



THE IMPACT OF HUMAN RESOURCES MAINTENANCE ON ENHANCING ORGANIZATIONAL AGILITY: AN APPLIED STUDY ON SECRETARIAT OF NORTHERN BORDERS REGION

Mohamed Ali Saad,  <https://orcid.org/0000-0002-6237-9584>

Northern Border University, Kingdom of Saudi Arabia

Samer Ahmed Al-Naggar,  <https://orcid.org/0000-0002-6005-7100>

Northern Border University, Kingdom of Saudi Arabia

Corresponding author: Mohamed Ali Saad, masmas114@yahoo.com

Type of manuscript: research paper

Abstract: *The study aims to identify the impact of human resources maintenance on enhancing organizational agility. The research was built based on a set of studies and previous theoretical frameworks related to the research subject. The research data was collected at the application agency (the Municipality of the Northern Borders Region) through a survey list distributed to 384 employees in the application area. Statistical Package for Social Sciences (SPSS) was used to analyze the data and verify the validity of the research hypotheses. There are no statistically significant differences between the opinions of the study sample due to the variable of gender, level of education, and experience concerning the level of human resources maintenance programs in the Municipality of the Northern Borders Region and the existence of a relationship between the maintenance of human resources in its various dimensions and organizational agility, as well as a strong positive impact of human resources maintenance on organizational agility. The study recommended the need to pay attention to human resources maintenance programs while working to raise awareness of the importance of enhancing organizational agility and increasing adequate financial support for the application of the philosophy of human resources maintenance and that the policies and procedures of human resources maintenance programs focus on taking into account supporting the agility of the organizational structure and organizational procedures at the level of the institution.*

Keywords: maintenance of human resources, occupational safety and health, psychological support for employees, health care, entertainment for employees, organizational agility.

JEL Classification: M12, C83, C88, D73

Received: 10 February 2023

Accepted: 18 March 2023

Published: 31 March 2023

Funding: There is no funding for this research

Publisher: Academic Research and Publishing UG

Cite as: Saad, M.A., & Al-Naggar, S.A. (2023). The Impact of Human Resources Maintenance on Enhancing Organizational Agility: An Applied Study on Secretariat of Northern Borders Region. *Marketing and Management of Innovations*, 1, 75-86. <https://doi.org/10.21272/mmi.2023.1-07>



Introduction. Scientific developments and the revolution of informatics and communication have created a different administrative reality than in the past. The manifestations of the new reality are reflected in the decline of many intellectual concepts and systems on which previous administrative studies relied, which made modern administrative methods differ from administrative thought and its applications in the past. Therefore, it is necessary to adopt modern management methods that are compatible with organizations' changes. Human resources are a source for achieving competitive advantage for the organization, in addition to being one of the capital resources in the organization (Beheshtifa & Safarian, 2013).

Human resources management is no longer only interested in the traditional role but has become more concerned with the need to strike a balance between the capacity of institutions to achieve the results of their work and the capacity to exert their maximum energy, which requires focusing on the maintenance of the human element and achieving the goals and desires of employees through the existence of an incentive system that contains a set of benefits while providing health care and safety in the work environment. Moreover, strategic planning is no longer the only source of success and adaptability for organizations to change. Hence the concept of «organizational agility» helps organizations integrate with environments characterized by activity and rapid change in a large way (Zafar et al., 2018).

Organizational agility has become necessary to distinguish successful organizations from troubled organizations, as constant changes in their environment require responsiveness, adaptability, and agility in responding to market changes (Harraf et al., 2015). Due to the difficulty of keeping pace with the human mind with the rapid developments in the business environment (Zain et al., 2005), the organization desperately needs human elements that possess organizational agility in its various dimensions (Warr & Inceoglu, 2012).

The problem of the study is «What is the impact of human resources maintenance programs on enhancing organizational agility in the entity under study». Accordingly, the study problem could be formulated through the following questions: What is the concept and role of human resource maintenance at the organizational level? What is the nature and type of relationship between human resource maintenance and organizational agility? To what extent do the various human resource maintenance programs (occupational safety and health, psychological support, health care, and entertainment) affect organizational agility?

This study also aimed to reveal the type and nature of the relationship between human resources maintenance and organizational agility and to identify the impact of human resources maintenance programs separately, represented in occupational safety and health/psychological support/health care/recreational means on organizational agility, as well as Identify the reality of the practice of both human resources maintenance and organizational agility in the entity under study.

The importance of this study comes through working to guide the officials of the entity under study on the significance of human resources maintenance and its important role in enhancing organizational agility, as well as standing on the important role of both human resources maintenance and organizational agility and its impact on enhancing the vital role of human resources and increasing its effectiveness, and finally providing some proposals that will raise the level of Maintaining human resources and enhancing organizational agility in the entity under study.

Literature Review. Concerning the literature review on human resources maintenance. Shah (2019) defined maintenance of human resources as attention to the material and non-material benefits necessary for the human element within organizations and working to provide them (Berman et al., 2019). Human resources maintenance is a set of programs that ensure the safety and security of the organization's employees as developed (Pham et al., 2019). A comprehensive definition of human resources maintenance is a set of programs that the company's management seeks to apply in order to maintain employees and take care of them, including these programs (occupational safety and health programs, psychological support for the worker, health care, recreational programs) to improve the general level of organizations. Therefore, the dimensions of human resources maintenance are represented in occupational safety and health, psychological support for employees, health care, and entertainment for employees.

Buhai and Nielsen (2008) found that improving the physical work environment and occupational health and safety practices has a positive impact on the performance of companies because of its significant impact on the level of productivity. And the study by Katsuro et al. (2010) found that following safety procedures at work reduces employee accident rates, which has a positive moral impact on the production volume. At the same time, the study by Nekoie-Moghadam et al. (2013) found that Preventive measures for employees are the most positive moral factors in organizational commitment, followed by social welfare, insurance, and retirement. Beheshtifar and Safarian (2013) found that medical care had the most impact on organizational development, followed by preventive measures.

Lane's study (2016) concluded that preventive services are the most influential factor in individual achievement motivation, followed by social services. At the same time, the study by Ybema et al. (2016) shows that human resources maintenance programs significantly impact employee development in organizations. And the study confirmed by Al-Taii et al. (2016) that human resource maintenance programs, especially social services, greatly impact organizational agility.

In connection with the literature review on organizational agility, Zhang and Sharifi (2000) considered it as «the capacity of an organization to deal with sudden events, facilitate overcoming risks, and enable it to turn opportunities into advantages in the work environment» (Overby et al., 2006). Sambamurthy et al. (2003) defined organizational agility as «the capacity of an organization to rapidly redesign its processes and design new processes on time to ensure taking advantage of dynamic market conditions» (Hamad & Yozgat, 2017). Being the organizational capacity to detect unexpected events in the field of work and respond to them proactively, the dimensions of organizational agility are represented in the agility of sensing, agility in decision-making, and the agility of practice or application (Warr & Inceoglu, 2012).

Aburub's (2015) results revealed variations between organizations regarding their level of organizational agility. There is also a weak effect of organizational resource planning systems on organizational agility in some organizations. In contrast, the results of the (Panda & Rath, 2016) study showed that information technology enables the organization to achieve organizational agility and that spending on information technology leads well to achieving the organization's competitive advantage compared to others. And the study of (L'Hermitte et al., 2016) identified purposeful and focused mechanisms for collaborative action.

One of the most important results is the existence of a positive effect of organizational agility on the performance of employees (Alhadid, 2016). Khoshlahn and Ardabili (2016) showed a positive relationship between organizational agility and transformational leadership.

A study by Dizari and Garoosi (2016) indicated that the dimensions of the components of teamwork represented in mutual support, union, and cooperation have a significant positive relationship with organizational agility. And the study by Chamanifard et al. (2016) confirmed a strong direct relationship between organizational agility and organizational commitment. The study by Panda et al. (2017) found that Human information technology is important in improving organizational agility. While Saha et al. (2017) revealed that organizational agility increases the effectiveness of human resources, and it also affects the nature of the work being done.

The current study agrees with most previous studies on the importance of maintaining human resources and organizational agility. This study differs from previous studies in dealing with the relationship between the maintenance of human resources and organizational agility in the area under study (northern border region), which has not been done before within the limits of the researchers' knowledge.

Methodology and research methods. The study hypotheses are as follows:

H1: There were no statistically significant differences between the opinions of the study sample regarding the level of human resources maintenance programs according to their demographic characteristics (gender, level of education, and the number of years of experience) in the entity subject to application.

H2: There is no statistically significant relationship between human resources maintenance programs and organizational agility in the entity subject to application.

H3: There is no statistically significant effect of human resources maintenance programs (occupational safety and health, health care and psychological support for employees, recreational means for employees) on organizational agility in its various dimensions in the subject of the application.

The survey list included (56) sentences, and it was divided into three parts as follows: The first part is about measuring the characteristics of the study sample in terms of gender, educational level, and the number of years. The second section of the experiment is the measurement of human resources maintenance programs, which was measured using (41) statements. In turn, the third part is to measure the promotion of organizational flexibility using (15) statements. A Likert scale was used that included five levels of satisfaction ranging from strongly disagree (1) to strongly agree (5).

The study population consists of all employees in the Municipality of the Northern Borders Region and its branches, amounting to (1181) individuals at the time of conducting the study in 2022, distributed over the main center and affiliated municipalities.

The study sample consisted of (384) employees in the organization and assuming that the phenomenon under study is achieved in the community by (%50) and with a confidence factor of (%95), that is, the permissible error limits, which are (%5). The sample size was calculated using the equation (Zikmund, 1991):

$$N = (Z)^2 \times P (1-P) / (D)^2 \quad (1)$$

N = community size; Z = the corresponding standard score, the significance level is (%95) and is equal to (% 1.96); D = error rate and equal to (%5); P = availability of the phenomenon under study = (%50).

The number of correct answers was (253), which represents (%66) of the total sample. Table 1 presents the distribution of the study population and its sample.

Table 1. Distribution of the study population and sample

Place	Men	Ladies	Sample	Responsiveness	Response Ratio
Arar Head Office	304	7	101	65	%64
Rafha Municipality	210	8	73	50	%68
Turaif Municipality	112	3	37	27	%73
Talat Al Tamiat Municipality	82	2	27	18	%67
Shabat Nesab Municipality	161	0	52	33	%63
Um Khanser Municipality	22	1	7	4	%57
Municipality of um Shrem	61	1	20	11	%55
Municipality of Owaiqila	59	2	20	13	%65
Municipality of Lina	82	1	27	18	%67
Rawdat Al Habbas Municipality	63	0	20	14	%70
Total	1156	25			
Total Number		1181	384	253	%66

Sources: developed by the authors.

Figure 1 shows the study model that includes the current study variables. Regarding the independent variable (human resource maintenance programs), the study relied on studies (Lin, 2016) and (Ybema et al., 2020), which are occupational safety and health, health care and psychological support for employees, and recreational means for employees. The dependent variable (organizational agility) was used by Pak (2011). It contains the dimensions of agility of decision-making, the agility of sense, and agility of application or practice. The paragraphs of the questionnaire were formulated and developed to serve the purposes of the study.

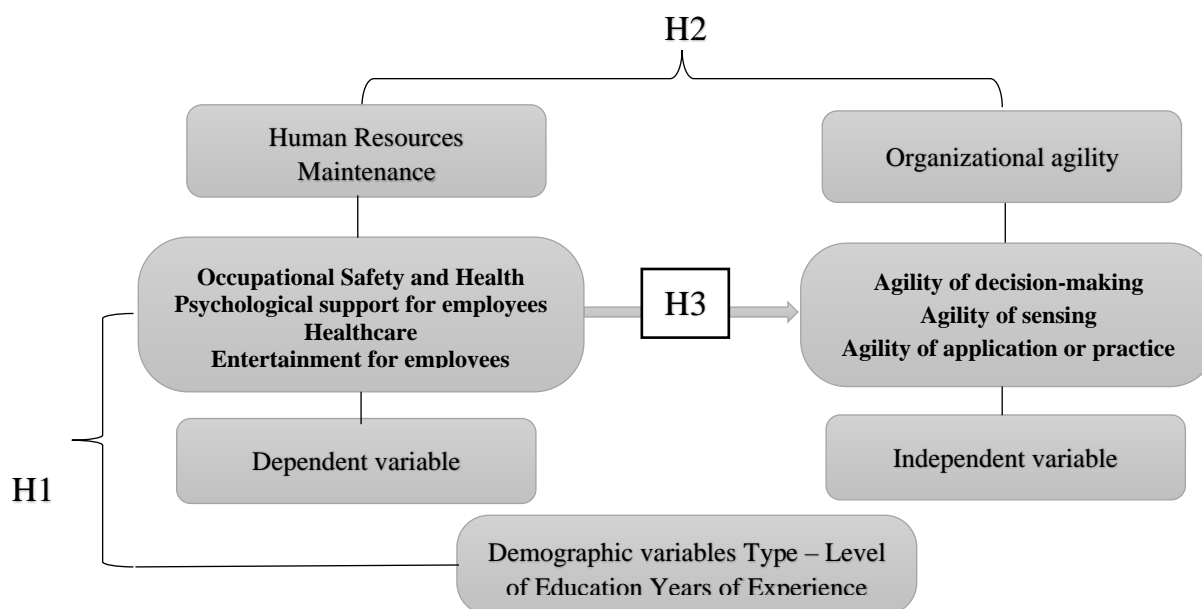


Figure 1. Study model

Sources: developed by the authors.

Table 2 shows that the domains of the human resource maintenance programs questionnaire have high stability and self-validity values, as they were as follows: occupational safety and health (0.606, 0.778), psychological support for employees (0.728, 0.853), healthcare (0.792, 0.889), entertainment for employees (0.801, 0.894), and it was also found that the domains of the organizational agility questionnaire have high

stability and self-truth values, as they were as follows: the agility of decision-making (0.814, 0.902), agility of sensing (0.743, 0.861), the agility of application or practice (0.699, 0.699). 0.836), and these values are acceptable and suitable for conducting this study, as the results of Table 1 show that all values are higher than (0.60).

Table 2. Stability and Honesty Tests

Dimension	number Paragraphs	Stability Test	Self-honesty
		Alfa Cronbach's coefficient	
Occupational Safety and Health	8	0.606	0.778
Psychological support for employees	9	0.728	0.853
Healthcare	11	0.792	0.889
Entertainment for employees	13	0.801	0.894
Agility of decision-making	3	0.814	0.902
Agility of sensing	5	0.743	0.861
Agility of application or practice	7	0.699	0.836
Overall Scale	56	0.897	0.947

Sources: developed by the authors.

Results. H1: There are no statistically significant differences between the views of the study sample regarding the level of human resources maintenance programs according to their demographic characteristics (gender, level of education, number of years of experience) in the subject of the application.

To test this hypothesis, it was based on the mean and standard deviation and analysis of single variance (One Way ANOVA) regarding gender, level of education, and the number of years of experience. Table 3 displays the findings of a statistical examination of employee feedback on human resources maintenance programs in the entity subject to application by gender, as follows:

Table 3. Result of the opinions of those surveyed by gender for the level of human resources maintenance programs

HR Maintenance Programs	Males		Females		Sig.
	Mean	Std.	Mean	Std.	
Occupational Safety and Health	4.12	0.25	3.98	0.23	0.88
Psychological support for employees	3.24	0.16	3.46	0.19	0.33
Healthcare	4.07	0.22	4.03	0.21	0.42
Entertainment for employees	1.94	0.33	2.14	0.30	0.56

Sources: developed by the authors.

Table 3 no statistically significant variations exist between the opinions of the research sample due to gender, noting that the mean of the respondents' answers about occupational safety and health for both males and females. Employees increased to (4.12) and (3.98), respectively, and health care to (4.07) and (4.03), while the answers of the respondents were medium about psychological support programs for employees, as they came to (3.24) and (3.46), respectively. The rate of recreational programs for male and female employees decreased to (1.94) and (2.14), respectively.

Table 4 displays the findings of the one-way analysis of variance (one-way ANOVA) of the opinions of the study sample on the level of human resources maintenance programs according to gender.

Table 4. Results of monovariance analysis (one-way ANOVA) for a point of view those surveyed by gender for the level of human resources maintenance programs

Dimension	Contrast source	Total squares	Degrees of freedom	Average squares	P Value	Significance
Occupational Safety and Health	Between groups	2.077	2	1.038	1.180	0.031
	Within groups	220.001	315	0.698		
	Total	222.771	317			

Continued Table 4

Dimension	Contrast source	Total squares	Degrees of freedom	Average squares	P Value	Significance
Psychological support for employees	Between groups	2.675	2	1.337	1.676	0.242
	Within groups	194.902	315	0.618		
	Total	197.481	317			
Healthcare	Between groups	2.019	2	1.009	1.793	0.340
	Within groups	207.243	315	0.657		
	Total	209.262	317			
Entertainment for employees	Between groups	1.777	2	0.888	0.657	0.120
	Within groups	163.834	315	0.520		
	Total	165.620	317			

Sources: developed by the authors.

Table 4 indicates no statistically significant variations exist between the opinions of the research sample due to gender. It is statistically significant at the significance level (0.01). Sig is greater than the level of morality, which indicates that there is no significant difference between the views of the study sample on the level of human resources maintenance programs. The researcher attributes the lack of difference in the opinions of employees by gender about human resources maintenance programs is due to the nature of what is assigned to employees at the application point did not differ by gender, where activities and functions are practiced in a balanced and equal manner due to a lack of discrimination in terms of gender, in the distribution of workloads.

Table 5 demonstrates the statistical analysis findings of employees' opinions on human resources maintenance programs in the entity subject to the application according to the level of education.

Table 5. Result of the opinions of those surveyed by the level of education for the level of human resources maintenance programs

HR Maintenance Programs	Males		Females		Sig.
	Mean	Std. Deviation	Mean	Std. Deviation	
Occupational Safety and Health	3.81	0.22	3.92	0.27	0.78
Psychological support for employees	3.11	0.18	3.13	0.14	0.03
Healthcare	4.13	0.20	4.09	0.17	0.34
Entertainment for employees	1.87	0.36	2.08	0.32	0.51

Note: Sig. – Statistical Significance.

Sources: developed by the authors.

Table 5 shows no statistically significant differences between the opinions of the research sample due to the educational level variable, noting that the mean of the respondents' answers about health care for males and females rose to (4.13), (and 4.09), respectively, while occupational safety and health works to (3.81), (3.92), respectively. The answers of the respondents were average on the psychological support programs for employees, as they came (3.11), (3.13) respectively, and the mean for entertainment programs for male and female employees decreased to (1.87), (2.08), respectively.

Table 6 also shows the results of the analysis of single variance (one-way ANOVA) of the opinions of the study sample on the level of human resources maintenance programs according to education levels.

Table 6. Results of monovariance analysis (one-way ANOVA) from the point of view of those surveyed by the level of education for the level of human resources maintenance programs

Dimension	Contrast source	Total squares	Degrees of freedom	Average squares	P Value	Significance
Occupational Safety and Health	Between groups	2.863	3	0.954	1.090	0.330
	Within groups	221.033	313	0.706		
	Total	223.896	316			
Psychological support for employees	Between groups	2.563	3	0.854	1.706	0.460
	Within groups	194.243	313	0.621		
	Total	196.806	316			

Continued Table 6

Dimension	Contrast source	Total	Degrees of	Average	P Value	Significance
Healthcare	Between groups	2.945	3	0.981	1.843	0.420
	Within groups	213.243	313	0.683		
	Total	216.188	316			
Entertainment for employees	Between groups	1.878	3	0.634	0.846	0.134
	Within groups	175.263	313	0.562		
	Total	177.141	316			

Sources: developed by the authors.

Table 6 shows an agreement between the opinions of the study sample according to the educational level, which has a statistical significance at the level of significance (0.01). The values of Sig were higher than the significance level, indicating no significant difference between the opinions of the study sample at the level of human resource maintenance programs. Males and females, in addition to the similarity in the scientific level of most of the employees in the Municipality of the Northern Borders Region in general.

Table 7 demonstrates the outcomes of the statistical analysis of employees' opinions on the level of human resources maintenance programs in the entity subject to the application according to the experience factor.

Table 7. Result of a point of view those surveyed by the level of experience in the level of human resources maintenance programs

HR Maintenance Programs	Males		Females		Sig.
	Mean	Std. Deviation	Mean	Std. Deviation	
Occupational Safety and Health	3.88	0.22	4.11	0.19	0.67
Psychological support for employees	3.03	0.16	3.09	0.23	0.27
Healthcare	3.91	0.24	4.13	0.21	0.44
Entertainment for employees	2.12	0.34	2.31	0.30	0.50

Sources: developed by the authors.

Table 7 shows the research sample's opinions are not statistically different from one another due to the variable of experience levels, noting the high mean of the respondents' answers about occupational safety and health for both males and females to (3.88), (4.11), respectively, and health care to (3.91), (4.13), respectively. While the respondents' answers were medium about psychological support programs for employees, where they came (3.03), (3.09) respectively, and the mean of recreational means for employees for both male and female employees decreased to (2.12), (2.31), respectively.

Table 8 also shows the one-way ANOVA analysis of the data's findings and opinions of the study sample on the level of human resources maintenance programs according to experience levels, as follows:

Table 8. Results of monovariance analysis (one-way ANOVA) from the point of view of those surveyed by the level of experience for the level of human resources maintenance programs

Dimension	Contrast source	Total squares	Degrees of freedom	Average squares	P Value	Significance
Occupational Safety and Health	Between groups	5.809	2	2.90	2.22	0.231
	Within groups	1.786	247	0.01		
	Total	7.595	249			
Psychological support for employees	Between groups	5.564	2	2.78	1.07	0.147
	Within groups	1.706	247	0.01		
	Total	7.27	249			
Healthcare	Between groups	5.987	2	2.99	2.41	0.212
	Within groups	1.886	247	0.01		
	Total	7.873	249			
Entertainment for employees	Between groups	34.087	2	17.04	0.091	0.374
	Within groups	1.886	247	0.01		
	Total	35.973	249			

Sources: developed by the authors.

It is clear from Table 8 that the research sample's opinions are not statistically different from one another due to the variable of experience levels. With a significance level of (0.01), it is statistically significant. The level of sig. exceeds the moral level. There are no appreciable differences in the research sample's perceptions regarding human resources maintenance programs. The absence of a difference in the opinions of employees according to experience about the level of human resources maintenance programs is due to the nature of routine work in the Municipality of the Northern Borders region, where it represents a group of repetitive activities. Therefore, the level of experience in the subject matter of the application will not affect the judgment of the study sample of working individuals. From the foregoing, it becomes clear that the first hypothesis is correct, as there are no statistically significant differences between the opinions of the study sample due to the variables of gender, education, and experience regarding the level of human resource maintenance programs.

H2: There is no statistically significant relationship between human resources maintenance programs and organizational agility in the entity subject to application. To prove the validity of this hypothesis or not, Pearson's correlation coefficient model was used where table 9 shows the following:

Table 9. Matrix of correlation coefficients between study variables

Variables	Occupational Safety and Health	Psychological support for employees	Healthcare	Entertainment for employees	Agility of decision making	Agility of sensing	Agility of application or practice
Occupational Safety and Health	1						
Psychological support for employees	0.723*	1					
Healthcare	0.677*	0.780*	1				
Entertainment for employees	0.654*	0.763*	0.792*	1			
Agility of decision-making	0.755*	0.724*	0.823*	0.699*	1		
Agility of sensing	0.562*	0.834*	0.765*	0.776*	0.708*	1	
Agility of application or practice	0.578*	0.781*	0.702*	0.638*	0.820*	0.897*	1

Sources: developed by the authors.

Table 9 demonstrates a positive moral correlation between human resources maintenance programs represented in each (occupational safety and health, psychological support for employees, health care, recreational means for employees) and after the agility of decision-making (one of the dimensions of organizational agility) in the entity under study. The highest of these dimensions was a link between health care and decision-making agility, where their correlation coefficient was (0. 823) at a significant level of (0.01). The least of these dimensions was the correlation between entertainment and agility of decision-making, where the value of their correlation coefficient was (0. 699) at a significant level of (0.01).

There is a positive moral correlation between human resources maintenance programs represented in each (occupational safety and health, psychological support for employees, health care, recreational means for employees) and after the agility of sensing (one of the dimensions of organizational agility) in the entity under study. The highest of these dimensions was a link between psychological support for employees and the Agility of sensing, where the value of their correlation coefficient (0.834) at a significant level of (0.01), and the least of these dimensions was the correlation between occupational safety and health and sensing agility, where the value of their correlation coefficient was (0. 562) at a significant level of (0.01).

There is a positive moral correlation between human resources maintenance programs represented in each (occupational safety and health, psychological support for employees, health care, recreational means for employees) and after the agility of the application or practice (one of the dimensions of organizational agility) in the entity under study. It is clear that the highest of these dimensions was a correlation between psychological support for employees and the agility of the application or practice, where the value of the coefficient of their correlation (0. 781) at a significant level of 0.01, and the least of these dimensions was the

correlation between occupational safety and health and the agility of application or practice, where the value of their correlation coefficient was (0.578) at a significant level of (0.01).

Based on the foregoing, the second hypothesis is incorrect. Where the analysis shows a statistically significant relationship between programs for maintaining human resources and enhancing organizational agility in the entity in question, the results of the current study are consistent with the studies of Al-Taii et al. (2016) and Saha et al. (2017).

H3: there is no statistically significant effect of combined human resources maintenance programs (occupational safety and health, health care, psychological support for employees, recreational means for employees) on organizational agility in its various dimensions (Table 10).

Table 10. Multiple regression results between human resources maintenance programs and the agility of decision-making, the agility of sensing, the agility of application, or practice

Dependent variable	Independent variables	Regression coefficient β	t	Significance
Agility of decision-making	Occupational Safety and Health	0.651	18.49	0.000
	The psychological uncler of the employees	0.622	18.27	0.000
	Healthcare	0.540	16.85	0.000
	Entertainment for employees	0.382	15.64	0.000
Agility of sensing	Occupational Safety and Health	0.621	16.92	0.000
	Psychological support for employees	0.584	19.26	0.000
	Healthcare	0.609	15.29	0.000
	Entertainment for employees	0.436	15.03	0.000
Agility of the application or practice	Occupational Safety and Health	0.604	18.97	0.000
	Psychological support for employees	0.584	17.65	0.000
	Healthcare	0.496	16.34	0.000
	Entertainment for employees	0.307	15.66	0.000

Note: t - t-test result.

Sources: developed by the authors.

Table 10 shows a statistically significant positive effect between human resource maintenance programs and decision-making agility as one of the dimensions of organizational agility. And that there is a statistically significant positive effect between human resource maintenance programs and agility of sensing as one of the dimensions of organizational agility, In addition to the existence of a statistically significant positive effect between human resources maintenance programs and the agility of application or practice as one of the dimensions of organizational agility.

Table 11 shows the overall relationship between human resources maintenance programs and organizational agility.

Table 11. Results of the multiple regression of the relationship between HR maintenance programs and organizational agility

Dependent variable	Independent variables	Regression coefficient β	t	Significance
Dimensions of Organizational agility	Dimensions of HR maintenance programs	0.87	22.14	0.000

Note: t - t-test result.

Sources: developed by the authors.

Table 11 shows a statistically significant favorable effect between the overall human resources maintenance programs on organizational agility in its various dimensions. The previous results indicate the rejection of the null hypothesis. Thus, human resource maintenance programs have a statistically significant effect on organizational agility in the Municipality of the Northern Borders Region. The results of the current study are consistent with the results of (Al- Taii et al., 2016).

Conclusions. The findings show that the research sample of employees is not significantly different from one another in the Municipality of the Northern Borders Region according to the variables of gender, level of education, and experience with the level of human resources maintenance programs. This is due to the nature

of the environment of the Northern Borders Region in terms of the close level of education and experience, in addition to the existence of a great deal of equality and justice in terms of gender. There is no discrimination in the labor market between men and women. Thus they are subject to the same working conditions regarding administrative procedures and practices, and therefore the opinions are compatible. These results support H1. This confirmed that there is no difference of opinion among the study sample about the level of human resource maintenance. It was concluded that the mean of the employees by gender, level of education, and experience was high concerning occupational safety and health programs as well as health care programs. At the same time, it was a medium for psychological support programs for employees and low for entertainment programs.

Also, the research showed a positive correlation between human resource maintenance programs represented in each (occupational safety and health, psychological support for employees, healthcare, recreational means for employees) combined and between each dimension of agility organizational agility (decision-making agility, agility Sensitivity, agility of application or practice) in commercial banks in the northern border region. Moreover, human resources maintenance programs have a strong, statistically significant positive effect on the general level of organizational agility in its various dimensions. These results support H2 and H3. The current study's findings agree with the studies that showed a positive correlation between the independent and dependent variables of the study. Therefore, distinctly maintaining human resources contributes to achieving high levels of agility organization and vice versa. Beheshtifar and Safarian (2013) confirmed the impact of human resource maintenance programs on organizational development.

While (Katsuro et al., 2010) confirmed that human resource maintenance programs greatly positively impacted productivity, the most important of these programs is safety measures at work. According to Dyer & Shafer (1998), paying attention to the design and implementation of various human resources activities leads to increasing employees' capabilities and enhancing their sense of common goals between them and the organization, which positively affects the level of organizational agility. Lin (2016) found confirmed that human resource maintenance programs increase the achievement motivation of the individual. Ybema et al. (2020) find that there is an affirmative effect of human resource maintenance programs on the development of employees in organizations.

The study results provide a basis for identifying the main trends that must be paid attention to develop institutional performance. So, in particular, the study confirms that Enhancing institutional awareness of the importance of maintaining human resources and working to develop and diversify these programs by setting a set of goals related to the desires of employees and working to improve employee entertainment programs by holding cultural, artistic, social, sports and literary competitions, as well as paying attention to programs related to psychological support for employees, which would raise the morale of employees and increase their ability to deal with any pressures or disturbances. In addition to designing an effective system that includes material and moral incentives that motivate employees and motivate them to develop and change, and provides innovative non-traditional solutions to all work problems and procedures. And the adoption of flexible organizational structures to improve organizational agility at the institutional level, as organizational agility requires a more dynamic environment and climate.

Author Contributions: conceptualization, S. M.; methodology, S. M. and A. S.; validation, S. M. and A. S.; formal analysis, S. M.; investigation, A. S.; data curation, A. S.; writing-original draft preparation, A. S.; writing-review and editing, S. M.; visualization, A.S. and S.M.; project administration, S.M.; funding acquisition, S.M.

Conflicts of Interest: Authors declare no conflict of interest.

Data Availability Statement: Not applicable.

Informed Consent Statement: Not applicable.

References

- Aburub, F. (2015). Impact of ERP systems usage on organizational agility: An empirical investigation in the banking sector. *Information Technology & People*, 28(3):570-588. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Albrich, W. C., & Harbarth, S. (2008). Healthcare workers: source, vector, or victim of MRSA? *The Lancet infectious diseases*, 8(5): 289-301. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Alhadid, A., (2016). The Effects of Organizational Agility on Organizational Performance, *International Review of Management and Business Research*, 5(1): 273-278. Retrieved from [\[Link\]](#)

- Amponsah-Tawiah, K. (2013). Occupational health and safety and sustainable development in Ghana. *International Journal of Business Administration*, 4(2), 74-78. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Al-Taii, M. A., Ismael, H. K., & Khudhur, S. A. (2020). The Role of Human Resources Maintenance in Achieving Organizational Agility. *Tanmiyat al-rafidain*, 39(125), 43-62. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Beheshtifar, M., & Safarian, M., (2013), HR Maintenance: A Vital Factor to Promote Job Commitment. *International Journal of Academic Research in Business and Social Sciences*, 3 (2): 197-202. [\[Google Scholar\]](#)
- Berman, E. M., Bowman, J. S., West, J. P., & Van Wart, M. R. (2021). *Human resource management in public service: Paradoxes, processes, and problems*. CQ Press. [\[Google Scholar\]](#)
- Buhai, S., Cottini, E., & Westergård-Nielsen, N. (2008). The impact of workplace conditions on firm performance. *Tinbergen Institute Discussion Paper*, 08-077/3. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Chamanifard, R., Nikpour, A., Chamanifard, S., & Nobarieidish, S. (2015). Impact of organizational agility dimensions on employee's organizational commitment in Foreign Exchange Offices of Tejarat Bank, Iran. *European Online Journal of Natural and Social Sciences: Proceedings*, 4(1 (s)), pp-199. [\[Google Scholar\]](#)
- Dizari, A. Z., & Garoosi, R. S. (2015). Relationship between Teamwork and Organizational Agility from the Perspective of Employees of Social Security Organization Branches in Tehran, Iran. *Journal of educational and management studies*, 5(1), 288-232. [\[Google Scholar\]](#)
- Dyer, L., & Shafer, R. A. (1998). From human resource strategy to organizational effectiveness: Lessons from research on organizational agility. [\[Google Scholar\]](#)
- Hamad, Z., & Yozgat, Y. (2017). Does organizational agility affect organizational learning capability? Evidence from commercial banking. *Management Science Letters*, 7(8), 407-422. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Harraf, A., Wanasika, I., Tate, K., & Talbott, K. (2015). Organizational agility. *Journal of Applied Business Research (JABR)*, 31(2), 675-686. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Katsuro, P.; Gadzirayi, C. T.; Taruwona, M., & Mupararano, S. (2010). Impact of occupational health and safety on worker productivity: A case of Zimbabwe food industry. [\[Google Scholar\]](#)
- Khoshlahn, M., & Ardabili, F. S. (2016). The role of organizational agility and transformational leadership in service recovery prediction. *Procedia-Social and Behavioral Sciences*, 230, 142-149. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- L'Hermitte, C., Tatham, P., Bowles, M., & Brooks, B. (2016). Developing organisational capabilities to support agility in humanitarian logistics: an exploratory study. *Journal of Humanitarian Logistics and Supply Chain Management*, 6(1), 72-99. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Lin, C., Li, X., & Lam, L. W. (2020). Development or maintenance? Dual-oriented human resource system, employee achievement motivation, and work well-being. *Human Resource Management*, 59(4), 311-325. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Liu, C. Y., Yang, Y. Z., Zhang, X. M., Xu, X., Dou, Q. L., Zhang, W. W., & Cheng, A. S. (2020). The prevalence and influencing factors in anxiety in medical workers fighting COVID-19 in China: a cross-sectional survey. *Epidemiology & Infection*, 148. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Hamad, Z., & Yozgat, Y. (2017). Does organizational agility affect organizational learning capability? Evidence from commercial banking. *Management Science Letters*, 7(8), 407-422. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Nabil, A. (2020). Occupational Safety and Health for Digital Library Workers in Egyptian Universities: Field Studies. *Scientific Journal of Libraries, Documents and Information, Faculty of Arts, Cairo University*, 2, p.4. [\[CrossRef\]](#)
- Najrani, M. (2016). The endless opportunity of organizational agility. *Strategic Direction*. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Nekoie-Moghadam, M., Beheshtifar, M., Ghatavi, S., & Aboei, M. (2013). Relationship between Human Resource Maintenance System and Organizational Commitment in Executive Organizations. Retrieved from [\[Link\]](#)
- Overby, E., Bharadwaj, A., & Sambamurthy, V. (2006). Enterprise agility and the enabling role of information technology. *European Journal of Information Systems*, 15, 120-131. [\[Google Scholar\]](#) [\[CrossRef\]](#)
- Panda, S., & Rath, S. K. (2016). Investigating the structural linkage between IT capability and organizational agility: A study on Indian financial enterprises. *Journal of Enterprise Information Management*. [\[Google Scholar\]](#) [\[CrossRef\]](#)

Panda, S., & Rath, S. K. (2017). The effect of human IT capability on organizational agility: an empirical analysis. *Management Research Review*, 40(7), 800-820. [[Google Scholar](#)] [[CrossRef](#)]

Pham, N. T., Tučková, Z., & Jabbour, C. J. C. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386-399. [[Google Scholar](#)] [[CrossRef](#)]

Saha, N., Gregar, A., & Sáha, P. (2017). Organizational agility and HRM strategy: Do they really enhance firms' competitiveness?. *International Journal of Organizational Leadership*, 6, 323-334. [[Google Scholar](#)]

Sambamurthy, V., Bharadwaj, A., & Grover, V. (2003). Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS quarterly*, 237-263. [[Google Scholar](#)] [[CrossRef](#)]

Shah, M. (2019). Green human resource management: Development of a valid measurement scale. *Business Strategy and the Environment*, 28(5), 771-785. [[Google Scholar](#)] [[CrossRef](#)]

Warr, P., & Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person–job fit. *Journal of occupational health psychology*, 17(2), 129. [[Google Scholar](#)] [[CrossRef](#)]

Ybema, J. F., van Vuuren, T., & van Dam, K. (2020). HR practices for enhancing sustainable employability: implementation, use, and outcomes. *The International Journal of Human Resource Management*, 31(7), 886-907. [[Google Scholar](#)] [[CrossRef](#)]

Zafar, S., Bin Mahmood, S. U., Tharwani, A., & Nasir, N. (2018). Bilateral psoas abscess after extracorporeal shock wave lithotripsy: Reminder of a rare complication. [[Google Scholar](#)]

Zain, M., Rose, R. C., Abdullah, I., & Masrom, M. (2005). The relationship between information technology acceptance and organizational agility in Malaysia. *Information & management*, 42(6), 829-839. [[Google Scholar](#)] [[CrossRef](#)]

Sharifi, H., & Zhang, Z. (1999). A methodology for achieving agility in manufacturing organisations: An introduction. *International journal of production economics*, 62(1-2), 7-22. [[Google scholar](#)] [[CrossRef](#)]

Мухаммад Алі Саад, Північний прикордонний університет, Саудівська Аравія

Самер Ахмед Аль-Наджар, Північний прикордонний університет, Саудівська Аравія.

Управління персоналом, як фактор підвищення організаційної гнучкості: на прикладі муніципалітету Північного Прикордоння

Ця стаття узагальнює аргументи та контраргументи в межах наукової дискусії з питання підвищення організаційної гнучкості підприємств. Метою дослідження є визначення впливу ефективності управління персоналом на підвищення організаційної гнучкості. На основі проведеного теоретичного аналізу літературних джерел та підходів до розв'язання проблеми в роботі висунуто ряд гіпотез відповідно до поставленої мети. Вихідні дані дослідження сформовано на основі анкетування 384 співробітників Секретаріату регіону північних кордонів у Королівстві Саудівська Аравія. Анкета складалася з трьох частини: перша частина враховувала характеристики досліджуваної вибірки щодо статі, рівня освіти та кількості років; друга – оцінювання ефективності управління людських ресурсів; третя – оцінювання організаційної гнучкості. Для оцінювання ефективності управління людськими ресурсами та організаційної гнучкості використовувалася шкала Лайкерта, що включала п'ять рівнів задоволення від абсолютно не згоден (1) до абсолютно згоден (5) Методичним інструментарієм проведеного дослідження стали методи кореляційного аналізу та ANOVA моделювання. Емпіричне дослідження було проведено з використанням статистичного пакета для соціальних наук (SPSS), що дозволило проаналізувати вхідні дані та перевірити гіпотези дослідження. За результатами дослідження встановлено відсутність статистично значущих відмінностей між статтю, рівнем освіти та досвідом щодо програм підтримки людських ресурсів у муніципалітеті Північного Прикордонного регіону, а також існування взаємозв'язку між підтримкою людських ресурсів у різних вимірах та організаційною гнучкістю. Отримані результати свідчать про значний позитивний вплив ефективності управління людськими ресурсами на організаційну гнучкість. Результати проведеного дослідження можуть бути корисними при розробці програм підтримки розвитку персоналу для підвищення організаційної гнучкості.

Ключові слова: збереження людських ресурсів, охорона праці, психологічна підтримка працівників, охорона здоров'я, розваги для працівників, організаційна маневреність.