)*.

Amin, M., Wan Ismail, W. K., Abdul Rasid, S. Z., & Selemani, R. D. A. (2014). The impact of human resource management practices on performance: Evidence from a public university. *The TQM Journal*, *26*(2), 125–142. https://doi.org/10.1108/TQM-10-2011-0062

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423.

Appelbaum, E., Bailey, T., Berg, P., & Kalleberg, A. L. (2000). *Manufacturing advantage: Why high-performance work systems pay off.* London: Cornell University Press.

Awang, Z., SH., L., & Zainudin, N. (2018). *Pendekatan mudah SEM- structural equation modelling*. Bandar Baru Bangi, MPWS Rich Resources.

Aybas, M., & Acar, A. C. (2017). The effect of human resource management practices on employees' work engagement and the mediating and moderating role of positive psychological capital. *International Review of Management and Marketing*, *7*(1), 363–372.

Badran, A. (2014). New trends in higher education in Jordan 2014. *In Education, Economic and Development. 4th Arab-Turkish Congress of Social Sciences. Arab Thought Forum. Amman-Jordan*, *October*, 1–28. Retrieved from https://www.uop.edu.jo/En/News/Documents/New Trends in Higher Education in Jordan 2014.pdf

Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews*, *19*(1), 31–53. https://doi.org/10.1111/ijmr.12077

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, *20*(4), 265–269. https://doi.org/10.1177/0963721411414534

Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology*, *83*(1), 189–206. https://doi.org/10.1348/096317909X402596

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work and Stress*, *22*(3), 187–200. https://doi.org/10.1080/02678370802393649

Baum, T., Cheung, C., Kong, H., Kralj, A., Mooney, S., Thi Thanh, H. N., … Siow, M. L. (2016). Sustainability and the tourism and hospitality workforce: A thematic analysis. *Sustainability*, *8*, 809. https://doi.org/10.3390/su8080809

Bhatti, M. A., Hussain, M. S., & Al Doghan, M. A. (2018). The role of personal and job resources in boosting nurses' work engagement and performance. *Global Business and Organizational Excellence*, *37*(2), 32–40. https://doi.org/10.1002/joe.21840

Binti Ishak, N., Eze, U., & Ling, L. (2010). Integrating knowledge management and human resource management for sustainable performance. *Journal of Organizational Knolwedge Management*, *2010*(2010), 1–13. https://doi.org/10.5171/2010.322246

Birdi, K., Clegg, C., Patterson, M., Robinson, A., Stride, C. B., Wall, T. D., & Wood, S. J. (2008). The impact of human resource and operational management practices on company productivity: A longitudinal study. *Personnel Psychology*, *61*, 467–501. https://doi.org/10.1111/j.1744-6570.2008.00136.x

Brewer, P. D., & Brewer, K. L. (2010). Knowledge management, human resource management, and higher education: A theoretical model. *Journal of Education for Business*, *85*(6), 330–335. https://doi.org/10.1080/08832321003604938

Buller, P. F., & McEvoy, G. M. (2016). A Model for implementing a sustainability strategy through HRM practices. *Business and Society Review*, *121*(4), 465–495. https://doi.org/10.1111/basr.12099

Chahal, H., Jyoti, J., & Rani, A. (2016). The effect of perceived high-performance human resource practices on business performance : Role of organizational learning. *Global Business Review*, *17*(3S), 107S-132S. https://doi.org/10.1177/0972150916631193

Chandrakumara, A., & Sparrow, P. (2004). Work orientation as an element of national culture and its impact on HRM policy-practice design choices: Lessons from Sri Lanka. *International Journal of Manpower*, *25*(6), 564–589. https://doi.org/10.1108/01437720410560451

Chen, S.-H., Wang, H.-H., & Yang, K.-J. (2009). Establishment and application of performance measure indicators for universities. *The TQM Journal*, *21*(3), 220–235. https://doi.org/10.1108/17542730910953004

Chew, J. (2004). Managing MNC expatriates through crises : A challenge for international human resource management. *Research and Practice in Human Resource Management*, *12*(2), 1–30.

Choi, Y. S., Lee, H., & Yoo, Y. (2010). The impact of information technology and transactive memory systems on knowledge sharing, application, and team performance: A field study. *MIS Quarterly*, *34*(4), 855–870. https://doi.org/10.2307/25750708

Christensen, M., Dyrstad, J. M., & Innstrand, S. T. (2018). Academic work engagement, resources and productivity: Empirical evidence with policy implications. *Studies in Higher Education*, *45*(1), 86–99. https://doi.org/10.1080/03075079.2018.1517304

Claycomb, C., Dröge, C., & Germain, R. (2001). Applied process knowledge and market performance: The moderating effect of environmental uncertainty. *Journal of Knowledge Management*, *5*(3), 264–277. https://doi.org/10.1108/13673270110401239

Currie, G., & Kerrin, M. (2003). Human resource management and knoweldge management: Enhancing knowledge sharing in a pharmaceutical company. *International Journal of Human Resource Management*, *14*(6), 1027–1045. https://doi.org/10.1080/0958519032000124641

De Prins, P., Van Beirendonck, L., De Vos, A., & Segers, J. (2014). Sustainable HRM: Bridging theory and practice through the 'respect openness continuity (ROC)'-model. *Management Revue*, *25*(4), 263–284. https://doi.org/10.1688/mrev-2014-04-Prins

Delaney, J. T., & Huselid, M. A. (1996). The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, *39*(4), 949–969. https://doi.org/10.2307/256718

Demerouti, E., & Bakker, A. B. (2011). The job demands-resources model: Challenges for future research. *SA Journal of Industrial Psychology*, *37*(2), 1–9. https://doi.org/10.4102/sajip.v37i2.974

Dhir, S., & Shukla, A. (2019). Role of organizational image in employee engagement and performance. *Benchmarking: An International Journal*, *26*(3), 971–989. https://doi.org/10.1108/BIJ-04-2018-0094

Dubbelt, L., Rispens, S., & Demerouti, E. (2016). Work engagement and research output among female and male scientists: A diary study. *Journal of Personnel Psychology, 15*(2), 55–65. https://doi.org/10.1027/1866-5888/a000150

Economic and Social Council. (2017). *Jordanian Economic and Social Council*. Retrieved from http://www.esc.jo/Documents/acb9c7b1-2ab3-4c18-a9f7-efce09e934d8.pdf

Ehnert, I. (2009). *Sustainable human resource management: A conceptual and explanatory analysis from a paradox perspective. Contributions to management science*. Heidelberg: Springer-Verlag.

Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: A comparative study of

sustainability reporting practices by the world's largest companies. *International Journal of Human Resource Management*, *27*(1), 88–108. https://doi.org/10.1080/09585192.2015.1024157

El-Kot, G., & Leat, M. (2008). Employees' perceptions of supervisory facets: An investigation within an Egyptian context. *International Journal of Islamic and Middle Eastern Finance and Management*, *1*(2), 149–165. https://doi.org/10.1108/17538390810880991

Feng, H. I., Chen, C.-S., Wang, C.-H., & Chiang, H.-C. (2012). The role of intellectual capital and university technology transfer offices in university-based technology transfer. *The Service Industries Journal*, *32*(6), 899–917. https://doi.org/10.1080/02642069.2010.545883

Figurska, I. (2015). Knowledge workers engage in work in theory and practice. *Human Resources Management & Ergonomics*, *IX*(2), 43–59.

Fong, C.-Y., Ooi, K.-B., Tan, B.-I., Lee, V.-H., & Chong, A. Y.-L. (2011). HRM practices and knowledge sharing: An empirical study. *International Journal of Manpower*, *32*(5/6), 704–723. https://doi.org/10.1108/01437721111158288

Fullwood, R., & Rowley, J. (2017). An investigation of factors affecting knowledge sharing amongst UK academics. *Journal of Knowledge Management*, *21*(5), 1254–1271. https://doi.org/10.1108/JKM-07-2016-0274/full/html?fullSc=1

Gaines, B. R. (2013). Knowledge Acquisition: Past, present and future. *International Journal of Human-Computer Studies*, *71*(2), 135–156. https://doi.org/10.1016/j.ijhcs.2012.10.010

Geiger, D., & Schreyögg, G. (2012). Narratives in knowledge sharing: Challenging validity. *Journal of Knowledge Management*, *16*(1), 97–113. https://doi.org/10.1108/13673271211198963

Glot, M. (2006). Knowledge management and the links to HRM: Developing leadership and management capabilities to support sustainability. *Management Research News*, *29*(7), 402–413. https://doi.org/10.1108/01409170610690862

Gope, S., Elia, G., & Passiante, G. (2018). The effect of HRM practices on knowledge management capacity: A comparative study in Indian IT industry. *Journal of Knowledge Management*, *22*(3), 649–677. https://doi.org/10.1108/JKM-10-2017-0453

Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map ? *The Journal of Continuing Education in the Health Professions*, *26*(1), 13–24. https://doi.org/10.1002/chp.47

Gruman, J. A., & Saks, A. M. (2011). Performance management and employee engagement. *Human Resource Management Review*, *21*(2), 123–136. https://doi.org/10.1016/j.hrmr.2010.09.004

Gupta, M., Acharya, A., & Gupta, R. (2015). Impact of work engagement on performance in Indian higher education system. *Review of European Studies*, *7*(3), 192–201. https://doi.org/10.5539/res.v7n3p192

Gürbüz, S. (2009). The effect of high performance HR practices on employees' job satisfaction. *Istanbul University Journal of the School of Business Administration*, *38*(2), 110–123.

Gutermann, D., Lehmann-willenbrock, N., Boer, D., Born, M., & Voelpel, S. C. (2017). How leaders affect followers' work engagement and performance : Integrating leader − member exchange and crossover theory. *British Journal of Management*, *28*, 299–314. https://doi.org/10.1111/1467-8551.12214

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (S. Edition). United States of America: Pearson Education Limited.

Hanif, M. I., Waheed, N., & Ahmad, S. (2020). Organizational commitment & work engagement affected by knowledge management: Evidence from banking sector of Pakistan. *Sarhad Journal of Management Sciences*, *6*(1), 99–114.

Hashemi, S. A., & Dehghanian, F. (2017). A survey and analysis of the relationship between human resources management and organizational performance. *Engineering, Technology & Applied Science Research*, *7*(6), 2200–2204. https://doi.org/10.1016/j.ejheart.2007.12.002

Hughes, J. C., & Rog, E. (2008). Talent management: A strategy for improving employee recruitment, retention and engagement within hospitality organizations. *International Journal of Contemporary Hospitality Management*, *20*(7), 743–757. https://doi.org/10.1108/09596110810899086

Hult, G. T. M., Ketchen, D. J., & Slater, S. F. (2004). Information processing, knowledge development, and strategic supply chain performance. *Academy of Management Journal*, *47*(2), 241–253. https://doi.org/10.2307/20159575

Hussein, N., Mohamad, A., Noordin, F., & Ishak, N. A. (2014). Learning organization and its effect on organizational performance and organizational innovativeness: A proposed framework for Malaysian public institutions of higher education. *Procedia - Social and Behavioral Sciences*, *130*, 299–304. https://doi.org/10.1016/j.sbspro.2014.04.035

Huxley, L., & Hall, V. (1996). Human resource management in higher education: Idiom and incidence. *Research in Post-Compulsory Education*, *1*(1), 77–85. https://doi.org/10.1080/1359674960010107

Inkinen, H. T., Kianto, A., & Vanhala, M. (2015). Knowledge management practices and innovation performance in Finland. *Baltic Journal of Management*, *10*(4), 432–455. https://doi.org/10.1108/BJM-10-2014-0178

Iqbal, Z., & Malik, M. (2019). Entrepreneurial orientation and engagement of Pakistani small and medium enterprises in sustainable development practices: Mediating role of knowledge management. *Business Strategy and Development*, *2*(3), 192–203. https://doi.org/10.1002/bsd2.53

Jerónimo, H. M., De Lacerda, T. C., & Henriques, P. L. (2020). From sustainable HRM to employee performance: A complex and intertwined road. *European Management Review*, *17*(4), 871–884. https://doi.org/10.1111/emre.12402

Jiang, J., Wang, S., & Zhao, S. (2012). Does HRM facilitate employee creativity and organizational innovation? A study of Chinese firms. *International Journal of Human Resource Management*, *23*(19), 4025–4047. https://doi.org/10.1080/09585192.2012.690567

Johannessen, J.-A., Olsen, B., & Olaisen, J. (1999). Aspects of innovation theory based on knowledge-management. *International Journal of Information Management*, *19*(2), 121–139. https://doi.org/10.1016/S0268-4012(99)00004-3

Ju, T. L., Lin, B., Lin, C., & Kuo, H.-J. (2006). TQM critical factors and KM value chain activities. *Total Quality Management*, *17*(3), 373–393. https://doi.org/10.1080/14783360500451614

Junça-Silva, A., Caetano, A., & Lopes, R. R. (2017). Daily uplifts, well-being and performance in organizational settings: The differential mediating roles of affect and work engagement. *Journal of Happiness Studies*, *18*(2), 591–606. https://doi.org/10.1007/s10902-016-9740-2

Karatepe, O. M. (2013). High-performance work practices and hotel employee performance: The mediation of work engagement. *International Journal of Hospitality Management*, *32*, 132–140. https://doi.org/10.1016/j.ijhm.2012.05.003

Khasawneh, S. (2011). Learning organization disciplines in higher education institutions: An approach to human resource development in Jordan. *Innovative Higher Education*, *36*(4), 273–285. https://doi.org/10.1007/s10755-010-9170-8

Kinyua, G. M. (2015). *Relationship between knowledge management and performance of commercial banks in Kenya*. Kenyatta University.

Kirby, J. (2005). Toward a theory of high performance. *Harvard Business Review*, *83*(7), 190.

Kılıç, M., & Uludağ, O. (2021). The effects of transformational leadership on organizational performance: Testing the mediating effects of knowledge management. *Sustainability*, *13*(14), 7981. https://doi.org/10.3390/su13147981

Kordab, M., Raudeliūnienė, J., & Meidutė-Kavaliauskienė, I. (2020). Mediating role of knowledge management in the relationship between organizational learning and sustainable organizational performance. *Sustainability*, *12*(23), 10061. https://doi.org/10.3390/su122310061

Kramar, R. (2014). Beyond strategic human resource management: Is sustainable human resource management the next approach? *The International Journal of Human Resource Management*, *25*(8), 1069–1089. https://doi.org/10.1080/09585192.2013.816863

Laursen, K. (2002). The importance of sectoral differences in the application of complementary HRM practices for innovation performance.

International Journal of the Economics of Business, *9*(1), 139–156. https://doi.org/10.1080/13571510110103029

Lee, H., & Choi, B. (2003). Knowledge management enablers, processes, and organizational performance: An integrative view and empirical examination. *Journal of Management Information Systems*, *20*(1), 179–228.

Lei, P.-W., & Wu, Q. (2007). Introduction to structural equation modeling: Issues and practical considerations. *Educational Measurement: Issues and Practice*, *26*(3), 33–43. https://doi.org/10.1111/j.1745-3992.2007.00099.x

Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resources Management*, *25*(06), 217–271. https://doi.org/10.1016/S0742-7301(06)25006-0

Lew, T.-Y. (2009). The relationships between perceived organizational support, felt obligation, affective organizational commitment and turnover intention of academics working with private higher educational institutions in Malaysia. *European Journal of Social Sciences*, *9*(1), 72–87.

Li Sa, M. L., Choon-Yin, S., Chai, Y. K., & Aik Joo, J. H. (2020). Knowledge creation process, customer orientation and firm performance: Evidence from small hotels in Malaysia. *Asia Pacific Management Review*, *25*(2), 65–74. https://doi.org/10.1016/j.apmrv.2019.07.002

Li, X. (2006). Agent-based buddy-finding methodology for knowledge sharing. *Information & Management*, *43*(3), 283–296.

Lilles, A., & Rõigas, K. (2017). How higher education institutions contribute to the growth in regions of Europe? *Studies in Higher Education*, *42*(1), 65–78. https://doi.org/10.1080/03075079.2015.1034264

Lim, L. J. W., & Ling, F. Y. Y. (2012). Human resource practices of contractors that lead to job satisfaction of professional staff. *Engineering, Construction and Architectural Management*, *19*(1), 101–118. https://doi.org/10.1108/09699981211192599

López-Torres, G. C., Garza-Reyes, J. A., Maldonado-Guzmán, G., Kumar, V., Rocha-Lona, L., & Cherrafi, A. (2019). Knowledge management for sustainability in operations. *Production Planning and Control*, *30*(10–12), 813–826. https://doi.org/10.1080/09537287.2019.1582091

Luu, T. T. (2019). Service-oriented high-performance work systems and service-oriented behaviours in public organizations: The mediating role of work engagement. *Public Management Review*, *21*(6), 789–816. https://doi.org/10.1080/14719037.2018.1526314

Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology*, *1*(1), 3–30. https://doi.org/10.1111/j.1754-9434.2007.0002.x

Macini, N., Alves, M. F. R., Cezarino, L. O., Liboni, L. B., & Caldana, A. C. F. (2020). Beyond money and reputation: Sustainable HRM in Brazilian

banks. *Employee Relations: The International Journal*, *44*(3). https://doi.org/10.1108/ER-12-2018-0331

Mahfouz, Shatha A. (2019). The impact of transactional leadership on employee commitment. *International Journal of Innovation, Creativity and Change*, *8*(8), 1–13.

Mahfouz, S. A., Awang, Z., & Muda, H. (2019). The impact of transformational leadership on employee commitment in the construction industry. *International Journal of Innovation, Creativity and Change*, *7*(8), 151–167.

Mahfouz, S., Bahkia, A. S., & Alias, N. (2021). The impact of human resource management practices on employee performance and the mediating role of employee commitment. *Journal of Governance and Regulation*, *10*(4), 222–234. https://doi.org/10.22495/jgrv10i4siart3

Mahfouz, S., Halim, M. S. A., Bahkia, A. S., & Alias, N. (2022a). How sustainable human resource management practices can increase intention to stay through organisational justice and employee engagement. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*, *13*(2), 1–19. https://doi.org/10.14456/ITJEMAST.2022.34

Mahfouz, S., Halim, M. S. A., Bahkia, A. S., & Alias, N. (2022b). Mediating role of employee commitment in the relationship between transactional leadership style and employee performance [Special Issue]. *Journal of Governance and Regulation*, *11*(1), 337–350. https://doi.org/10.22495/jgrv11i1siart13

Mahfouz, S., Halim, M. S. A., Bahkia, A. S., & Alias, N. (2022c). The impact of organizational justice on intention to stay: The mediating role of organizational commitment. *Corporate Governance and Organizational Behavior Review*, *6*(1), 139–149. https://doi.org/10.22495/cgobrv6i1p10

Mahfouz, Shatha A., Awang, Z., Muda, H., & Bahkia, A. S. (2020). Mediating role of employee commitment in the relationship between transformational leadership style and employee performance. *Humanities & Social Sciences Reviews*, *8*(2), 624–637. Retrieved from https://doi.org/10.18510/hssr.2020.8270

Manzoor, F., Wei, L., Bányai, T., Nurunnabi, M., & Abdul Subhan, Q. (2019). An examination of sustainable HRM practices on job performance: An application of training as a moderator. *Sustainability*, *11*(8), 2263. https://doi.org/10.3390/su11082263

Martins, V. W. B., Rampasso, I. S., Anholon, R., Quelhas, O. L., & Leal Filho, W. (2019). Knowledge management in the context of sustainability: Literature review and opportunities for future research. *Journal of Cleaner Production*, *229*, 489–500. https://doi.org/10.1016/j.jclepro.2019.04.354

Minbaeva, D. B. (2005). HRM practices and MNC knowledge transfer. *Personnel Review*, *34*(1), 125–144. https://doi.org/10.1108/00483480510571914

Mohanapriya, G., & Sasikala, P. (2015). HRM in knowledge management. *International Research Journal of Management Science & Technology*, *6*(10), 127–132.

Monavvarian, A., & Khamda, Z. (2010). Towards successful knowledge management: People development approach. *Business Strategy Series*, *11*(1), 20–42. https://doi.org/10.1108/17515631011013096

Monteiro, S., & Pais, L. (2014). Knowledge management and HRM – Theoretical and empirical links. In *European Conference on Knowledge Management* (Vol. 2, pp. 700–708). Academic Conferences International Limited.

Mosconi, E., & Roy, M. C. (2013). Linking knowledge management and organizational performance. *International Business Research*, *6*(9), 68–76. https://doi.org/10.5539/ibr.v6n9p68

Newman, K. L. (2011). Sustainable careers: Lifecycle engagement in work. *Organizational Dynamics*, *40*(2), 136–143. https://doi.org/10.1016/j.orgdyn.2011.01.008

Nonaka, I., & Takeuchi, T. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York Oxford, Oxford university press. OUP USA.

Obeidat, S. M., Mitchell, R., & Bray, M. (2016). The link between high performance work practices and organizational performance: Empirically validating the conceptualization of HPWP according to the AMO model. *Employee Relations*, *38*(4), 578–595. https://doi.org/10.1108/ER-08-2015-0163

Oltra, V. (2005). Knowledge management effectiveness factors: The role of HRM. *Journal of Knowledge Management*, *9*(4), 70–86. https://doi.org/10.1108/13673270510610341

Omotayo, F. O. (2015). Knowledge management as an important tool in organisational management : A review of literature. *Library Philosophy and Practice (e-Journal)*, *4*, 1–23.

Osterloh, M. (2005). *Human resources management and knowledge creation*. CREMA Working Paper, No. 2005-09, Center for Research in Economics, Management and the Arts (CREMA), Basel.

Otoo, F. N. K. (2019). Human resource management (HRM) practices and organizational performance: The mediating role of employee competencies. *Employee Relations: The International Journal*, *41*(5), 949–970. https://doi.org/10.1108/ER-02-2018-0053

Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, *121*(3), 451–466. https://doi.org/10.1007/s10551-013-1732-0

Pauleen, D. J., Corbitt, B., & Yoong, P. (2007). Discovering and articulating what is not yet known: Using action learning and grounded theory as a knowledge management strategy. *The Learning Organization*, *14*(3), 222–240. https://doi.org/10.1108/09696470710739408

Pombo, G., & Gomes, J. (2018). How does work engagement mediate the association between human resources management and organizational performance? *Problems and Perspectives in Management*, *16*(3), 63–79. https://doi.org/10.21511/ppm.16(3).2018.06

Quarchioni, S., Paternostro, S., & Trovarelli, F. (2020). Knowledge management in higher education: A literature review and further research avenues. *Knowledge Management Research and Practice*, 1–16. https://doi.org/10.1080/14778238.2020.1730717

Qureshi, K. Y., Awan, F. B., & Perveen, S. (2020). Impact of project management leadership and knowledge management on job engagement; with mediating role of self efficacy. *Journal of Business & Economics*, *12*(2), 82–98. https://doi.org/10.5311/JBE.2020.12.16

Ramírez, Y., & Gordillo, S. (2014). Recognition and measurement of intellectual capital in Spanish universities. *Journal of Intellectual Capital*, *15*(1), 173–188. https://doi.org/10.1108/JIC-05-2013-0058

Ramjeawon, P. V., & Rowley, J. (2017). Knowledge management in higher education institutions: Enablers and barriers in Mauritius. *The Learning Organization*, *24*(5), 366–377. https://doi.org/10.1108/TLO-03-2017-0030

Reagans, R., & McEvily, B. (2003). Network structure and knowledge transfer: The effects of cohesion and range. *Administrative Science Quarterly*, *48*(2), 240–267.

Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green human resource management : A review and research agenda. *International Journal of Management Reviews*, *15*(January), 1–14. https://doi.org/10.1111/j.1468-2370.2011.00328.x

Rofcanin, Y., Heras, M. Las, & Bakker, A. B. (2017). Family supportive supervisor behaviors and organizational culture: Effects on work engagement and performance. *Journal of Occupational Health Psychology*, *22*(2), 207–217. https://doi.org/10.1037/ocp0000036

Rožman, M., Shmeleva, Z., & Tominc, P. (2019). Knowledge management components and their impact on work engagement of employees. *Naše Gospodarstvo/Our Economy*, *65*(1), 40–56. https://doi.org/10.2478/ngoe-2019-0004

Sahibzada, U. F., Jianfeng, C., Latif, K. F., & Sahibzada, H. F. (2020). Fueling knowledge management processes in Chinese higher education institutes (HEIs): The neglected mediating role of knowledge worker satisfaction. *Journal of Enterprise Information Management*, *33*(6), 1395–1417. https://doi.org/10.1108/JEIM-07-2019-0197

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, *21*(7), 600–619. https://doi.org/10.1108/02683940610690169

Sani, I., & Ibrahim, R. B. M. (2005). Mediating role of work engagement in the relationship between human resource practices and employee competence in Nigerian basic education system: Building a conceptual

framework. *United Nations, Department of Economic and Social*, 1–16. https://doi.org/10.6007/ijarbss/v10-i12/8088

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, *66*(4), 701–716. https://doi.org/10.1177/0013164405282471

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*(1), 71–92.

Schneider, B., Yost, A. B., Kropp, A., Kind, C., & Lam, H. (2018). Workforce engagement: What it is, what drives it, and why it matters for organizational performance. *Journal of Organizational Behavior*, *39*(4), 462–480. https://doi.org/10.1002/job.2244

Secundo, G., Elena-Perez, S., Martinaitis, Ž., & Leitner, K. H. (2015). An intellectual capital maturity model (ICMM) to improve strategic management in European universities: A dynamic approach. *Journal of Intellectual Capital*, *16*(2), 419–442. https://doi.org/10.1108/JIC-06-2014-0072

Shin, D., & Konrad, A. M. (2014). Causality between high-performance work systems and organizational performance. *Journal of Management*, *43*(4), 1–25. https://doi.org/10.1177/0149206314544746

Shin, S. J., Jeong, I., & Bae, J. (2016). Do high-involvement HRM practices matter for worker creativity? A cross-level approach. *International Journal of Human Resource Management*, *29*(2), 260–285. https://doi.org/10.1080/09585192.2015.1137612

Shuck, M. B., Rocco, T. S., & Albornoz, C. A. (2011). Exploring employee engagement from the employee perspective: Implications for HRD. *Journal of European Industrial Training*, *35*(4), 300–325. https://doi.org/10.1108/03090591111128306

Soliman, F., & Spooner, K. (2000). Strategies for implementing knowledge management: Role of human resources management. *Journal of Knowledge Management*, *4*(4), 337–345. https://doi.org/10.1108/13673270010379894

Tehseen, S., Ramayah, T., & Sajilan, S. (2017). Testing and controlling for common method variance: A review of available methods. *Journal of Management Sciences*, *4*(2), 146–175.

Theriou, G. N., & Chatzoglou, P. D. (2008). Enhancing performance through best HRM practices, organizational learning and knowledge management: A conceptual framework. *European Business Review*, *20*(3), 185–207. https://doi.org/10.1108/09555340810871400

Tuan, L. T. (2011). Human resource management in knowledge transfer. *International Business and Management*, *2*(2), 128–138.

Veltri, S., & Silvestri, A. (2015). The free state university integrated reporting: A critical consideration. *Journal of Intellectual Capital*, *16*(2), 443–462. https://doi.org/10.1108/JIC-06-2014-0077

Wall, T. D., & Wood, S. J. (2005). The romance of human resource management and business performance, and the case for big science. *Human Relations*, *58*(4), 429–462. https://doi.org/10.1177/0018726705055032

Weil, A., & Woodall, J. (2005). HRD in France: The corporate perspective. *Journal of European Industrial Training*, *29*(7), 529–540. https://doi.org/10.1108/03090590510621036

Wikhamn, W. (2019). Innovation, sustainable HRM and customer satisfaction. *International Journal of Hospitality Management*, *76*, 102–110. https://doi.org/10.1016/j.ijhm.2018.04.009

Xu, F. Z., Zhang, Y., Yang, H., & Wu, B. T. (2020). Sustainable HRM through improving the measurement of employee work engagement: Third-person rating method. *Sustainability*, *12*(17), 7100. https://doi.org/10.3390/su12177100

Yahya, S., & Goh, W.-K. (2002). Managing human resources toward achieving knowledge management. *Journal of Knowledge Management*, *6*(5), 457–468. https://doi.org/10.1108/13673270210450414

Yeh, Y.-J., Lai, S.-Q., & Ho, C.-T. (2006). Knowledge management enablers: A case study. *Industrial Management and Data Systems*, *106*(6), 793–810. https://doi.org/10.1108/02635570610671489

Yeh, Y. M. C. (2005). The implementation of knowledge management system in Taiwan's higher education. *Journal of College Teaching & Learning*, *2*(9), 35–42.

Yoder, D. (1942). *Personnel management and industrial relations*. New York: Prentice-Hall, Inc. Retrieved from http://dx.doi.org/10.1037/13581-000

Zaugg, R. J., Blum, A., & Thom, N. (2001). *Sustainability in human resource management*. Retrieved from https://www.researchgate.net/profile/Norbert-Thom/publication/276906300_Sustainability_in_Human_Resource_Management/links/555b312b08ae6943a87945bd/Sustainability-in-Human-Resource-Management.pdf

Zhang, B., & Morris, J. L. (2014). High-performance work systems and organizational performance: Testing the mediation role of employee outcomes using evidence from PR China. *International Journal of Human Resource Management*, *25*(1), 68–90. https://doi.org/10.1080/09585192.2013.781524

Zhang, Z., Wan, D., & Jia, M. (2008). Do high-performance human resource practices help corporate entrepreneurship? The mediating role of organizational citizenship behavior. *Journal of High Technology Management Research*, *19*(2), 128–138. https://doi.org/10.1016/j.hitech.2008.10.005

Abstrakt

CEL: *Współczesny biznes i globalne organizacje regularnie stają przed wyzwaniami wynikającymi z nieprzewidywalnego otoczenia konkurencyjnego. Praktyki zarządzania zasobami ludzkimi (ZZL) dają pracownikom trwałe możliwości wykorzystywania swoich zdolności i wyrażania entuzjazmu do zdobywania umiejętności i wiedzy oraz stosowania ich w miejscu pracy w celu wzrostu zaangażowania jednostek i zwiększenia wydajności organizacji. Ten artykuł przedstawia najnowsze wyniki badań, których celem jest zbadanie (i) pośredniczącej roli zarządzania wiedzą i zaangażowania w pracę oraz (ii) wpływu praktyk zrównoważonego zarządzania zasobami ludzkimi na wyniki organizacji.* ***METODYKA:*** *500 kwestionariuszy zostało rozesłanych do jordańskich wykładowców uniwersyteckich (populacja badawcza) w celu zebrania danych. Dane z badania oceniono za pomocą modelowania równań strukturalnych (SEM) przy użyciu IBM-SPSS-AMOS 25.0.* ***WYNIKI:*** *Zidentyfikowano dwa kluczowe wyniki: (i) zrównoważone praktyki zarządzania zasobami ludzkimi, zarządzanie wiedzą i zaangażowanie w pracę były pozytywnie powiązane z wynikami organizacji; (ii) zarządzanie wiedzą i zaangażowanie w pracę odegrały rolę pośrednika w trwałej korelacji pomiędzy praktyką ZZL a wynikami organizacji.* ***IMPLIKACJE:*** *Ogólnie rzecz biorąc, współpraca pracowników okazała się niezbędna do optymalizacji wydajności organizacji, szczególnie podczas ich zaangażowania w zrównoważone praktyki HRM i zarządzanie wiedzą. Na koniec w badaniu zaproponowano kilka praktycznych zaleceń i interwencji dotyczących zrównoważonego zarządzania zasobami ludzkimi, które można wykorzystać w przyszłych badaniach.* ***ORYGINALNOŚĆ I WARTOŚĆ****: Badanie dostarczyło dowodów na pięć zmiennych relacji zawartych w modelu. Po pierwsze, wydajność organizacyjna wzrosła dzięki zrównoważonym praktykom ZZL poprzez zarządzanie wiedzą. Po drugie, wydajność organizacyjna wzrosła dzięki zrównoważonym praktykom ZZL poprzez zaangażowanie w pracę. Po trzecie, zaangażowanie w pracę wzrosło dzięki zrównoważonemu zarządzaniu zasobami ludzkimi poprzez zarządzanie wiedzą. Po czwarte, wydajność organizacyjna wzrosła wraz z zarządzaniem wiedzą poprzez zaangażowanie w pracę. Po piąte, wydajność organizacyjna wzrosła dzięki zrównoważonemu zarządzaniu zasobami ludzkimi dzięki zarządzaniu wiedzą i zaangażowaniu w pracę.*

Słowa kluczowe: *praktyki zrównoważonego zarządzania zasobami ludzkimi, wydajność organizacji, zarządzanie wiedzą, zaangażowanie w pracę, teoria AMO*

Biographical notes

Shatha Abu-Mahfouz is an Assistant Professor. She acquired the specification in Management in the Master and Ph.D. program. Her research interests include HRM, Leadership, Knowledge Management, Digital Transformation, Technology Management, Organizational Behaviour, and Sustainability.

Mutia Sobihah Abd Halim is an Associate Professor at Sultan Zainal Abidin Universiti. She holds her Bachelor's, Master's and Ph.D. degrees in

Management from Malaysia. Her research interests include Management, Marketing, Tourism, e-Commerce, and Management Information System.

Ayu Suriawaty Bahkia is an Assistant Professor. She acquired the specification in Management in the Master and Ph.D. program. Her research interests include HRM, Safety Behaviour, Safety Climate, Leadership, and Knowledge Management.

Noryati Alias is a Senior Lecturer at SEGI University. She obtained a first degree in Mathematics and Statistics and a postgraduate degree in Education from Malaysia. She acquired the specification in Management in the Master and Ph.D. program. Her research interests include HRM, Leadership, Research Methodology, and E-learning.

Abdul Malek Tambi is a Professor at Sultan Zainal Abidin Universiti. His areas of specialization include total quality management and management sciences. He has many years of experience in teaching, supervising, research, and consultation for Malaysian Institute of transport, Institut Darul Redzuan, Malaysian Qualifications Agency, and Terengganu Tourism Department, Malaysia.

Conflicts of interest

The authors declare no conflict of interest.

Citation (APA Style)

Abu-Mahfouz, S., Halim, M.S.A., Bahkia, A.S., Alias, N., & Tambi, A.M. (2023). Sustainable human resource management practices in organizational performance: The mediating impacts of knowledge management and work engagement. *Journal of Entrepreneurship, Management, and Innovation*, *19*(2), 57-97. https://doi.org/10.7341/20231922