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RESEARCH ARTICLE – BUSINESS MANAGEMENT

The Role of Human Resource Management in Achieving Organizational Entrepreneurial Performance through Strategic Agility

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Abstract

This study examines the role of human resource management (HRM) in achieving organizational entrepreneurial performance through strategic agility, focusing on the Middle Technical University in Baghdad. The study aims to evaluate the impact of HRM on entrepreneurial performance and strategic agility and explore the mediating role of strategic agility. A quantitative methodology involving a descriptive-correlational design was used. The sample comprised 108 university managers and employees selected via simple random sampling. Data were collected using validated questionnaires and analyzed using SPSS and LISREL software. The findings reveal significant positive relationships among HRM, strategic agility, and entrepreneurial performance. These results highlight the critical role of HRM and strategic agility in fostering organizational performance and provide actionable insights for enhancing HR practices.

Publisher: Middle Technical University

Keywords: Human Resource Management; Organizational Entrepreneurial Performance; Strategic Agility; Middle Technical University; Descriptive Method.

1. Introduction

The success of any organization relies on the effective integration of resources, especially human resources, to achieve its goals [1]. In response to organizational complexities, a specialized department—Human Resources—emerged to manage activities such as planning, recruitment, training, evaluation, and motivation [2]. Human Resource Management (HRM), defined as the optimal use of human capital to meet organizational objectives, plays a vital role in this process [3]. HRM addresses workforce planning, selection, development, and performance, recognizing that achieving goals requires meeting human resource needs and vice versa [4].

Human resource managers bridge the gap between employees and leadership to facilitate mutual success [5]. In today's competitive and knowledge-driven environment, organizations are increasingly adopting an entrepreneurial performance orientation that emphasizes innovation, creativity, and risk-taking as strategic responses to change [6]. Such performance has gained academic and governmental interest due to its role in driving economic progress [7].

Public sector organizations, facing resource limitations, social shifts, and structural reforms, have turned to entrepreneurial performance to enhance efficiency and accountability [8]. In this context, human resources play a behavioral and strategic role in fostering entrepreneurship within institutions [9].

One key enabler of this transformation is strategic agility, defined as the ability to adapt and thrive amid rapid and unpredictable changes [10]. Organizations with high agility enhance their capacity to innovate and compete effectively [11]. Strategic agility, when supported by flexible communication and informal structures, enhances creativity and organizational responsiveness [12]. Agile cultures also emphasize accountability across all employee levels [13].

Today, the challenge lies in developing human resources capable of leadership and entrepreneurial thinking. Organizations that invest in skilled, innovative employees and promote entrepreneurial orientation maintain a competitive edge [6]. Therefore, the central objective of HRM becomes empowering strategic agility and enabling entrepreneurial performance.

This study explores the relationship between HRM, strategic agility, and entrepreneurial performance, focusing on academic institutions—specifically, Middle Technical University in Baghdad—to fill a research gap in this critical area.

1.1. Research objectives

- What is the role of Human Resource Management in achieving entrepreneurial performance?
- How does strategic agility mediate the relationship between Human Resource Management and entrepreneurial performance?

- What is the impact of human resources on entrepreneurial performance, mediated by strategic agility?

1.2. Research problem

Academic institutions, particularly universities, often face challenges in aligning their Human Resource Management (HRM) practices with the rapidly changing demands of the environment. This misalignment hinders innovation, risk-taking, and entrepreneurial performance. While HRM is crucial for organizational success, its direct impact on entrepreneurial outcomes is not always clear. Recent studies suggest that strategic agility could mediate this relationship, enhancing HRM's effectiveness in supporting entrepreneurial performance. However, there is limited research on this topic, especially within higher education institutions.

The first question: Does human resources management has an impact on achieving entrepreneurial performance?

Question two: Human resources management affects strategic agility?

Question Three: Does strategic flexibility affect entrepreneurial performance?

1.3. Research importance

- The researcher's conviction that human resources are among the most important strategic resources because they determine the organization's chances of survival, progress, and success. They also determine the organization's ability to achieve outstanding performance. This encourages researchers to study the various strategies, functions, and activities related to human resources management that allow it to meet the challenges of the times.
- The lack of studies that addressed the relationship between human resources management, entrepreneurial performance, and strategic performance.
- Benefiting from the results and recommendations of the study and presenting them to decision makers in order to seek to enhance and develop human resources management at the university, which contributes to improving institutional performance.

1.4. Research aims

- Knowing the role of human resources management in achieving entrepreneurial performance.
- Clarifying the extent to which selection and appointment contribute to achieving pioneering performance at the university.
- Knowing the role of training and developing human resources capabilities in achieving pioneering performance at the university.
- Exposing the role of evaluating the performance of human resources management at the university.

2. Research Hypothesis

HRM's Impact on Entrepreneurial Performance: Human Resource Management (HRM) has a significant effect on entrepreneurial performance in academic institutions, particularly within Middle Technical University in Baghdad.

HRM's Influence on Strategic Agility: HRM practices, such as recruitment, training, and performance evaluation, play a key role in enhancing strategic agility within academic institutions.

Strategic Agility as a Mediator: Strategic agility mediates the relationship between HRM practices and entrepreneurial performance, enhancing the effectiveness of HRM in fostering entrepreneurial outcomes.

The framework illustrates the relationships among HRM, strategic agility, and entrepreneurial performance. HRM activities such as recruitment, training, and performance evaluation are hypothesized to influence strategic agility and entrepreneurial outcomes.

2.1. Research method

Descriptive, correlational method.

2.2. Research community

The research community is the workers at Middle Technical University in Baghdad.

2.3. Research sample

The research targeted 150 employees at Middle Technical University, from which 108 participants were selected using simple random sampling. Justifications for this sampling approach include representativeness and accessibility.

2.4. Data Collection Methods

Three validated questionnaires were employed, covering HRM practices, strategic agility, and entrepreneurial performance. Reliability was established through Cronbach's alpha ($\alpha > 0.90$).

3. Data Analysis

Descriptive and inferential statistics, including structural equation modeling, were used to analyze data via SPSS (version 24) and LISREL (version 8.5).

3.1. Research tool

The questionnaire is considered one of the most important tools that the researchers used in the data collection process.

3.2. Research scale

The degree of possible responses to the items was measured on a five-point scale according to a five-point Likert scale (Table 1).

Evaluation of measurement tools: To measure the validity of the questionnaire, face validity and content validity were used, in addition to Cronbach's alpha to measure reliability.

Table 1. Scale of degree of approval

Statistical significance	Percentage	Relative weight	Degree of approval
Very high degree of approval	greater than 80%	5	I totally agree
High degree of approval	80-70%	4	I agree
Average degree of approval	69-50%	3	neutral
Low approval score	49-20%	2	I do not agree
Zero degree of approval	less than 20%	1	Strongly Disagree

Table 2. Results of Cronbach's alpha test for reliability and validity of the scale of statements of the study's themes

Search variables	Reliability (30=n)
Human Resource Management	0.961
Leadership performance	0.934
The ability to innovate	0.940
Overall reliability	0.980

From Table 2, the results of the validity test for all axes of the study are greater than (60%). These values mean the availability of a very high degree of validity for all hypothesis statements for each hypothesis separately or at the level of all dimensions of the scale, where Cronbach's alpha value for the overall scale reached (0.97). The validity value is (0.98), which is high reliability and validity. Therefore, it can be said that the standards that the study relied on to measure (the study's axes) have internal consistency in their statements, which enables us to rely on these answers in achieving the study's objectives and analyzing its results.

The statistical methods used in this research can be divided into two categories: inferential statistical methods and descriptive statistical methods. Descriptive statistics methods such as frequency distribution tables and rates were used to study and describe the general characteristics of the respondents. The inferential statistical methods used are also briefly explained below. The data obtained were also analyzed using SPSS version 24 and Lisrel statistical program version 8/5.

3.3. Data analysis and Hypothesis Testing

Table 3, it is clear that the percentage of males among the sample members represents 67%, while the percentage of females among the sample members reached 33%.

Table 3. Sample description based on gender

Type	Repetition	The ratio
Male	77	67%
Female	31	33%
the total	108	100%

Table 4. Sample distribution by age

Age group	The number	percentage
20 to 30 years	11	10%
31 to 40 years	49	46%
41 to 50 years	37	34%
51 years or more	11	10%
the total	108	100%

It is noted from the Table 4 that the age group (20- 30) represents 11%, the age group (31-40) represents 49%, the age group (41-50) represents 37%, and the age group (51 and above) represents 11%. This means that most of the research sample members are in the age groups between (31- 40) and (41- 50) years.

Table 5. Sample distribution of educational qualification

Qualification	Repetition	The ratio
Higher Diploma	26	23%
Bachelor's	49	47%
Master's degree and above	33	30%
the total	108	100%

From the Table 5 it is clear that the percentage of the higher diploma was 26%, while the percentage of the bachelor's degree was 49%, and the percentage of the master's degree and above was 33%. This indicates the distinguished academic qualification of the sample members.

Table 6. Distribution of the sample according to years of service

Years of service	Repetition	The ratio
1 to 5 years	10	9%
6 to 11 years	26	24%
11 to 15 years	34	33%
16 to 20 years	25	23%
21 years and over	13	11%
The total	108	100%

From Table 6 it is clear that the percentage of experience (less than 5 years) is 10%, while the percentage of experience (6 to 11) is 26%, the percentage of experience (11 to 15) is 34%, and the percentage of experience of more than (16 to 20) 25%. It is clear that most of the sample members have more than 11 years of experience, which indicates the high experience of those examined.

Table 7. Distribution of the sample according to job level:

Career Level	Repetition	The ratio
Director and assistants	31	29%
Employees	77	71%
The total	108	100%

From Table 7 it is clear that the percentage of employees is 77%, while the percentage of managers and assistants is 31%.

3.4. Testing the normality of data

The Kolmogorov-Smirnov test was used to check the normal distribution of variables.

Table 8. The result of the normality test for the research variables

The variable	Kolmogorov statistics	Level of importance	Results
Human Resource Management	0.81	0.77	normal
Leadership performance	0.61	0.95	normal
Strategic agility	0.74	067	normal

As can be seen from Table 8, the results of the Kolmogorov-Smirnov test at the α=0.05 level show4 normality only in the personality traits variable. But because the number of samples is very large (more than 100), according to the central limit theorem, the Kolmogorov-Smirnov test can not only be satisfied, but to ensure normality, the elongation and deflection should also be checked, and the results are shown in Table 9.

Table 9. Elongation, dimensional deviation and variables

Variables	Dimensions	Dimensional deviation	elongation	Indicators	The result
Human Resource Management		0.856	1.26	Between 2, -2	normal
Human Resource Management	recruitment	0.861	1.33	Between 2, -2	normal
	Education	1.08	1.18	Between 2, -2	normal
	Performance evaluation	0.595	0.822	Between 2, -2	normal
	Compensation for services	0.502	0.147	Between 2, -2	normal
	working conditions	0.933	1.65	Between 2, -2	normal
Entrepreneurial performance		0.659	0.698	Between 2, -2	normal
Entrepreneurial performance	Intensity and novelty of product innovation	0.670	0.921	Between 2, -2	
	Risk	0.403	0.366	Between 2, -2	Normal
	pioneer	0.788	0.906	Between 2, -2	Normal
	authority	0.618	0.358	Between 2, -2	Normal
Strategic agility		0.662	0.342	Between 2, -2	Normal
	Strategic sensitivity	0.696	0.342	Between 2, -2	Normal
	Strategic response	0.547	0.830	Between 2, -2	Normal
	Collective capabilities	0.520	0.180	Between 2, -2	Normal
	Choosing strategic objectives	0.770	0.762	Between 2, -2	normal

3.5. Descriptive statistics for variables

The results of descriptive statistics are shown in Table 10.

Table 10. Results of descriptive statistics

Variables	Dimensions	Average	Standard deviation	Variance	Minimum	Maximum
Human Resource Management		3.86	0.677	0.495	1.50	5
Human Resource Management	Recruitment	3.98	0.744	0.600	1	5
	Education	3.99	0.730	0.533	1	5
	Performance evaluation	3.81	0.814	0.663	1.50	5
	Compensation for services	3.65	0.781	0.611	1	5
	working conditions	3.87	0.776	0.603	1	5
Leadership performance		3.77	0.727	0.530	1.31	5
Leadership performance	Intensity and novelty of product innovation	3.17	0.760	0.578	1	5
	Risk	3.61	0.865	0.749	1.25	5
	Pioneer	3.95	0.811	0.658	1	5
	Authority	3.78	0.728	0.612	1.33	5
Strategic agility		3.73	0.738	0.545	1.39	5
	Strategic sensitivity	3.70	0.857	0.735	1	5
	Strategic response	3.71	0.850	0.723	1	5
Strategic agility	Collective capabilities	3.69	0.785	0.611	1.60	5
	Choosing strategic objectives	3.83	0.722	0.522	1.75	5

The results presented in Table 10 show that the averages obtained for the research variables were at a medium to high level. The highest average relates to the education dimension, with an average of 3.99, and the lowest average relates to the modernity dimension and intensity of product innovation, with an average of 3.17.

3.6. Test the structure of the final model

Looking at all the indicators in Table 11, can see that the main research model is a good fit.

Table 11. Factor analysis, final research model variable

Variable statistical indicators for the final research model		Construct validity		
		Factor analysis	T value	Proportionality indicators
Human Resource Management	recruitment	0.85	10.56	Chi-square (02/127), degrees of freedom (62), chi-square over degrees of freedom (2/04), root mean square error (0/079), goodness-of-fit index (0/96), adjusted goodness-of-fit index (0 /95), adjusted goodness-of-fit index (0/91), Smoothed fit index (0/94), unsmoothed fit index (0/96), increased fit index (0/96), mean square index (0/034).
	Education	0.77	9.18	
	Performance evaluation	0.81	9.92	
	Compensation for services	0.74	8.64	
	working conditions	0.70	8.07	
Leadership performance	Intensity and novelty of product innovation	0.86		
	Risk	0.69	8.20	
	pioneer	0.60	6.69	
	authority	0.68	7.95	
Strategic agility	Strategic sensitivity	0.37		
	Strategic response	0.76	3.66	
	Collective capabilities	0.81	3.71	
	Choosing strategic objectives	0.84	3.73	

3.7. First-order factor analysis of the final model

The final research model verified using Validate is shown in the following graphs (Fig. 1). In designing this model, questions were asked related to the human resources management dimension (the independent variable) and the entrepreneurial performance dimension (the dependent variable), and the average of the strategic agility dimension (the mediating variable) was calculated and the average was entered into the analysis as a control variable (Fig. 2).

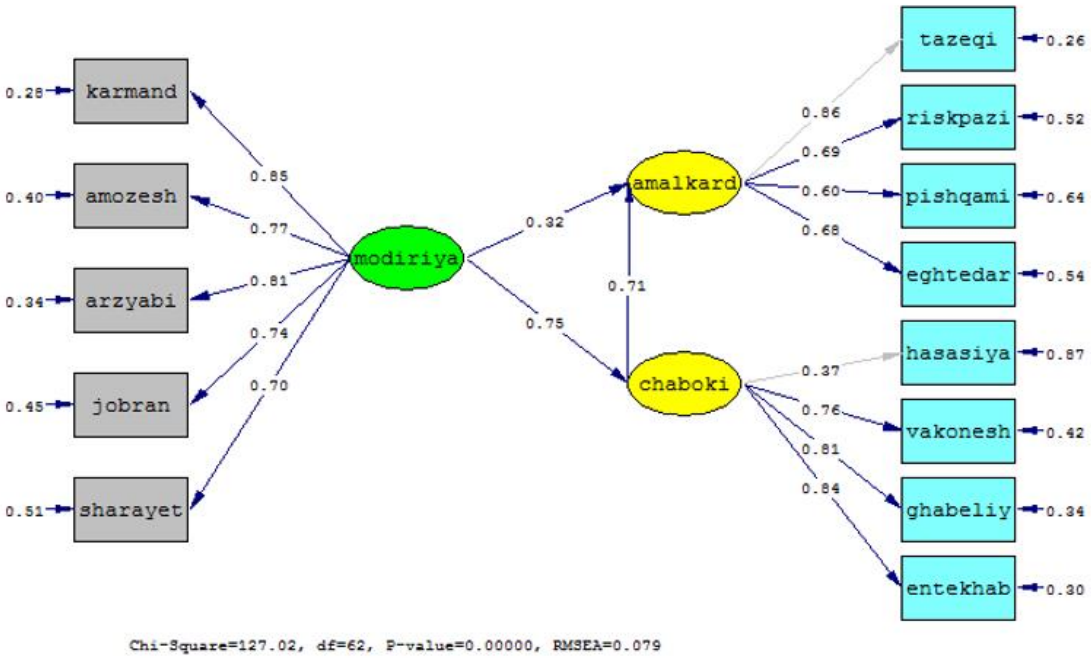

Fig. 1. Final search model in standard estimation mode

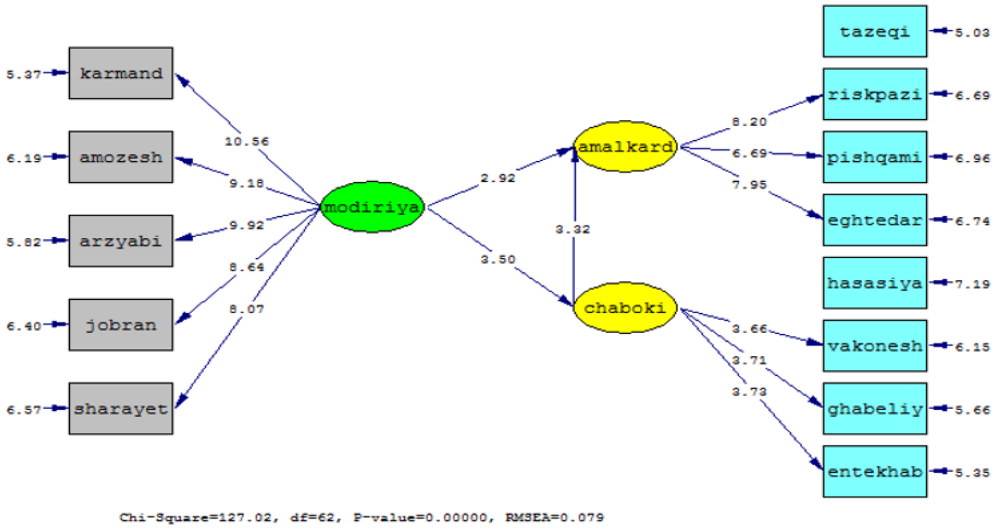

Fig. 2. The final research model in the t-statistics method

3.8. Results of research hypotheses

Main hypothesis: Human resources management has an impact on achieving entrepreneurial performance, with an emphasis on the mediating role of strategic agility. According to the above graphs, the standardized factor loadings for HRM, entrepreneurship performance, and strategic agility were estimated to be 0.32, 0.71, and 0.75.

The significant value of this relationship is 2.92, 3.32, and 3.50, which was obtained in HRM on significant entrepreneurial performance of 96.1, which indicates that the observed correlation is significant. In human resources management on strategic agility, a level of 1.96 was obtained, so it can be said that the research hypothesis (or the first main hypothesis) that human resources management has an impact on entrepreneurial performance has been confirmed, and human resources management has also been confirmed. He emphasized strategic agility. The effect of human resources management variables on entrepreneurial performance is moderate due to the standard factor loading in the range of 0.3 to 0.7, as well as the effect of human resources management variables on strategic agility due to the standard factor loading Also excellent within 0.7 to 1.

The first question: The impact of human resources management on entrepreneurial performance.

According to the graphs above, which are presented in the confirmatory factor analysis section of the final model, the standardized factor loading of HRM on entrepreneurial performance was estimated as 32/0. The statistical value for this relationship is 2.92 and is greater than 1.96, which indicates a statistically significant correlation. Therefore, it can be said that the research hypothesis about the impact of human resources management on entrepreneurial performance has been confirmed. The magnitude of this effect is moderate due to the standard factor loading in the range of 0.3 to 0.7.

Question two: Human resources management has an impact on strategic agility.

According to the graphs above, the standardized factor loading of HRM on strategic agility was estimated as 0.75. The significance value of this relationship is 3.50 and greater than 1.96, which indicates that the observed correlation is significant. Therefore, it can be said that the research hypothesis on the impact of human resources management on strategic agility has been confirmed. The magnitude of this effect is also excellent due to the standard factor loading in the range of 0.7 to 1.

Question Three: Entrepreneurial performance has an impact on strategic agility. According to the above graphs, the standardized factor loading of entrepreneurial performance on strategic agility was estimated as 0.71. The statistical value of this relationship is 3.32 and is greater than 1.96, which indicates that the observed correlation is significant. Therefore, it can be said that the research hypothesis about the impact of entrepreneurial performance on strategic agility has been confirmed. The magnitude of this effect is also excellent due to the standard factor loading in the range of 0.7 to 1.

4. Research Results

The first question claimed that human resource management has an impact on entrepreneurial performance. According to the program outputs, the standardized factor load of HRM on entrepreneurial performance was estimated as 0.32. The statistical value for this relationship is 2.92 and is greater than 1.96, which indicates a noticeable correlation. Therefore, it can be said that the research hypothesis about the impact of human resources management on entrepreneurial performance has been confirmed. In explaining this hypothesis, it can be said that universities, as a place for preparing competent human resources and growing entrepreneurship, play an essential role in the production of knowledge and innovation, and the importance of university sciences in the field of creativity and innovation is also increasing. New business development. Universities as a platform for resource preparation and academics as generators of knowledge and technology have an urgent need for entrepreneurial attitude and behavior for the success of knowledge and technology transfer. Universities must provide the appropriate environment for students and faculty members and their participation in entrepreneurial activities, and for these people, by enhancing entrepreneurial tendencies and characteristics such as; The need for success, desire for independence and internal control can lead to the application of knowledge and the flourishing of desired goals in today's changing environment.

The hypothesis in the second question claimed: that human resources management has an impact on strategic agility.

According to the program outputs, the standard load factor of HRM on strategic agility was estimated at 0.75. The significance value of this relationship is 3.50 and greater than 1.96, which indicates that the observed correlation is significant. Therefore, it can be said that the

research hypothesis on the impact of human resources management on strategic agility has been confirmed. In explaining this hypothesis, it can be said that since the capital of Dash-based organizations such as universities is human resources, human resource management can play an important role in creating organizational agility. There is no doubt that the most important factor for organizational growth, excellence and development will not be an element other than the organization's human resources. Many organizations, having properly understood the issue of managing the organization's programmers, have given priority to attention to human resources. Despite new technical developments, no worker has been able to replace human labor. Therefore, it is essential for university managers to properly recognize human capital and develop latent talents for strategic agility and effectively mobilize this capital in achieving organizational goals. The third question claimed that strategic agility has an impact on entrepreneurial performance.

The standardized factor loading of entrepreneurial performance on strategic agility was estimated to be 0.71. The statistical value for this relationship is 3.32 and is greater than 1.96, which indicates that the observed correlation is significant. Therefore, it can be said that the research hypothesis about the impact of entrepreneurial performance on strategic agility has been confirmed. In explaining this hypothesis, it can be said that strategic agility, by creating resource flexibility, facilitating the circulation of information in the organization and increasing the speed and quality of the flow of information and knowledge in the organization, can change and improve learning in the organization, which can help the university respond more quickly to the needs and requests of its students. And improve their adaptation to the surrounding environment, and in this way environmental uncertainty can be reduced and influence the improvement of entrepreneurial performance. The trend towards entrepreneurship as a result of discovering new opportunities and increasing information and data regarding the external environment of the organization increases the commitment of members to use data and information and transform it into internal knowledge of the organization. Therefore, learning that it is encouraging in the organization that this topic can also have an effective impact on Improving and changing the organization's status and performance.

The main hypothesis of the research is that human resources management has an impact on achieving entrepreneurial performance by emphasizing the role of the mediating variable, which is strategic agility. According to the program outcomes, the standardized factor loadings for human resource management, entrepreneurship performance, and strategic agility were estimated at 0.32, 0.71, and 0.75. The statistical value of this relationship is 2.92, 3.32, and 3.50, which was obtained in human resource management on entrepreneurial performance of 1.96, which indicates that the observed correlation is significant. In human resources management, strategic agility of 1.96 was obtained, so it can be said that the research hypothesis (or the first main hypothesis) is confirmed. In explaining this hypothesis, it can be said that entrepreneurship frameworks create a mechanism that depends on variables such as entrepreneurial strategies, organizational culture, organizational structure, available resources, reward and encouragement systems, and administrative support. In general, culture has two basic functions in the organization: unifying or integrating members so that they know how to act and communicate with each other and helping the organization adapt to external factors. The meaning of union or internal integration of an organization is that members have a common identity and learn how to cooperate effectively. Flexibility based on speed, flexibility, innovation, quality and profit enables companies to compete in global markets in a timely and effective manner to capture the market and allows the company to establish a good export competitive position for itself. The potential logic of this theory is that flexibility allows companies to compete with environmental changes with speed, quality, flexibility, and responsiveness. The above are the main components of agility. Unexpected shocks in the supply chain become costly, and as a result, you become more agile than before in quickly responding to a crisis. When organizations have strategic agility,

5. Conclusion

HRM Impacts Entrepreneurial Performance: The study confirms that human resource management positively influences entrepreneurial performance in universities, contributing to the development of entrepreneurial skills and innovation.

HRM Enhances Strategic Agility: HRM plays a key role in enhancing strategic agility, enabling universities to adapt effectively to changing environments and improve their responsiveness to challenges.

Strategic Agility Drives Entrepreneurial Performance: Strategic agility significantly impacts entrepreneurial performance by facilitating knowledge flow, adaptability, and faster response to environmental changes.

Strategic Agility Mediates HRM and Entrepreneurial Performance: Strategic agility mediates the relationship between HRM and entrepreneurial performance, highlighting that HR strategies must foster agility for optimal outcomes. They can perform better, so strategic agility has a positive and meaningful relationship with organizations' performance.

6. Recommendations and Suggestions

- Universities should prioritize strategic agility in HRM practices to address changing organizational needs.
- 10egular training programs should focus on building flexibility and innovation among employees.
- Implement a knowledge-based recruitment system to enhance entrepreneurial capabilities.
- Develop frameworks to measure and improve strategic agility and its integration into HR processes.

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