

# The Mediating Role of Individual Innovative Behavior on the Relationship between High Performance Work Systems and Adaptive Performance in the Iraqi Federal Board of Supreme Audit

Maisar Alwan Salih and Siti Rohaida Mohamed Zainal

School of Management, Universiti Sains Malaysia, 11800, Penang, Malaysia

Email: Yg042249@gmail.com, siti\_rohaida@usm.my

**To Link this Article:** <http://dx.doi.org/10.6007/IJARBSS/v15-i3/25120> DOI:10.6007/IJARBSS/v15-i3/25120

**Published Date:** 25 March 2025

## Abstract

The Iraqi Federal Board of Supreme Audit serves as the primary oversight institution responsibilities and governmental activities, safeguard public funds, and reinforce accountability. However, the efficient funding of these activities faces challenges due to legal barriers concerning the autonomy of the Iraqi Federal Board of Supreme Audit. Moreover, this study aims at clarifying the relationship between the high-performance working systems on adaptive performance and the mediating role of individual innovative behaviour in the Iraqi federal board of supreme audit. Furthermore, this quantitative cross-sectional study investigated the correlation of high-performance working systems on adaptive performance and the mediating role of individual innovative behaviour in the Iraqi federal board of supreme audit. A total of current study collected data from 295 special, first, second, third managers were online surveyed in which participants were asked to provide responses to 61 items designed to capture four specific variables. The data underwent analysis using both SPSS and PLS-SEM techniques. The findings revealed that both relevance and importance of high-performance working systems on adaptive performance and the mediating role of individual innovative behaviour in the Iraqi federal board of supreme audit. The result of the study demonstrated a significant relationship of high-performance working systems, along with the mediating role of individual innovative behaviour, in influencing adaptive performance. Overall, this study contributes to a deeper comprehension of adaptive performance. Furthermore, the study concludes with theoretical and practical insights beneficial to both academics and practitioners.

**Keywords:** Individual Innovative Behavior, High Performance Work Systems, Adaptive Performance, Iraqi Federal Board of Supreme Audit

**Introduction**

Usage of cutting-edge information technology, the sophistication of the organisational climate, and globalisation have all contributed to data overflow in the knowledge-based business. Therefore, senior officials face increased pressure as it becomes challenging for them to solely rely on intuition and past practices when making strategic judgments (Vasilescu, 2011). The advent of informatics transformation has resulted in an abundance of information that is readily available to everyone (Abumandil & Hassan, 2016). However, businesses have struggled to effectively develop the expertise of their strategic decision makers. Without advanced methods such as Decision Support Systems (DSS) that can convert information into knowledge and assist decision makers by incorporating intuition, self-assessment, predictions, and personal experiences, the decision-making process becomes more challenging, this knowledge cannot be achieved. However, most of the strategic decision-makers in Iraq today work from offices with computers. The use of audit as a method to gauge the success of auditing has received popularity, and in latest years, FBSA's ability to undertake auditing has become increasingly important (Salih, & Almajdob, 2019). In a similar study, Nuri and Al-Lahibi (2013) identified a few obstacles to efficient auditing at the FBSA. The capacity of the auditor to identify substantial errors and misrepresentations and his expertise, competence, and autonomy are all factors in FBSA auditing in Iraq (Salih, 2019). Failures in auditing have sparked discussions about the new regulation that has been established to strengthen auditing in this area.

Previous research has shown that audit failures can damage an auditor's image by costing them market share (Thabit, Ibrahim, & Majed, 2019). In this analysis, audit quality may be theoretically thought of as existing on a continuum that runs from very low to very high. Additionally, audit failures occur at the lower end of the continuum, whereas audit occurs at the other end. The former can result in corporate failure, bribery, as well as other undesirable outcomes. Additionally, audit failures reduce the perceived value of auditing organisations (Hamd, Aziz, & Hamdan, 2022). Likewise, regardless of a nation's level of growth, corruption occurs on a worldwide scale in a variety of methods and kinds. More lately, since 2003, there has been a rise in public uproar in Iraq against the government's mismanagement of public funds, corruption, high ongoing costs, governance costs, and unsatisfactory budgetary execution by various government institutions. In this context, Tas (2012) provided evidence that government sector corruption is rampant in Iraq, particularly among higher-ranking public officials, and that it has the ability to impede economic growth and sound national governance.

This explains the poor performance of the FBSA in dealing with ratios of corruption. The inability of the FBSA to protect public funds and reduce the rate of corruption in Iraq there are overlapping and conflicting of jurisdictions between the Iraqi FBSA and other oversight bodies that create to combating corruption, especially, with the Commission of Integrity and the offices of the Inspectors General in the government ministries. For example, when the Integrity Commission and the offices of the Inspectors General were established in 2004 by The Coalition Provisional Authority (CPA), their jurisdictions were similar to mandates of the Iraqi SAi in the controlling, inspections, and auditing the financial, administrative and legal activities of public sector entities. The multiplicity of oversight bodies and overlapping in its jurisdictions have led to weaknesses in the performance of the FBSA in combating.

## Theoretical Insights and Hypotheses Development

### *Adaptive Performance*

Adaptive performance refers to the behaviours and actions exhibited by individuals that contribute to achieving organizational goals in the face of changing or novel circumstances. It involves the ability to effectively adjust and respond to new challenges, tasks, and work environments. Adaptive performance encompasses behaviours that go beyond the typical or expected job requirements and involve problem-solving, learning, flexibility, and innovation to adapt to evolving situations and contribute to overall organizational success.

According to Pulakos, Dorsey and Whit (2006), operational adaptability aligns with the notion of adaptive performance. Operational adaptability is characterized by the capacity to proactively shape and react to evolving circumstances, threats, and situations by employing flexible, timely, and suitable actions. The fundamental element of operational adaptability is that these actions should result in enhanced functionality or performance. It involves continuously evaluating the outcomes of these actions and making further adjustments as necessary in order to achieve the desired results (Barrick, Thurgood, Smith, & Courtright, 2015). In essence, both operational adaptability and adaptive performance emphasize the importance of being responsive, flexible, and proactive in addressing evolving challenges and achieving desired outcomes.

### *Mediating Role Individual Innovative Behavior*

As previously noted, the connection between strategic planning and strategic decision-making requires the function of a mediating variable in order to address the problem of discrepancy in the past investigations. Process Innovation was put out as a mediator in this research between strategic planning and strategic decision-making. The majority of previous research, such as those by Yuan, and Woodman, (2010), and Hanlon, Yeung, and Zuo (2022). The function of individual innovative behavior as a mediator among four characteristics of strategic orientation (technological, entrepreneurship, market, and training direction) and strategic decision-making in Korea was statistically.

In order to understand the purpose of the mediator factor, as per Baron and Kenny (1986), the independent variables and the dependent variable, and the mediating variable, also the mediating variable and the dependent variable should all have a strong and favourable association. This research bases the following hypotheses on the prior study's confirmation that these associations are significant and positive.

H4: Individual innovative behavior has a mediating effect on the high-performance work systems and adaptive performance.

*H4a. Individual innovative behavior has a mediating effect on selective staffing and adaptive performance.*

*H4b. Individual innovative behavior has a mediating effect on training and adaptive performance.*

*H4c. Individual innovative behavior has a mediating effect on participation and adaptive performance.*

*H4d. Individual innovative behavior has a mediating effect on performance appraisal and adaptive performance.*

*H4e. Individual innovative behavior has a mediating effect on clear job description and adaptive performance.*

### Framework of Study

This is novel research which is originally created based strategic approach with a solid combination of background from theories contingency theory and the system theory, The theory of contingency theory claims that in triggering independent variable, high performance work systems, independence or empowerment of employees works as a motivational factor. This study concludes from the literature that individual innovative behaviour has a beneficial impact high performance work system, on adaptive performance. The primary reason is that individual innovative behaviour contributes to finding creative alternatives, which could enhance their ability to solve problems. The framework and the contingency theory are included in the linked theories contingency theory and the system theory. The contingency theory might work well as the foundation for describing the connection among the variables of high-performance work systems and high-performance working systems on adaptive performance mediating role individual innovative behaviour. Thus, the proposed research model is expected to have a great significance because it both fills several current gaps in literature and consistent to theories. The study structure is depicted in Figure 1.

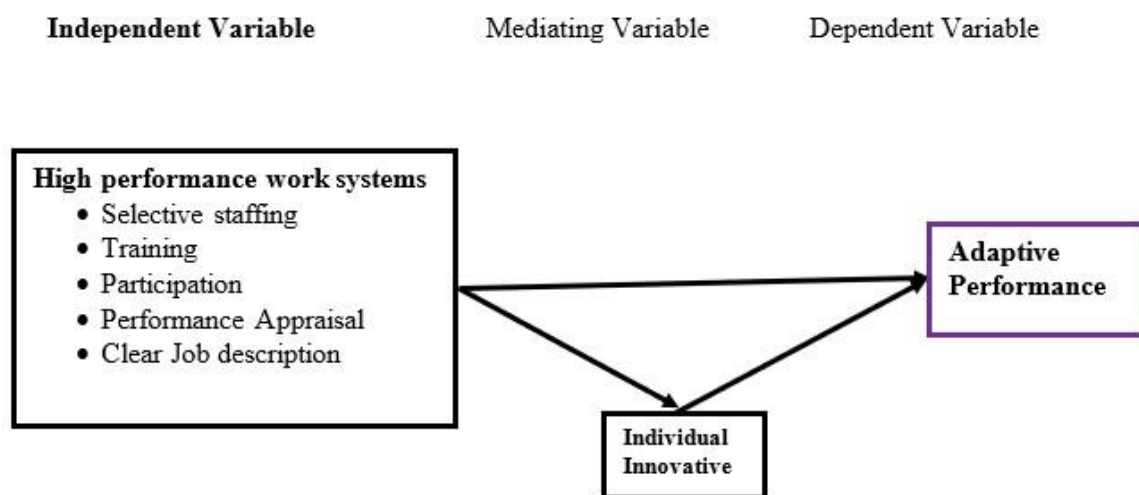


Figure 1. Framework of the study

### Methodology

#### *The Survey Administration*

Primary data were collected through an online survey questionnaire that was disseminated via an email, among all target focus on the Iraqi FBSA headquarters, the target population for this study consisted of counsel heads of department, assistant heads of department, senior financial auditors, and finance audit staff. Data collected during January and February 2024. Of 175 auditors was targeted, 133 individuals completed the questionnaires, resulting in a response rate of 76%. They were in a position to complete the questionnaire in 10 minutes. There was no way that the survey respondents' identity could be revealed, as only aggregate data was required for this quantitative research.

#### *The Survey Instrument*

The respondents were instructed to answer all survey questions that were presented to them about, individual innovative behaviour, and adaptive performance (otherwise, they could not submit the questionnaire). Table 2 features the list of measures as well as their corresponding

items that were utilized in this study. It also provides a definition of the constructs used in the proposed framework.

The research participants were expected to clearly indicate the extent of their agreement with the survey's measuring constructs in a five-point Likert scale, where 1 represented "strongly disagree" and 5 referred to "strongly agree". The survey was pilot tested among a small group of target population. The research participants disclosed their gender as well as their age by choosing one of three age groups in the last part of the survey. They also indicated the highest qualification that they attained at the time of this study.

#### *The Demographic Profile of the Respondents*

In terms of gender distribution, 62.4% of the respondents identified as male, with females comprising the remaining 37.6%. The age of the participants ranged from  $\geq 30$  to 60 years old. The largest age group, representing 58.6% of the sample, fell between  $\geq 30$  and 40 years old. The 41-50 year old age group comprised 28.6% of the participants, while the smallest portion, 12.8%, belonged to the oldest age group (51-60 years old). Given the focus on the Iraqi FBSA headquarters, the target population for this study consisted of counsel heads of department, assistant heads of department, senior financial auditors, and finance audit staff. The data revealed that assistant heads of department formed the majority of respondents (33.8%), followed by finance audit staff (27.8%) and heads of department (19.5%). Senior financial auditors comprised 12.8% of the sample, and counsels represented the smallest group (6.0%). The educational background of the participants revealed that 20.3% held a Bachelor's degree, 50.4% possessed a Master's degree, and 29.3% had achieved a PhD. Finally, the respondents' work experience varied. The majority (45.1%) possessed experience ranging from 10 to less than 15 years, followed by those with experience less than 20 years (13.5%). Participants with experience between 15 and 20 years formed 21.8% of the sample, while the most experienced group (20 years or more) comprised 19.6% (Table 1).

Table 1

*Profile of respondents (N= 133)*

Demographic characteristics		Frequency	Percentage (%)
Gender	Male	83	62.4
	Female	50	37.6
Age	30 - 40	78	58.6
	41 - 50	38	28.6
	51 - 60	17	12.8
Position	Counsel	8	6.0
	Head of Department	26	19.5
	Assistant head of department	45	33.8
	Senior financial auditor	17	12.8
Education level	Bachelor	27	20.3
	Master	67	50.4
	PhD	39	29.3
Experience	Less than 10 years	18	13.5
	10- less than15 years	60	45.1
	15-less than 20 years	29	21.8
	20 years or more	26	19.6
Workplace location	Northern Iraq	38	28.6
	Central Iraq	56	42.1
	Southern Iraq	39	29.3

**Data Analysis***The Descriptive Statistics*

The findings reported that, in the main, the research participants were agreeing with the statements that were presented to them in the survey questionnaire. The mean values were mostly above 3. Whilst IB06 (M = 3.87) was the highest mean scores, AP02 (M = 3.24) reported the lowest mean. The SD values were relatively low as the highest variance figure was 1.36 (for AP09, AP13 and AP14) (Table 2).

Table 2

*Descriptive Statistics of Measurement Items*

Latent Variables	Question Items	Mean	Std. Deviation
<b>Adaptive performance (AP)</b>		<b>3.52</b>	<b>1.10</b>
	AP01	3.32	1.35
	AP02	3.24	1.21
	AP03	3.54	1.35
	AP04	3.39	1.34
	AP05	3.39	1.15
	AP06	3.32	1.28
	AP07	3.50	1.13
	AP08	3.61	1.34
	AP09	3.68	1.36
	AP10	3.71	1.25
	AP11	3.78	1.21
	AP12	3.56	1.33
	AP13	3.32	1.36
	AP14	3.67	1.36
	AP15	3.64	1.29
	AP16	3.56	1.33
	AP17	3.55	1.21
	AP18	3.76	1.34
	AP19	3.33	1.33
<b>Selective staffing (SS)</b>		<b>3.44</b>	<b>1.18</b>
	SS01	3.29	1.31
	SS02	3.46	1.22
	SS03	3.56	1.24
<b>Training (TR)</b>		<b>3.51</b>	<b>0.91</b>
	TR01	3.44	1.08
	TR02	3.62	0.99
	TR03	3.47	1.06
<b>Participation (PA)</b>		<b>3.43</b>	<b>1.12</b>
	PA01	3.37	1.13
	PA02	3.36	1.19
	PA03	3.46	1.23

Latent Variables	Question Items	Mean	Std. Deviation
	PA04	3.52	1.25
<b>Performance Appraisal (PE)</b>		<b>3.57</b>	<b>1.03</b>
	PE01	3.59	1.02
	PE02	3.45	1.14
	PE03	3.68	1.20
<b>Clear Job description (CD)</b>		<b>3.51</b>	<b>0.96</b>
	CD01	3.56	1.04
	CD02	3.60	1.04
	CD03	3.44	1.10
	CD04	3.43	1.12
<b>Individual Innovative Behaviour (IB)</b>		<b>3.62</b>	<b>1.04</b>
	IB01	3.31	1.26
	IB02	3.65	1.12
	IB03	3.72	1.35
	IB04	3.56	1.24
	IB05	3.59	1.34
	IB06	3.87	0.679

### Results from PLS-SEM Algorithm

An assessment of the inner variance inflation factor (VIF) provided no indication of common method bias in this study. Ideally, VIF values should be close to 3.3 and not exceed 5 (Hair, Hult, Ringle, & Sarstedt, 2022). As shown in Table 3, all VIF values fall below 3.3 or are close to it, suggesting that the absence of common method bias allows for the further analysis of the structural model.

Table 3

#### *Multicollinearity Assessment*

Latent variable	AP	IB
IB	2.022	-
CD	3.878	3.791
PA	4.781	4.712
PE	3.723	3.643
SS	3.982	3.908
TR	2.045	2.045

Table 4 illustrates the results of outer loadings, as well as the constructs' reliabilities, convergent validities, in terms of the average variance extracted (AVE). The outer loadings ranged between 0.507 and 0.947. The findings confirmed that the reliability values were higher than 0.7. The AVE figures were above 0.5. To ascertain the convergent validity, this study follow the thumb rules suggested by Hair et al. (2022), of which the value outer loading should be greater or equal to 0.70 and AVE need to be greater than 0.5; a certain item should



be deleted if its outer loading is less than 0.4; and in the case of outer loading from 0.4-0.7, the items is only deleted if this elimination increases the CR and AVE which is above threshold already and no need for deletion.

Table 4 presents the results of outer loadings, along with the constructs' reliabilities and convergent validities, measured in terms of the average variance extracted (AVE). Outer loadings ranged from 0.500 to 0.947 for the IB06 and IB05 respectively, indicating potential issues with convergent validity for values below 0.7, while all AVE figures exceeded 0.5. To confirm convergent validity, this study followed the guidelines proposed by Hair et al. (2022). Accordingly, an outer loading equal to or greater than 0.70 and an AVE greater than 0.5 were considered necessary criteria. items with outer loadings ranging from 0.4 to 0.7 were eliminated only if their removal increased both the composite reliability (CR) and AVE, provided these measures were already above the threshold, thereby rendering item deletion unnecessary.

Table 4

*Construct Reliability and validity of Measurement Model*

Constructs	Type	Indicators	Loading	No. of Items deleted	Cronbach's Alpha	CR	AVE
AP	Reflective			None	0.979	0.981	0.733
		AP01	0.788				
		AP02	0.850				
		AP03	0.875				
		AP04	0.912				
		AP05	0.831				
		AP06	0.828				
		AP07	0.826				
		AP08	0.917				
		AP09	0.943				
		AP10	0.908				
		AP11	0.920				
		AP12	0.726				
		AP13	0.682				
		AP14	0.914				
		AP15	0.923				
		AP16	0.882				
		AP17	0.864				
		AP18	0.867				
AP19	0.757						
CD	Reflective			None	0.848	0.897	0.685
		CD01	0.833				
		CD02	0.860				
		CD03	0.789				
		CD04	0.826				
IB	Reflective			None	0.93	0.948	0.758
		IB01	0.918				

Constructs	Type	Indicators	Loading	No. of Items deleted	Cronbach's Alpha	CR	AVE
PA	Reflective	IB02	0.919	None	0.951	0.965	0.873
		IB03	0.927				
		IB04	0.924				
		IB05	0.946				
		IB06	0.500				
		PA01	0.938				
PE	Reflective	PA02	0.930	None	0.901	0.938	0.834
		PA03	0.941				
		PA04	0.928				
		PE01	0.917				
		PE02	0.912				
SS	Reflective	PE03	0.911	None	0.938	0.96	0.889
		SS01	0.940				
		SS02	0.943				
		SS03	0.947				
TR	Reflective	TR01	0.880	None	0.846	0.907	0.765
		TR02	0.859				
		TR03	0.884				

The constructs' discriminant validities were tested through the HTMT procedure Henseler, Ringle, and Sarstedt (2015). The former reported that the square roots of AVE (in bold) were higher than the other correlation values (within the same columns) (Table 5). In addition, the latter (HTMT) values, on the right-hand side of the bold figures, were lower than 0.9 (Hair et al., 2022; Henseler et al., 2015) (Table 6).

Table 5

*Discriminant Validity – Fornell-Larcker criterion*

LV	AP	CD	IB	PA	PE	SS	TR
AP	<b>0.856</b>						
CD	0.756	<b>0.827</b>					
IB	0.797	0.653	<b>0.871</b>				
PA	0.710	0.804	0.658	<b>0.934</b>			
PE	0.681	0.746	0.648	0.824	<b>0.913</b>		
SS	0.735	0.812	0.651	0.782	0.773	<b>0.943</b>	
TR	0.531	0.629	0.488	0.683	0.576	0.658	<b>0.874</b>

Table 6

*Discriminant Validity - Heterotrait-Monotrait (HTMT0.9 criterion)*

LV	AP	CD	IB	PA	PE	SS	TR
AP							
CD	0.810						
IB	0.796	0.699					
PA	0.731	0.798	0.683				
PE	0.719	0.758	0.690	0.860			
SS	0.760	0.815	0.680	0.727	0.839		
TR	0.574	0.730	0.527	0.762	0.663	0.74	

The PLS algorithm also provided details about the robustness of the structured model. It clearly indicated the factors' predictive power and shed light on the values of  $R^2$  and  $f^2$ . It revealed that the independent constructs affected 50.5 % of the individual's innovative behaviour and 74.3 % of their adaptive performance in the Iraqi federal board of supreme audit.

Individual innovative behaviour (IB) had the highest effect on adaptive performance (AP), where ( $f^2 = 0.445$ ). The low effects were reported between clear job description (CD) on adaptive performance (AP) ( $f^2 = 0.072$ ), and on individual innovative behaviour (IB) ( $f^2 = 0.023$ ). Another low effect was reported between selective staffing (SS) on adaptive performance (AP) ( $f^2 = 0.03$ ), and between performance appraisal (PE) on individual innovative behaviour (IB) ( $f^2 = 0.022$ ). There were lower effects between selective staffing (SS) on Individual innovative behaviour (IB) ( $f^2 = 0.019$ ), and between effect of participation (PA) on individual innovative behaviour (IB) ( $f^2 = 0.015$ ). The lowest effects were reported for participation (PA) on adaptive performance (AP) ( $f^2 = 0.003$ ), and Training (TR) on adaptive performance (AP) ( $f^2 = 0.002$ ). The Other non-existed effects were reported for performance appraisal (PE) on adaptive performance (AP), and for Training (TR) on individual innovative behaviour (IB) (Table 7). Figure 2 depicts the path coefficients of this empirical investigation

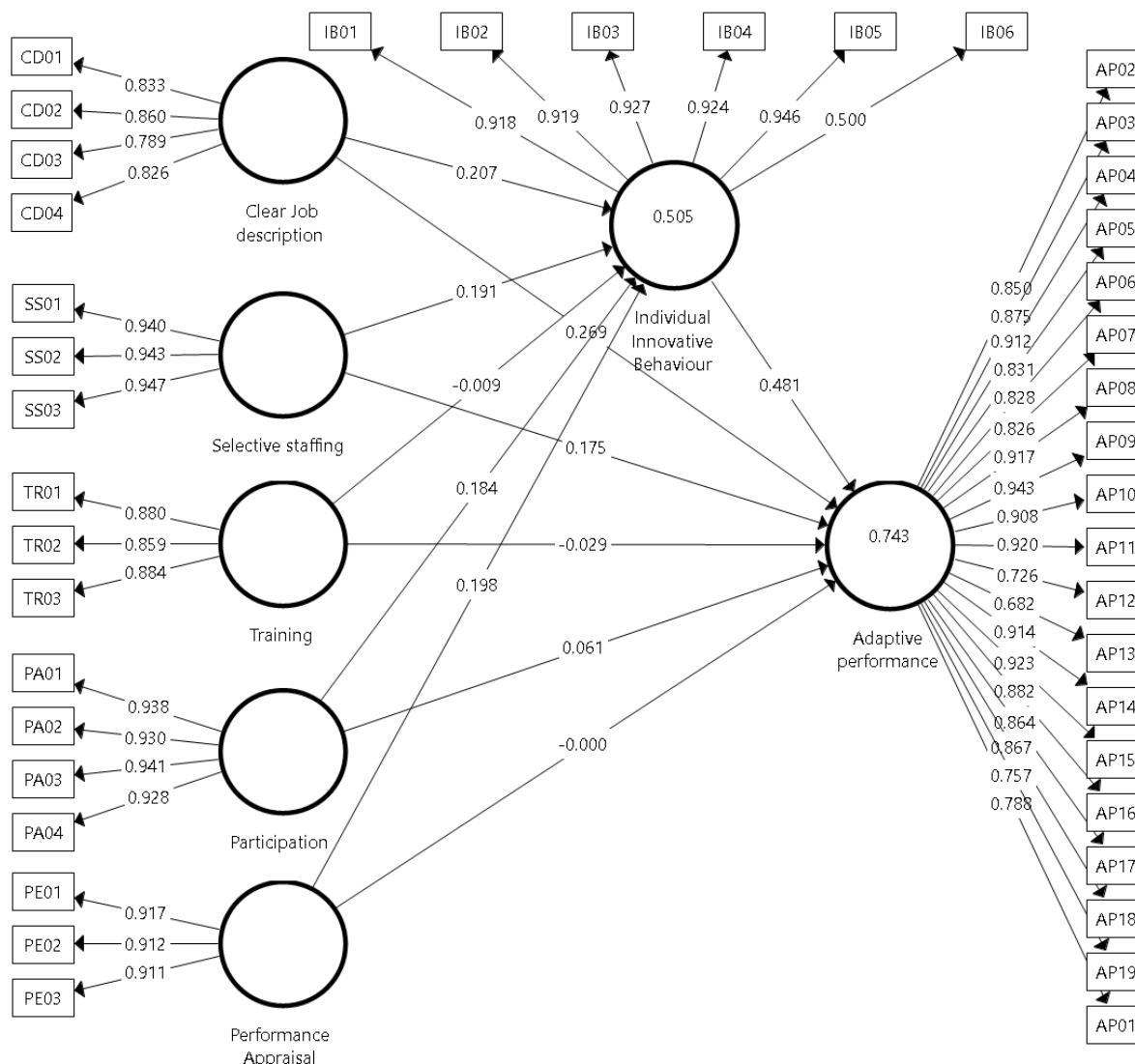


Figure 2. Results of path coefficient and measurement model estimation

**Results from the Bootstrapping Procedure**

This study employed a bootstrapping procedure with 5,000 resamples to assess the hypothesized relationships within the proposed structural model. The results supported the model's robustness, revealing significant effects between the exogenous and endogenous constructs (Table 7).

**Strongest effect:** Hypothesis 11 (H<sub>11</sub>) demonstrated the strongest positive association, with individual innovative behavior significantly influencing adaptive performance ( $\beta = 0.481$ ,  $t = 3.424$ ,  $p < 0.01$ ).

**Moderate effects:** Several hypotheses exhibited moderate positive effects. Clear job descriptions (H<sub>1</sub>) positively impacted adaptive performance ( $\beta = 0.269$ ,  $t = 2.672$ ,  $p < 0.01$ ). Similarly, selective staffing (H<sub>7</sub>) ( $\beta = 0.175$ ,  $t = 2.023$ ,  $p < 0.05$ ) positively impacted adaptive performance. Performance appraisal (H<sub>6</sub>) ( $\beta = 0.198$ ,  $t = 1.986$ ,  $p < 0.05$ ) were positively associated with individual innovative behavior. A moderate positive effect was also found between selective staffing (H<sub>8</sub>) and individual innovative behavior ( $\beta = 0.191$ ,  $t = 1.914$ ,  $P <$

0.05), and in clear job descriptions on individual innovative behavior (H<sub>2</sub>) ( $\beta = 0.207$ ,  $t = 1.911$ ,  $p < 0.05$ ).

Non-significant effects were observed for participation on adaptive performance (H<sub>3</sub>), performance appraisal on innovative behavior (H<sub>4</sub>), performance appraisal on adaptive performance (H<sub>5</sub>), training on adaptive performance (H<sub>9</sub>), and training on individual innovative behavior (H<sub>10</sub>) ( $|\beta| < 0.061$ ,  $|t| < 0.600$ ,  $p > 0.05$ ).

Table 7

*Hypothesis Testing of Direct Effect*

H	Relationship	Std. Beta	Std. Error	t-value	p-value	f <sup>2</sup>	LL	UL	Decision
H <sub>1</sub>	CD -> AP	**0.269	0.101	2.672	0.004	0.072	0.110	0.443	Supported
H <sub>2</sub>	CD -> IB	*0.207	0.108	1.911	0.028	0.023	0.032	0.384	Supported
H <sub>3</sub>	PA -> AP	0.061	0.101	0.600	0.274	0.003	-0.112	0.215	N/S
H <sub>4</sub>	PA -> IB	0.184	0.137	1.346	0.089	0.015	-0.042	0.413	N/S
H <sub>5</sub>	PE -> AP	0.000	0.064	0.006	0.498	0.00	-0.096	0.115	N/S
H <sub>6</sub>	PE -> IB	*0.198	0.1	1.986	0.024	0.022	0.033	0.36	Supported
H <sub>7</sub>	SS -> AP	*0.175	0.086	2.023	0.022	0.03	0.036	0.318	Supported
H <sub>8</sub>	SS -> IB	*0.191	0.1	1.914	0.028	0.019	0.036	0.364	Supported
H <sub>9</sub>	TR -> AP	-0.029	0.049	0.585	0.279	0.002	-0.109	0.052	N/S
H <sub>10</sub>	TR -> IB	-0.009	0.06	0.154	0.439	<b>0.00</b>	-0.105	0.091	N/S
H <sub>11</sub>	<b>IB -&gt; AP</b>	<b>**0.481</b>	<b>0.141</b>	<b>3.424</b>	<b>0.001</b>	<b>0.445</b>	<b>0.234</b>	<b>0.696</b>	Supported

Note:  $T > 1.95$ . \*\*\*  $P < 0.001$ . \*\*  $P < 0.01$ . \*  $P < 0.05$ .

clear job description selective staffing training participation performance appraisal individual innovative behaviour adaptive performance

Tables 8 exhibits the path coefficients and the significance of the full mediating role of individual innovative behaviour in the relationship between participation to adaptive performance (H<sub>3a</sub>) ( $\beta = 0.1$ ,  $t$ -value = 3.799,  $p < 0.05$ ). As well as the significance of the full mediating role of individual innovative behaviour in the relationship between performance appraisal to adaptive performance (H<sub>5a</sub>) ( $\beta = 0.096$ ,  $t$ -value = 3.124,  $p < 0.05$ ). While individual innovative behaviour plays a significant complementary mediation role in the relationship between selective staffing and to adaptive performance (H<sub>7a</sub>) ( $\beta = 0.092$ ,  $t$ -value = 4.05,  $p < 0.05$ ). On the other hand, individual innovative behaviour did not mediate the relationship between clear job description to adaptive performance (H<sub>1a</sub>) ( $\beta = 0.089$ ,  $t$ -value = 1.86,  $p > 0.05$ ), nor the relationship between training to adaptive performance (H<sub>9a</sub>) ( $\beta = 0.092$ ,  $t$ -value = 4.05,  $p < 0.05$ ).

The results of the mediation analysis, presented in Table 4.8, investigate the indirect effects of individual innovative behavior on the relationship between various independent variables and adaptive performance. Full mediation is found for participation (H<sub>3a</sub>) and performance appraisal (H<sub>5a</sub>), with individual innovative behavior significantly mediating the relationships ( $\beta = 0.10$ ,  $t = 3.799$ ,  $p < 0.05$ ;  $\beta = 0.096$ ,  $t = 3.124$ ,  $p < 0.05$ , respectively). In the case of selective staffing (H<sub>7a</sub>), individual innovative behavior exhibits a significant complementary mediation

effect ( $\beta = 0.092$ ,  $t = 4.05$ ,  $p < 0.05$ ). However, individual innovative behavior does not mediate the relationships between clear job description ( $H_{1a}$ ) and training ( $H_{9a}$ ) with adaptive performance ( $\beta = 0.089$ ,  $t = 1.86$ ,  $p > 0.05$ ;  $\beta = 0.092$ ,  $t = 4.05$ ,  $p > 0.05$ , respectively).

**Table 8.** Significance analysis of the direct and indirect effects

Hypothesis	Indirect effect	95% Confidence Interval of the Indirect Effect	t Value	Significance of indirect effect ( $p < 0.05$ )?	Direct effect	95% Confidence Interval of the Direct Effect	t Value	Significance of direct effect ( $p < 0.05$ )?	Hypothesis testing result/ Type of mediation (if exist)
$H_{1a}$ : CD->AP	0.089	[-0.008, 0.118]	1.86	(0.081) <i>no</i>	0.269	[0.110, 0.443]	.672	0.004) <i>yes</i>	<b>Not supported/</b> Direct-only, nonmediation
$H_{3a}$ : PA-> AP	0.1	[0.033, 0.047]	1.799	(0.013) <i>yes</i>	0.061	[-0.112, 0.215]	.600	0.274) <i>no</i>	<b>Supported/</b> Full mediation
$H_{5a}$ : PE-> AP	0.096	[0.067, 0.137]	1.124	(0.043) <i>yes</i>	0.000	[-0.096, 0.115]	.006	0.498) <i>no</i>	<b>Supported/</b> Full mediation
$H_{7a}$ : SS-> AP	0.092	[0.049, 0.101]	4.05	(0.01) <i>yes</i>	0.175	[0.036, 0.318]	.023	0.022) <i>yes</i>	<b>Supported/</b> Complementary mediation
$H_{9a}$ : TR-> AP	-0.004	[-0.045, 0.003]	0.19	(0.857) <i>no</i>	-0.029	[-0.109, 0.052]	.585	0.279) <i>no</i>	<b>Not supported/</b> No mediation

*Notes:* CD= clear job description, SS= selective staffing, TR= training, PA= participation, PE= performance appraisal, IB= individual innovative behaviour. AP= adaptive performance

#### *Theoretical Contributions*

Contribution to strategic HPWS literature in forth ways: Firstly, exploit creatively strategic standpoint in exploiting HPWS as a central function of strategy implementation to reach the overall organisational objectives. Under this light, this study explores the solid combination of strategic HPWS, which are the two key components of strategic HPWS in a single model as a vital step in strategy implementation. A lot of previous studies focus on single component, HPWS, which is a lack of strategic approach with overall and systematic view. This combination in one hand that reflects the necessity of strategically vertical and horizontal integration. Of which HPWS plays as an important role in vertical integration between upper and lower level of management. Meanwhile, HPWS were assessed in a bundle of practices that represent the horizontal integration of HPWS. Thus, the approach of strategic HPWS with both vertical and horizontal integration in this study is the holistic approach based on the systematic philosophy of strategic management.

Secondly, in terms of measurement, the study ascertains the nature of HPWS with the concise measurement to undertake its key role in strategy implementation rather than unreasonable mixing up its roles at both strategy formulation and implementation in previous studies. The study therefore has refined the current items to finalize an appropriate measurement for HPWS.

Nevertheless, the previous study of Grant, and Baden-Fuller, (2018) on HPWS and several studies on similar constructs such as strategic integration, HPWS index were all not in depth of exploiting the central role of HPWS in implementing organisation strategy. Most of them assess the HPWS in alignment with both strategy implementation and strategy formulation. Thirdly, this study contributes significance to the current body of knowledge that fills the gap in HPWS organisational outcomes (Banks & Kepes, 2015; Lengnick-Hall et al., 2009). The mediation of individual innovative behaviour between high performance work systems, high performance working systems and adaptive performance found in this study is the novel contribution to expand literature of HPWS.

Contribution to cross field of HPWS in a single model also present a rationale pitfall of strategy implementation in a firm. That is a demonstration from the top level of strategic leaders with visionary articulating and other supported behaviours, then combined with HPWS as an essential step to translate the vision into practices, and the last is a practical level of HPWS to implement strategy toward realized firm vision. This combination of variables is strongly convinced by philosophy of strategy implementation.

#### *Practical Implication*

There are several practical contributions generated from this study. Firstly, in the competitive environment with limited resource of public sector, this study opened up a prominent room for organisations to leverage managers due to their internal competitive advantage through advancing the core role of performance play an important role in effectively creating higher organisational collective advantage. Especially, Stephenson, (2015) argued that, in the context of organisation, there is a continual, deliberate reinterpretation of HR policies and practices in the context of the organisation; therefore, the finding for the significant effect of adaptive performance Iraqi federal board of supreme audit is more convinced. Furthermore, there are few empirical studies explicitly in Iraq dedicated to adaptive efficiency. The present study contributes to the literature by highlighting the need for more empirical research, especially in non-western nations. The present research offers qualitative insight on company success from an eastern perspective. This study is focused on Iraqi federal board of supreme audit. This adds to the literature by demonstrating how the interpretations of adaptive performance activities influence the creative of individual workers (Dorenbosch et al., 2005). The HRM – innovation relation was previously mainly studied in terms of creative organisational outcomes (Bos-Nehles & Veenendaal, 2019), while this study offers a greater understanding of the relationship between high-performance working systems on adaptive performance.

A few implications and suggestions for the future management team can be recommended from the findings, particularly for the benefit of public sector. Many researchers have identified individual innovative behaviour as the best way to increase the level of motivation to explore opportunities and generate new ideas (Fayyadh, Azhar, & Jalaludin, 2021 & Den

Hartog, 2010), helping to influence adaptive performance, and accepting goals or values of private and public sector.

The results show that recognition practices and inclusive individual innovative behaviour significantly. As a recommendation, Iraqi federal board of supreme audit need to find ways to incorporate inclusive employee recognition towards strong innovative behaviour, thereby that innovative behaviour. Management must incorporate as a suggestion an element to enhance affective recognition, such as focusing on company goals / objectives / visions and innovative behaviour, such as making them realise the importance of adaptive performance with the same organisation.

This study found that the relationship between and high-performance working systems with adaptive performance is mediated by affective individual innovative behaviour. It is recommended that organisation begin to focus on recognition practices that are intended to improve the high-performance working systems that will ensure a much better adaptive performance. Among this study, high-performance working systems was found to be the best options for improving individual affective innovative behaviour. The work environment in Iraqi federal board of supreme audit was so hectic and stressful. Employees need to be exposed to all kinds of latest news, clear instructions and guidelines in this kind of environment. A lot of skill development needs to be given to equip them with product knowledge and the job competence development. In addition, the emphasis should be on customer service skills that are their core business. As a suggestion, an organisation must be prepared to provide a much-improved channel of fair rewards, skills development, information sharing and need-based empowerment, and monitor their pay to ensure that it is consistent with the market trend. All of this initiative will fail if it is not long-term associated with the priorities and objectives of the company. When employees feel they are treated fairly well by the management, the employees may feel responsible for continuing to work hard for their companies. Furthermore, line managers can engage in behaviour that increases respect, trust and duty to achieve innovative employee behaviour (Labrenz, 2014). This will improve their innovative behaviour, thereby through adaptive performance.

### **Limitations**

Nevertheless, although the limitations suggest that this research findings should be interpreted and utilized with some caution, the contributions of this study provided new insights and a deeper understanding high performance work system, and adaptive performance in the context of organisation. Therefore, it is optimistic that this study might prompt future study efforts to explore the important insights of adaptive performance.

### **Directions for Future Research**

The longitudinal methodology should be utilized to gain more objective results for the effect of HPWS on organisational performance thought Iraqi federal board of supreme audit. Thirdly, the influence of high-performance working systems is found with the existence. Furthermore, the proposed bundle of HPWS for organisation context is inconsistent in previous studies, and as expected, HPWS is found as significant predictor of adaptive performance. However, the effect size is limited, this signals the way to refine the bundle of HPWS in order to create confined bundle that is more appropriate in Iraqi federal board of supreme audit to generate better outcomes. Fourthly, the researcher may extend the model by exploring other mediators



in individual innovative behaviour based on the latest suggestions from literature. The collective organisational engagement may trickle down to influence group or even team level motivational states. Thus, the prominent mediators which is potential to replace or support individual innovative behaviour in this model not only refers to other variables at adaptive performance but also at group, at strategic business unit or team to explore larger perspectives in this field.

### **Conclusion**

Taking into account the concluded findings, it is assumed that several factors are worth researching. Potential replication of this study using samples from other sectors or cultures could be a positive attempt to verify a consistent interpretation of the findings and understand that this could be the first empirical research to investigate the proposed relationships in Iraqi federal board of supreme audit. This study is significant because the results help Iraqi federal board of supreme audit enhance their adaptive performance and contribute to the literature on adaptive performance

### **References**

- Abumandil, M. S., & Hassan, S. (2016). Information quality and decision-making effectiveness: A study of banks in Palestine. *International Review of Management and Marketing*, 6(7), 127-132.
- Alkhawaja, M. I., Abd Halim, M. S., Abumandil, M. S., & Al-Adwan, A. S. (2022). System Quality and Student's Acceptance of the E-learning System: The Serial Mediation of Perceived Usefulness and Intention to Use. *Contemporary Educational Technology*, 14(2), ep350.
- Banks, G. C., & Kepes, S. (2015). The influence of internal HRM activity fit on the dynamics within the "black box". *Human Resource Management Review*, 25(4), 352-367.
- Baron, R. M., Kenny, D. A. J. J. O. p., & psychology, s. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. 51(6), 117
- Barrick, M., Thurgood, G., Smith, T., & Courtright, S. (2015). Collective Organizational Engagement: Linking Motivational Antecedents, Strategic Implementation, and Firm Performance. *Academy of Management Journal*, 58(1), 111–13. Retrieved from <http://amj.aom.org/content/58/1/111.short>
- Colbert, J. T., Olson, J. K., & Clough, M. P. (2007). Using the web to encourage student-generated questions in large-format introductory biology classes. *CBE—Life Sciences Education*, 6(1), 42-48.
- Den Hartog, D. N., Boon, C., Verburg, R. M., & Croon, M. A. (2013). HRM, communication, satisfaction, and perceived performance: A cross-level test. *Journal of management*, 39(6), 1637-1665.
- Ekmeil, F. A. R., & Abumandil, M. S.(2020) The Effect Of Market Structure And Financial Ratios On Financial Performance In
- Fayyadh, M. J., Azhar, Z., & Jalaludin, D. (2021). Advancing Sustainable Internal Audit in Iraq's Supreme Audit Institutions: A Proposed Conceptual Framework. *Studies of Applied Economics*, 39(11).
- Grant, R. M., & Baden-Fuller, C. (2018). How to develop strategic management competency: Reconsidering the learning goals and knowledge requirements of the core strategy course. *Academy of Management Learning & Education*, 17(3), 322-338.

- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). PLS-SEM Book: A Primer on PLS-SEM. In: Sage.
- Hamd, B. A., Aziz, P. S. M., & Hamdan, N. F. (2022). The Role of the Postgraduate Institute for Accounting and Financial Studies for Providing Graduates that Can Improve the Performance of the Board of Supreme Audit and Reduce Government Spending Costs for the Period 2004-2020. *Webology*, 19(1), 3446-3463.
- Hanlon, M., Yeung, K., & Zuo, L. (2022). Behavioural economics of accounting: A review of archival research on individual decision makers. *Contemporary Accounting Research*, 39(2), 1150-1214.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(115–135).
- Labrenz, S. (2014). The influence of HR-practices on innovative behaviour and the moderating effect of line manager behaviour (Bachelor's thesis, University of Twente).
- Lengnick-Hall, M. L., Lengnick-Hall, C. A., Andrade, L. S., & Drake, B. (2009). Strategic human resource management: The evolution of the field. *Human resource management review*, 19(2), 64-85. *Medicine*, 7(06)
- Nuri, S., & AL-Lahibi, I. (2013). Suggested Model for activating the role of the regulators for the auditing profession in achieving quality audit. *Journal of Accounting and Financial Studies Volume*, university of Baghdad, (23).
- Palestinian Private Hospitals During Coronavirus Disease, Covid-(19). *European Journal of Molecular & Clinical*
- Pulakos, E. D., Dorsey, D. W., & White, S. S. (2006). Adaptability in the workplace: Selecting an adaptive workforce. In *Understanding adaptability: A prerequisite for effective performance within complex environments* (pp. 41-71). Emerald Group Publishing Limited.
- Salih, W. K., & Almajdob, M. S. (2019). An Evaluation of the role of supreme audit institutions in reduce of audit failure to promote economic development: The case of the Federal Board of Supreme Audit of Iraq. *International Journal of Academic Research in Business and Social Sciences*, 9(9), 252-265.
- Stephenson, W. T. (2015). *Midnight running: How international human resource managers make meaning of expatriate adjustment* (Doctoral dissertation, University of Georgia).
- Thabit, T. H., Ibrahim, L. K., & Majed, A. W. (2019). Proposed framework for auditing sustainable development practices in Iraq. In *8 th International Scientific Conference*, Baghdad College of Economic Sciences University, Baghdad, Iraq.
- Vasilescu, C. (2011). Effective strategic decision making. *Journal of Defense Resources Management*, 2(1), 101.
- Younus, A. M., Tarazi, R., Younis, H., & Abumandil, M S. (2022). The Role of Behavioural Intentions in Implementation of Bitcoin Digital Currency Factors in Terms of Usage and Acceptance in New Zealand: Cyber Security and Social Influence. *ECS Transactions*, 107(1), 10847.
- Yuan, F., & Woodman, R. W. (2010). Innovative behaviour in the workplace: The role of performance and image outcome expectations. *Academy of management journal*, 53(2), 323-342.