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The Mediating Role of Strategic Adaptability on the Relationship between Human Resource Management Strategies and Innovation

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Abstract: Dynamic environmental changes continue to impact organizations' performance and goals, prompting them to adapt and develop strategies that foster innovation continually. Thus, HRMS enables talented, retaining skilled, and innovative employees who contribute with creative ideas and creative problem-solving problems to enhance innovation practices in organizations. Therefore, the findings of previous studies are insufficient and considered as empirical evidence to investigate the research constructs relationship. This study aims to examine the gap in strategic adaptability via HRM strategies and innovation in Jordanian banks. The study employs data analysis and hypotheses testing, descriptive analysis approach, and (SEM) structural equation modeling through SPSS-24 and PLS-SEM-4 software. The research population includes 16 Jordanian banks, and a stratified sampling method conducted on 468 respondents resulted in 455 completed ones, the respondents are middle level managers and department heads. The findings reveal a positive significant impact of HRMS and innovation (INN), a significant positive impact of HRMS and strategic adaptability (SA), and a significant positive effect between strategic adaptability (SA) and innovation (INN). In addition, the findings indicate a partial indirect relationship effect between strategic adaptability (SA) via HRMS and innovation (INN). The conclusion shows that the bank's performance is highly improved by strategic adaptability, which allows the bank to quickly respond to local and global environmental changes, challenges, crises, and market trends, and provides valuable theoretical and practical insights regarding the role of strategic adaptability (SA) relationship between HRM strategies (HRMS) and innovation (INN). These findings are relevant to the global banking sector due to the similar operating conditions and environments. Moreover, a better understanding of these relationships by practitioners and researchers for future studies in different environments, and sectors.

Keywords: human resource management strategies; strategic adaptability; innovation

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1. Introduction

Organizations continuously promote innovation by recruiting talented staff to drive significant contributions to enhance work conditions, performance, culture, and climate [1]. However, innovation practices provide key solutions to encounter changes and crises aligned with flexible and agile strategies and adaptability [2]. Moreover, innovation becomes a core and crucial factor in an organization's long-life survival and maintains stability in dynamic environmental changes [3].

An organization's strategic thinking and planning depend on HRM strategies in order to attract appropriate skills and retain excellent workforces which resulted in enhancing organizational performance [4–6]. Today, HRM practice encompasses various tasks such as organizational performance, capability, flexibility, and adaptability that overcome unexpected environmental changes [7]. HRM strategies aim to foster a business firm's

capabilities for achieving long-term growth and success [8]. In addition, HRM strategies can provide organizations with a talented and innovative workforce to enhance innovation practices which maintain sustainable organizational performance [9–11]. Therefore, HRM strategies are considered as a critical issue that affects positively organizational performance outcomes [12,13]. Moreover, HR flexibility can help an organization to revive its dynamic capability to cope with internal environmental changes [14].

Strategic adaptability is an essential practice performed by organizational leaders to recognize unpredictable circumstances through adapting flexibility, agility, leanness, and resilience strategies to secure the organization's positions [15]. However, strategic flexibility and adaptability can help organizations enhancing operational capability more effectively and efficiently than encountered competitors [16]. Moreover, adapting strategic agility can assist an organization's ability to follow strategic actions in response to external environmental changes [17]. Furthermore, organizations are more likely to adopt a flexible strategy as a quick response to dynamic environmental changes, through adapting to minimize change effects [18,19].

The interdependent relationship of strategic adaptability between HRM strategies and innovation has been attributed to several factors. Recently, few studies have explored the relation between HRM strategies and strategic adaptability and their implications for organizations. The current research aims to bridge this gap through investigating the relationship of strategic adaptability between HRM strategies and innovation in Jordanian banks. Therefore, HRMS on INN through the adoption-innovation theory concept emphasizes the effective innovation practices to fit with the employees' innovative thinking and ideas [20]. Moreover, modern HRM theory emphasizes HR practices and employees interacting within the organization and organizational performance [21]. Furthermore, the adaptability theory emphasizes the ability of an organization to cope with environmental changes, HR adaptability, and organizational strategic adaptability such as flexibility, resilience, and technology [22,23]. In addition, these theories are valuable to this research which concentrates on the relationship of strategic adaptability between HRM strategies and innovation in Jordanian banks. The relationship investigation of strategic adaptability between HRM strategies and innovation aims to increase the attention of organizations management to enhance HRM practices, strategies, innovation, and adaptability.

The integration of HRM strategies into broader organizational strategies is crucial for enhancing capabilities and performance, especially in complex and dynamic environments. The literature also emphasizes the role of HRM in facilitating innovation through strategic and sustainable practices.

The current literature highlights the importance of effective HRM practices in fostering innovation and strategic adaptability. However, there are significant gaps, particularly in the context of the Jordanian banks, regarding the impact of HRM strategies on innovation outcomes. Addressing these gaps could provide valuable insights for theory and practice, enhancing our understanding of how HRM strategies can be leveraged to improve organizational success in an increasingly complex and competitive environment.

Finally, this research aims to fill a gap in the existing literature by exploring important relationships that have not been investigated in the banking sector in Jordan. The study examines the mediating role of strategic adaptability in the relationship between HRM strategies and innovation in Jordanian banks, which has not been explored before. Additionally, it contributes to the field of HRM in the banking sector by providing a comprehensive review of the existing literature. Furthermore, the study considers the mediation effect of strategic adaptability, which is a new concept in Jordanian bank management. This research resulted into the following research questions:

1. What is the effect of HRM strategies (HRMS) on innovation (INN)?
2. What is the effect of HRM strategies (HRMS) on strategic Adaptability (SA)?
3. What is the effect of strategic adaptability on innovation?
4. To what extent does strategic adaptability (SA) role mediate the relationship between HRM strategies (HRMS) and innovation (INN)?

The research structure is organized into several sections. Section 2 presents the gap in the literature review and hypotheses formulation. Section 3 presents the methodology which includes (the research design approach, population and sampling, data collection, and data analysis. Section 4 presents the findings. Section 5 presents the findings discussion. Finally, Section 6 conclusion, implications, limitations, and recommendations for future research endeavors.

2. Literature Review and Hypothesis

The theoretical framework of this research depends on the theories and concepts of HRM strategies, innovation, and strategic adaptability. In this research, the theories and concepts are used collectively to form the research frameworks which guide the researcher's exploration of how HRM strategies and strategic adaptability influence innovation. The theory discussion is valuable for a deeper interpretation of findings, conclusions, implications, and contributions.

2.1. HRM Strategies (HRMS) and Innovation (INN)

An organization's HRM practice is governed by a process that leads to organizational performance outcomes such as recruiting, selecting, training, and compensation [5,13,24,25]. Thus, innovation refers to useful creative ideas that generate reasonable solutions to an organization's issues [26–28]. Therefore, HRM practices can support strategic decisions through innovative ideas which lead into organizational change and development [29], and HRM practices are key for driving and formulating effective innovation [11]. Moreover, HRM practices significantly contribute to enhancing human resource abilities to utilize technology for innovation in the digital era. Moreover, it enhances organizational processes and performance outcomes [30]. HRM practices empower employees through creating innovative environments that foster employees' new skills, talent, and knowledge to meet environmental changes [31,32]. Furthermore, HRM strategies play a significant role in promoting innovation to cope with environmental changes and facilitating adaptation which help organizations to remain resilient, and to interact with changes effectively [33]. Additionally, sustainable HRM requires deep understandings of the hiring and training of talented staff and the process of motivating them to act innovatively and flexibly, which enhances innovation capabilities that result in meeting critical changes effectively [34]. Recently, HRM strategies are considered as a key solution that fosters organizational sustainable performance in the face of organizational changes [9,10]. To this end, the first hypothesis is formulated as follows:

H1. *HRM strategies (HRMS) are positively related to Innovation (INN).*

2.2. HRM Strategies (HRMS) and Strategic Adaptability (SA)

HRM practices and strategic adaptability are integrated to enhance employee agility to meet environmental changes that influence organizational performance [35]. Thus, strategic adaptability refers to an organization's adaptability to meet uncertainties through HR skills, behaviors, and practices and to cope with work conditions, flexibility for change, openness innovation, competitiveness, and swift effectiveness [36]. Moreover, HRM practices can equip employees with flexibility, capacity, and skills to respond to crises and performance outcomes [37].

Strategic adaptability effectiveness depends on the workforce's capabilities of understanding the dynamic environmental changes to maintain the organizations [38,39]. Thus, HRM practices support organizations' adaptability with valuable contributions, such as agile talent acquisition, which support the organization's agility to encounter the surrounding environmental changes [40]. Strategic adaptability motivates HRM practices to understand environmental changes through innovative solutions [41–43]. HRM encompasses many human factors, such as skill, competence, flexibility, adaptability, and resilience, which resulted in enhancing organizational performance [44]. HRM adaptation-oriented imple-

mentation aims to respond to environmental changes instantly and leads to the achievement of organizational goals through self-organization [45]. Moreover, HRM practices play a key role in predicting adaptive performance. Therefore, organizational managers should take into consideration employees' adaptability to motivate and adapt their behavior to suit the workplace environment [46].

Recently, HRM practices have been involved with organization's strategic adaptability assisted by the HR capabilities and organizational flexibility to respond to predictable changes effectively [47]. Therefore, HRM and agility strategy adaptability support organizations more effectively, which leads work processes to cope with environmental changes [41,48–50]. HR strategies are essential to enhance employees' resilient behaviors, skills, knowledge, and abilities, which contributes to organizations' sustainability no matter the environmental changes and crises [51]. Moreover, HRM practices and technology adaptability aid in the implementation and the effective practices of organizations' agility, which results in effective responses to dynamic markets and environmental changes [52–54]. HRM practices focus on individual recruitment, selection, and hiring that allow organizations to overcome dynamic changes through creating dynamic, flexible adaptation mechanisms and internal knowledge to enhance resilience capabilities by offering effective solutions to crises and changes [5]. Attracting and retaining talented employees can enhance employee's abilities by practicing HR strategies to reduce workaholism, create a more positive work environment, decrease burnout, and increase employee job satisfaction [55]. Employees' environmental responsibility and green transformational leadership play significant roles in the relationship between green HRM practices and environmental performance [56]. To this point, the second hypothesis is formulated as follows:

H2. *HRM strategies (HRMS) are positively related to strategic adaptability (SA).*

2.3. Strategic Adaptability (SA) and Innovation (INN)

Strategic adaptability can reform organizations' capabilities with innovative ideas which cope with internal and external changes, which results in an effective and competitive resource [57,58]. Thus, adapting talent ideas, skills, learning, and behavioral flexibility of employees is essential to fulfill organizational environmental changes and problems in order to ensure organizations' functional flexibility [59,60]. Moreover, technology adaptability and innovative capabilities are associated with the degree of a firm's capabilities and flexibility assisted by talented staff who perform organizations' environmental changes within actionable strategies [61,62]. Therefore, knowledge is considered a key factor to enhance creative ability in provoking new innovative ideas to support agility strategy [19]. Employees' new knowledge, skills, and innovative abilities are sources of organizational resilience when coping with organizations' internal changes [63]. Small and medium enterprises' innovation capabilities and open innovation practices significantly affect financial and operational performance in achieving optimal organizational outcomes during the post-COVID-19 pandemic period [64]. The post-COVID-19 pandemic period has led to significant changes in business processes and innovation across various firms. Companies have rapidly embraced digital solutions such as telemedicine to effectively streamline work and improve their services [65]. The COVID-19 pandemic has influenced organization' productivity. Organizations had quickly to adjust their HRM strategies to be highly more dynamic and innovative to remain resilience and productive [66]. To this point, the third hypothesis is formulated as follows:

H3. *Strategic adaptability (SA) is positively related to Innovation (INN).*

2.4. HRM Strategies (HRMS), Strategic Adaptability (SA), and Innovation (INN)

Innovation plays a significant role in both organizational flexibility strategy and HRM practices, which leads to improved employee skills and flexibility efficiently and effectively and enables them to deal with expected environmental changes [39]. Thus,

organizations need effective HR practices to be more adaptable, flexible, and innovative to meet environmental contingencies [67,68]. Moreover, flexible strategy adaptability conducted by business firms has a significant relationship with innovative HRM practices that have resulted in promoting dynamic business firms [69].

Organizational adaptability can improve the innovation process through the flexible implementation of HR practices by motivating employees to enhance their learning capacity with new skills and knowledge to be involved effectively [70]. Moreover, HR flexibility can instantly lead to actionable strategies and responding effectively to environmental changes through the relationship of innovation between adaptability culture and product innovation [71]. HRM practice, work innovation, and functional employee flexibility impact employees' ability and motivation to any expected changes [72].

Technology adaptability in HRM practice enhances the readiness of organizations to respond to rapid changes and crises and it contributes to adaptive innovative practices [73]. Ultimately, HRM practices and flexibility strategy enhance the mechanisms of staffing, selection, training, and rewards in order to promote talented staff to respond to environmental changes and crises depending on innovative practices. In addition, HRM agility is an effective strategy to respond instantly and effectively toward disruptive environmental changes beside maintaining organizational innovation and long-term sustainability [26,42]. Organizational innovation and innovative work behavior positively mediate between NHRM practices and innovation performance during the post-COVID-19 pandemic. Moreover, practicing NHRM can provide problem solutions and enhance innovation practices within employees for crisis response [74]. To this point, the fourth hypothesis is formulated as follows:

H4. *Strategic adaptability (SA) mediates indirect effect relationship between HRM strategies (HRMS) and innovation (INN).*

The research model is developed based on the literature review and prior study's findings from different countries, sectors, and environments to assess the impact of HRM strategies (HRMS) on innovation (INN) [5,13,24,25], and to assess the impact of HRM strategies (HRMS) on strategic adaptability (SA) [36–43,50], and to assess the impact of strategic adaptability (SA) on innovation (INN) [58–61], and finally, to investigate the mediating role of the strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN) [26,39,42,69–73]. To sum, by combining the positive associations, the researchers propose the following four hypotheses (H1, H2, H3, andH4). Figure 1 shows Research theoretical framework model. Source: Created by Authors.

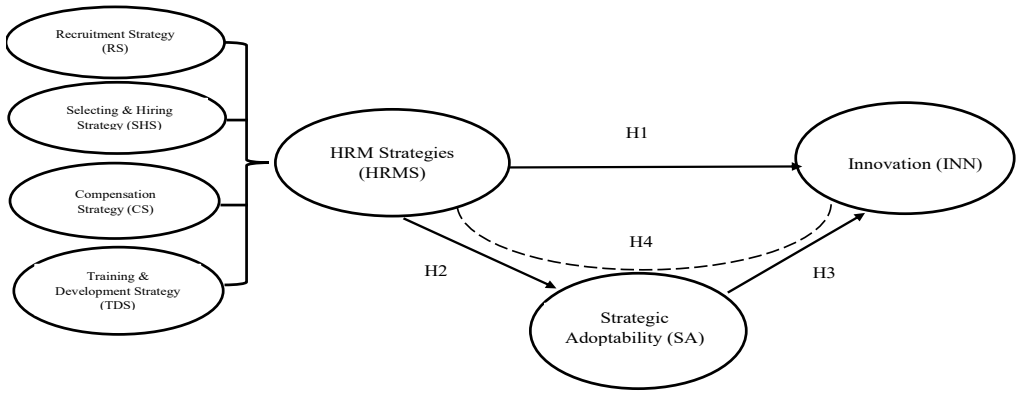

Figure 1. Research theoretical framework model. Source: Created by Authors.

3. Methodology

This section is composed of research design, sample design, data collection, statistical methods and demographical data.

3.1. Research Design

Quantitative approach is employed to investigate the mediating role of strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN) in Jordanian banks [75]. The quantitative approach is used to identify the connections between constructs and measure their significant effect [76,77].

3.2. Population and Sampling

The research population is composed of 16 Jordanian banks [78]. In particular, the stratified sample method is used. The sample covered all middle-level managers and heads of departments in the headquarters office of the 16 Jordanian banks with a total of 468 respondents [75,77,78].

3.3. Measurement Scales and Data Collection

The adapted measurement scales of constructs and constructs items were carefully developed and conducted through reviewing relevant literature and prior studies instruments. The questionnaire validity assessment was verified by an academic jury of 4 experts from public and private Jordanian universities in the field of HRM and strategic management, and the jury of experts verified the questionnaire in terms of item content formulation, clarity, meaning, readability, and relevancy. The survey questionnaire was translated from English to Arabic to ensure accessibility and understanding for the respondents, and the translated version was then backtranslated into English. Data were collected from 16 Jordanian banks, particularly the middle-level managers and head departments, with 468 respondents. The research model constructs codes, namely (HRMS) human resource management strategies including (recruitment strategy (RS), selecting and hiring strategy (SHS), compensation strategy (CS), and training and development strategy (TDS); innovation (Inn); and strategic adaptability (SA). The final draft of the survey is composed of 40 items [2,6,13,25,27–29,32,37,49,71]. The survey items' reliability was found to be greater than 0.80, which is highly reliable [75,77].

The items are linked to the research constructs to evaluate the HRMS, INN, and SA within banks to ensure reliable data collection that serve the research purpose and contributions. A five-point Likert scale questionnaire allows respondents to rate their agreement or disagreement of each item. Assuming that attitudes can be measured to generate greater accuracy in the results, the scale was ranged (1: Strongly Disagree to 5: Strongly Agree). The survey was electronically distributed. Finally, 455 fully completed questionnaires are considered valid for analysis out of 468. The rate of respondent responses found to be 97.2% [39,77,79].

3.4. Statistical Methods

A descriptive analysis is used for the sample profile and constructs items analysis of the arithmetical mean while the standard deviation is calculated by using SPSS-24 software and Smart PLS-4 structural equation modeling (SEM) is used for hypotheses testing [75,79,80].

3.5. Demographic Factors

The demographical factors include (gender, age, educational level, years of experience, and current position) as illustrated in Table 1.

Table 1 indicates a significant difference in terms of gender as 327 are males representing approximately 71.9%, while 128 are females representing approximately 28.1% of the respondents. This refers to the banks' hiring policies that prefer to hire males than females. More males manage the banking workload, work pressure, work conditions, work hours, and labor demand than females. Furthermore, this issue could be investigated in the future to explore the imbalance in gender hiring in the banking sector to promote hiring equality and diversity among genders. The age of 266 respondents is 35–45 years with a percentage of 58.5%, which means that those who are concerned with implementing strategic plans

in Jordanian banks are young people. Young males fulfill the requirements, conditions, and challenges of banking work. Regarding the educational level, 401 respondents with a percentage of (88.1%) hold a bachelor's degree which means the majority of Jordanian banks employees have a high qualifications and specialization in banking work. Regarding the experience, 279 respondents have experience range from 10 to 15 years with a percentage of 61.3 which means that leadership positions in Jordanian banks have accumulated experience in managing banking operations with high efficiency and addressing work problems and conditions with radical and innovative solutions.

Table 1. Sample Demographical Factors Distribution.

Measure	Categories	Frequency	Percentage
Job Title	Manager	183	40.2%
	Department Head	272	59.8%
Gender	Male	327	71.9%
	Female	128	28.1%
Age	Less than 25 years	-	-
	25- and less than 35	12	2.6%
	35- and less than 45	266	58.5%
	45- and less than 55	145	31.9%
	55 and above	32	7.0%
Qualification	Bachelor	401	88.1%
	Master	48	10.5%
	PhD	6	1.3%
Experience	Less than 5 years	-	-
	5- and less than 10 years	112	24.6%
	10- and less than 15 years	279	61.3%
	15- and less than 20 years	56	12.3%
	20 years and above	8	1.6%
	Total	455	100.0%

Source: Created by Authors.

4. Results

4.1. Testing Data Normality

As normality is not strictly required for data used in structural equation modeling [81], we examined the skewness and kurtosis of our study data to assess any potential deviations. According to Kline [82], skewness values between +3 and −3 are acceptable, while kurtosis values should ideally fall within the same range [83]. Table 2 shows that the skewness of the constructs ranges from −2.558 to 0.859, and kurtosis ranges from 4.864 to 11.124, indicating some violations of the normality assumption, particularly with kurtosis.

Table 2. skewness and kurtosis for test of normality (N = 455).

Constructs	Skewness		Kurtosis	
	Statistic	SD. Error	Statistic	SD. Error
IV	0.859	1.000	4.864	1.000
DV	−2.462	1.000	11.124	1.000
MV	−2.558	1.000	9.663	1.000

Source: Created by Authors.

Given data deviations, the research utilized PLS-based SEM (Partial Least Squares Structural Equation Modeling), which does not require strict normality. Moreover, to ensure the reliability of the research results. Furthermore, the bootstrapping method with 5000 employed subsamples to confirm the significance of all loadings and path coefficients [83]. Despite the kurtosis deviations, the PLS-SEM approach and the bootstrapping method yielded stable and dependable results without data transformation. Table 2 shows skewness and kurtosis for test of normality (N = 455).

Table 2 indicates the skewness of the constructs found to be between (−2.558–0.859) while the kurtosis was found to be between (4.864–11.124), which reveals no differences between skewness and kurtosis data.

4.2. Model Measurement and Assessment

Structural equation modeling (SEM) is conducted to assess the model constructs and items measurement, as recommended by [81,84]. The first assessment is conducted to test the validity and reliability of the three model constructs (HRMS, INN, and SA). HRMS is considered an independent construct represented in four sub-dimension codes: (RS, SHS, CS, and TDS). The total construct items are distributed as the followings: The independent construct (HRMS) with 20 items (5 items of each sub-dimension). The dependent construct (INN) with 10 items and the mediating construct (SA) with 10 items. Path co-statistical efficiency is conducted for the hypotheses assessment (H1, H2, and H3) to determine the model constructs and items relationships. In addition, factor loading (FL) of at least 0.05 items, discriminant validity (DSV) and composite reliability (CR) are conducted as recommended by [81,85]. Furthermore, the measurement scales of the constructs items were found to be statistically significant at ($p < 0.01$), which supported the convergent validity (CV) requirements [81,85]. Table 3 indicates the model measurement findings.

Table 3. Model measurement findings.

First-Order Constructs	Second-Order Constructs	Items	Mean	Std. Dev.	Factor Loadings	Cronbach's Alpha Values	CR	AVE
HRM Strategies (HRMS)						0.922	0.936	0.785
		RS1	4.16	0.854	0.786			
		RS2	4.28	0.832	0.892			
		RS3	4.18	0.848	0.812			
		RS4	4.06	0.862	0.802			
		RS5	4.24	0.841	0.826			
		SHS6	4.46	0.836	0.845			
		SHS7	4.50	0.831	0.882			
		SHS8	4.47	0.824	0.851			
		SHS9	4.30	0.858	0.874			
		SHS10	4.43	0.839	0.842			
		CS11	4.38	0.822	0.848			
		CS12	4.01	0.806	0.816			
		CS13	3.91	0.918	0.742			
		CS14	4.42	0.819	0.901			
		CS15	4.24	0.906	0.812			
		TDS16	4.28	0.902	0.910			
		TDS17	4.35	0.889	0.896			
		TDS18	4.35	0.878	0.915			
		TDS19	4.00	0.908	0.842			
		TDS20	4.25	0.912	0.881			

Table 3. *Cont.*

First-Order Constructs	Second-Order Constructs	Items	Mean	Std. Dev.	Factor Loadings	Cronbach's Alpha Values	CR	AVE
Innovation (Inn)						0.929	0.941	0.762
		Inn21	4.31	0.845	0.909			
		Inn22	4.28	0.867	0.868			
		Inn23	4.21	0.879	0.848			
		Inn24	4.23	0.866	0.882			
		Inn25	4.21	0.872	0.838			
		Inn26	4.18	0.886	0.864			
		Inn27	4.19	0.857	0.877			
		Inn28	4.41	0.839	0.932			
		Inn29	4.32	0.842	0.904			
		Inn30	4.25	0.852	0.896			
Strategic Adaptability (SA)						0.918	0.929	0.736
		SA31	4.32	1.042	0.822			
		SA32	4.36	1.132	0.903			
		SA33	4.21	1.141	0.818			
		SA34	4.14	1.176	0.784			
		SA35	4.22	1.164	0.796			
		SA36	4.31	1.126	0.844			
		SA37	4.42	1.122	0.912			
		SA38	4.39	1.089	0.876			
		SA39	4.36	1.042	0.731			
		SA40	4.19	1.164	0.889			

Note(s): Composite reliability (CR), average variance extracted (AVE). Source: Created by Authors.

Table 3 indicates that factor loading values of each construct item ranged between (0.731 and 0.915), which exceeds the suggested value of 0.6. Moreover, the Cronbach's alpha values of each construct item ranged between (0.918–0.929) while the AVE values of the constructs ranged between (0.736–0.785) which is also found to be greater than the recommended value of 0.6 [81,86]. In addition, the (CR) values ranged from (0.929 to 0.941) which exceed the recommended value of 0.7 [81]. This reveals that the model constructs (IV; DV; MV) found to be valid and related based on the values of the (CR). The (AVE) values exceeds 0.6. which indicates the model is significantly acceptable and valid for the assessment as it specifies hypothetical causal relations between latent factors and their observed indicator constructs.

Regarding the values of the (AVE) for each construct in the model's measurement, the (DSV) test is conducted as the value for each construct should exceed the correlation values with other constructs which is recommended by [87,88].

Table 4 indicates that the model construct values ranged between (0.657–0.726) which is found to be below (0.90). This indicates that the construct findings are discriminatory [87,88]. To sum, Tables 2 and 3 exhibit the findings of the cross-loadings and HTMT tests as the findings reveal that (CV) and (DSV) values found to be reliable and valid.

Table 4. HTMT Results for the DSV of the Model Constructs Measurement.

	Factors	1	2	3
1.	HRM Strategies (HRMS)	0.785		
2.	Innovation (INN)	0.726	0.762	
3.	Strategic Adaptability (SA)	0.668	0.657	0.736

Note(s): Discriminant validity (DSV). Source: Created by Authors.

4.3. Structural Model Assessment

Structural model analysis is conducted via PLS 4 to investigate the model constructs relationship and the significance of the hypothesis. In addition, bootstrapping is used with 5000 replications besides several tests such as R^2, F^2, Q^2, and *p* value of the inner model [89].

4.3.1. Coefficient Determination (R^2)

The (R^2) value test is conducted to determine the construct variance of the (IV) which is explained by the (DV) construct [89]. Moreover, the bootstrapping method is conducted to obtain the *t*-statistics, *p* value, UL, and LL values for the mediation analysis in order to calculate (R^2). In addition, the bootstrapping generates 5000 samples out of 455 cases. Table 5 indicates the (R^2) value.

Table 5. Coefficient Determination (R^2).

Constructs	(R^2) Value
DV: Innovation (INN)	0.789
MV: Strategic Adaptability (SA)	0.566

Source: Created by Authors.

Table 5 indicates that R^2 values of the IV (HRMS) found to be high, which is explained across variance by other constructs of innovation (DV) and (MV). Strategic adaptability (SA) and the R^2 values found to be (0.789, and 0.566) respectively as R^2 exceeds 0.1, it indicates that the formulations are satisfactory and appropriate [90]. The appropriate R^2 variance across constructs is (0.75 high, 0.5 medium, and 0.25 low) respectively [86,87].

4.3.2. Q-Square (Q^2) or Predictive Relevance (Q^2)

Q-Square (Q^2) or Predictive Relevance aims to verify the internal constructs value of the model and the frequency of the construct of HRMS (IV). IV constructs are explained by other model constructs of innovation (DV) and strategic adaptability (MV). Table 6 indicates the Q^2 values:

Table 6. Q^2 Values for the Endogenous Latent Constructs.

Endogenous Latent Constructs	(Q^2) Value
DV: INN	0.786
MV: SA	0.569

Source: Created by Authors.

Table 6 indicates that (Q^2) values for the internal constructs found to be 0.786, and 0.569, respectively. According to [90–92], If the values are higher than zero, they indicate that the model constructs have sufficient predictive ability.

4.3.3. Total Effect

The total effect test is conducted to determine the total effect of each construct on other constructs of the model. According to [93], the suggested values of f^2 should be 0.35 and above to indicate a large effect, 0.15 with medium effects, and 0.02 with small effects. Table 7 indicates the effect size (f^2) values of the study model constructs.

Table 7 illustrates that the total effect of each construct on other constructs of the (HRMS on INN) found to be 0.784, which indicates a large impact. The HRM strategies' (HRMS) impact on strategic adaptability (SA) is 0.721, which also indicated a large impact, while the effect of strategic adaptability (SA) on innovation (INN) was found to be 0.233, which indicated a medium effect. This means that the independent construct (IV) confirmed

a positive significant impact on the other constructs and even the mediating constructs between them (HRMS and INN).

Table 7. Total Effect of the overall constructs.

Constructs	Total Effects	Decision
HRMS -> INN	0.784	Large
HRMS -> SA	0.721	Large
SA -> INN	0.233	Medium

Source: Created by Authors.

4.3.4. Path Coefficients—Hypothesis Testing

The Path Coefficient test is conducted to investigate the research hypothesis [81,86]. The findings reveal a direct significant relationship that supported the H1, H2, and H3. Table 8 indicates Path Coefficients findings.

Table 8. Direct Effect Findings.

Hypotheses	Constructs	Original Sample (β)	Sample Mean (M)	Standard Deviation (STDEV)	*t* Statistics	*p* Values	Decision
H1	HRMS -> INN	0.762	0.762	0.032	21.032	0.000	Support ***
H2	HRMS -> SA	0.789	0.789	0.035	22.132	0.000	Support ***
H3	SA -> INN	0.724	0.724	0.048	15.314	0.000	Support ***

***: $p < 0.001$; Two-tailed hypothesis; 5000 bootstrap samples. Source: Created by Authors.

Table 8 illustrates the direct effect of the relationship which supports the (H1, H2, and H3). The details of the Path Coefficients results are as the followings:

A. H1 indicates a direct significant effect of the HRM strategies (IV) on the innovation (DV) as ($\beta = 0.762$, $t = 21.032$, $p < 0.000$). This indicates that the innovation (DV) shows a positive significant effect by the HRM strategies (IV) therefor the hypothesis is accepted.
B. H2 indicates a direct significant effect of the HRM strategies (IV) on the strategic adaptability (MV) as ($\beta = 0.789$, $t = 22.132$, $p < 0.000$). This indicates that the strategic adaptability (MV) shows a positive significant effect from the HRM strategies (IV), therefore the hypothesis is accepted.
C. H3 indicates a direct significant effect of the strategic adaptability (MV) on the innovation (DV) as β value ($\beta = 0.724$, $t = 14.521$, $p < 0.000$). This indicates that the strategic adaptability (MV) shows a positive significant effect on the strategic adaptability (MV), therefore the hypothesis is accepted.

4.3.5. Mediation Analysis

H4 states the indirect relationship effect of the strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN) [94,95]. To examine the indirect relationship between constructs, the SEM is conducted via AMOS 24. The findings reveal that the indirect effect of the strategic adaptability (SA) mediated the relationship between the HRM strategies (HRMS) and innovation (INN) as illustrated in Table 9.

Table 9. The Mediation Indirect Effects of (IV-MV-DV).

Variable Relationship	Original Sample (β)	Sample Mean	SD	*t*-Value	*p*-Value	LL (2.5)	UL (97.5)	Decision
HRMS -> SA -> INN	0.234	0.234	0.042	4.642	0.000	0.100	0.254	Partial Effect

Two tailed hypothesis; 5000 bootstrap samples. Source: Created by Authors.

Table 9 illustrates indirect significant relationship effects, including a partial effect of the strategic adaptability (SA) as a mediator between HRM strategies (HRMS) and innovation (INN) at (β = 0.234, *t* = 4.642, LL = 0.100, UL = 0.254 *p* < 0.000). This indicates that the HRM strategies (HRMS) and innovation (INN) show indirect partial relationship effect when mediating by strategic adaptability (SA) therefore the hypothesis is accepted.

Figure 2 and Tables 8 and 9 illustrate the significant direct impacts of (HRMS -> INN; HRMS -> SA; and SA -> INN and moreover the indirect relationship of (HRMS -> SA -> INN). This reveals that HRM strategies (HRMS) are positively influencing the practice of innovation (INN) through the strategic adaptability (SA) as mediator within Jordanian banks.

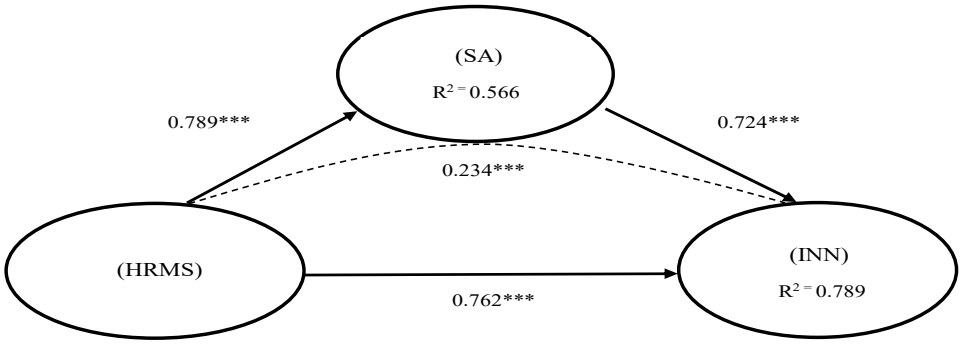

Figure 2. Note(s) ***: *p* < 0.001; bold arrows: direct effect; and dashed arrows: indirect effect. Source: Created by Authors.

5. Discussion and Implications

The findings reveal valuable contributions to the relationship between strategic adaptability (SA), HRMS, and innovation (INN). The findings also reveal a significant effect of strategic adaptability (SA) on HRMS strategies and innovation (INN) in Jordanian banks. This finding leads bank decision-makers to understand thoroughly the role and the contribution of strategic adaptability (SA) and HRMS in enhancing innovation (INN) practices. Moreover, HRM strategies (HRMS) have a direct effect on innovation (INN) and strategic adaptability (SA), while the mediation of strategic adaptability (SA) reveals a partial indirect relationship effect between HRM strategies (HRMS) and innovation (INN). To this end, understanding the valuable contributions of strategic adaptability (SA) and HRMS supports bank managers in their strategic direction, plans, decisions, and future vision, which resulted in enhancing their HRMS and innovation (INN) practices through strategic adaptability. This leads to adapt effective strategies to ensure high-performance standards, sufficient performance outcomes, growth, stability, competitiveness, sustainability and effective response to dynamic environmental changes and crises.

5.1. Discussion

This research investigates a significant literature gap, as little is known about the indirect relationship of SA between HRM strategies and innovation (INN). Moreover, there are scarce studies about strategic adaptability (SA) as a mediator between HRM strategies and innovation (INN). Scholars recommend conducting further research concerning the effect of strategic adaptability (SA) as a mediator on HRMS and innovation (INN) [26,35,37,39,49,63]. Consequently, this study aims to bridge this gap, as HRM strategies and innovation contribute valuable changes through strategic adaptability. This study concentrates on the mediating role of strategic adaptability (SA) between (HRMS) and (INN) in Jordanian banks. This study investigates the mediating effect of strategic adapatbilty on the relationship between HRM strategies and innovation. While prior research has explored the impact of HRM strategies on organizational adaptability and the influence of adaptability on innovation, no prior research has specifically investigated the mediating role of strategic adaptability in the HRM strategies- innovation link, particularly within the Jordanian banks sector.

Moreover, the results of the research hypothesis (H1, H2, H3, and H4) indicate a significant effect that lined with prior studies. The findings on (H1) indicate a significant positive impact between HRMS and innovation (INN), and scholar's studies find a significant effect between HRM practices and innovation which are in constant with [11,27,29,30]. Moreover, the findings on (H2) indicate a positive significant effect between HRMS and strategic adaptability (SA), which is in constant with [26,35–39,47,48,54]. Furthermore, the findings on (H3) indicate a positive significant effect between strategic adaptability (SA) and innovation (INN), which is in constant with [19,57–61]. Additionally, the findings on (H4) indicate indirect partial relationship effect of strategic adaptability (SA) as a mediator between HRM strategies (HRMS) and innovation (INN), which is in constant with [39,68,71].

Finally, the findings provide a significant theoretical knowledge and practical contributions in terms of HRM strategies (HRM), innovation (INN), and strategic adaptability (SA). These findings on (H1, H2, H3, and H4) support the direct and indirect effect of the mediating role of strategic adaptability (SA) between (HRMS) and innovation (INN).

5.2. Theoretical Implication

The theoretical implications and contributions of this study aim to bridge the gap concerning HRMS, INN, and SA. The investigation focuses on the mediating role of strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN). This study is conducted on 455 respondents employed in the higher and middle levels in Jordanian banks. No investigations are conducted to explore the role of strategic adaptability (SA) as a mediator between HRMS and innovation (INN). Moreover, prior studies discussed the role and effect of HRMS on INN with relevant theories such as the adoption-innovation theory that emphasizing the effective innovation practices to fit with employees and management's innovative thinking and ideas [20], while modern HRM theory emphasizes HR practices and employees interacting within organizations and organizational performance [21]. Moreover, the adaptability theory emphasizes the ability of organization adaptability to cope with environmental changes such as: HR adapt abilities, organizational strategic adaptability (flexibility, agility, resilience, and technology) [22,23]. These theories are valuable to be applied on organizational management and supported organizations to cope with future environmental changes, work environment development, and change.

This research drives another implication that enhances organizations to foster organizational and behavioral innovation practices in order to increase innovation capacity depending on the role of strategic adaptability. The practical strategies such as lean, flexibility, agility, and resilience strategies enhance organizations for providing desired and practical solutions to the environmental changes and enhancing organizational performance outcomes.

Finally, the current research investigates the mediating role of strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN). This context could be applicable to global organizations such as banks operating in similar environments.

5.3. Managerial Implications

This research provides practical implications to assist and guide leaders and managers to improve their organizations' HRM strategies effectiveness including recruitment, selecting and hiring, compensation, and training and development. This leads to fostering effective innovation practice through the mediating role of strategic adaptability in the Jordanian banks. Moreover, enhancing innovation practices resulted in the effectiveness of HRMS that relies on talented human resource contributions, capabilities, skills, and competencies. This leads to impact effectively work quality, creativeness, problem-solving ability, organizational development, change response, and coping with local and global environmental changes encountering Jordanian banking sector.

Managerial human resource strategic plans consider innovation and strategic adaptability as a priority goal to emerge into the global market context and practices. In addition, the managerial practices aim to update employees with conventional knowledge to promote

new skills, boosting work skills, problem-solving abilities, and intellectual contributions to enhance the knowledge capacity to cope with work environmental changes. Moreover, managers are recommended to practice strategic adaptability as a key drive for problem solving, setting practical solutions, and environmental changes prediction to cope with complex environmental changes and to enhance organizational cultures and climate.

6. Conclusions, Limitations and Directions for Future Research

6.1. Conclusions

This research aims to assess the mediating role of strategic adaptability (SA) between HRM strategies (HRMS) and innovation (INN). HRMS reveal a positive significant impact on innovation (INN) and strategic adaptability (SA). Strategic adaptability (SA) reveals a positive significant impact on innovation (INN) and an indirect partial effect on (HRMS) and (INN). The findings provide useful, valuable, and practical insights for Jordanian bank managers to pay more attention to strategic adaptability by adapting effective HRM strategies (HRMS) to leverage the capabilities, skills, and creative ideas of human resources, by involving them in formulating strategic plans and tactics as strategic partners, and this will be helpful for bank managers to address the changes and challenges in the banking sector by implementing solutions that minimize potential risks. Moreover, Jordanian banks should establish an incubator for employees with creative and innovative ideas to motivate them to propose innovative solutions to be adopted in addressing critical issues resulting from rapid changes that affect the performance of banks in light of global competition in the banking sector on the other hand, and developing the banking work environment and conditions within innovative solutions to enhance banking services quality that meet international standards. Finally, Jordanian banks must train their employees periodically to enhance their capabilities and professional skills to qualify them appropriately to adapt to the expected changes imposed on banks and their banking operations, in order to avoid potential risks that will pose a threat to their performance, stability, and growth.

6.2. Limitations and Directions for Future Research's

This research provides valuable theoretical and practical insights about the role of strategic adaptability (SA) as a mediator between HRM strategies (HRMS) and innovation (INN). The obtained findings are applicable to the global banking sector due to the similar conditions and environments of operation. In addition, it is recommended to conduct future studies with different conditions, environments, and sectors.

Future studies are recommended to investigate HRM strategies (HRMS), innovation (INN), and strategic adaptability (SA) across diverse contexts to expand the scope of organizational environments in different sectors, populations, and sampling for a deep understanding of the research phenomena to enhance findings. The researchers recommend future studies to concentrate on HRM practices and strategies in light of other dimensions such as organizational sustainability, open innovation, organizational ecosystem, organizational resilience, and green innovation.

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