Factors Affecting the Professionalism of Human Resource Management in the Public Sector with an Emphasis on Environmental Management

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ABSTRACT

Background: This study was conducted to determine the factors affecting the professionalism of human resources management in the Ministry of Industry, Mines, and Trade.

Methods: A survey method was selected to collect data. We asked the managers of the Ministry of Industry, Mines, and Trade to answer the questionnaire. The statistical population included 165 vice presidents and heads of the Ministry of Mining Industry and Trade, who were selected by simple random sampling. The measurement tool was a Delphi questionnaire and researcher-made questionnaires. Reliability, convergent validity, and divergent validity of the data were tested. The relationship between the investigated variables was tested based on a causal structure with the partial least squares technique, and then the Goodness of fit (GOF) index was calculated.

Results: The coefficient of determination of the endogenous structures of the research model was desirable. Moreover, the coefficient of determination of merit-oriented and health-oriented ministry creation was reported as 0.527 and 0.707, which were acceptable values. Also, cross-validity redundancy and commonality were obtained in the range of 0.15 to 0.35 $\geq$.

Conclusion: The predictive power of the research constructs is estimated as a medium to strong.

1. Introduction

Globalization requires competitive, dynamic management structures and employees who accept more responsibility, take the initiative, create influential relationships, and share information to continuously increase and change customer expectations and improve the quality of services [1, 2]. In the modern world, to measure and compare countries with one another, the gross national product index (GNP) is not considered a measure of development; rather, the status of wealth per capita of countries from different sources is essential. Three leading indicators are human resources, physical resources, and natural resources. Among these, the effect of human resources is the most important, and it is considered a significant indicator of ranking countries in terms of development. Therefore, obtaining high-quality and committed human resources in the organization requires providing professional solutions. The creation and implementation of such solutions require the existence of professional trends in the behaviors and work approaches of human resources [3-5]. Therefore, concerning the global markets, first of all, professionalism should be established in all sections, especially in human resource management [6, 7]. The professionalization of the field of human resources makes this field improve its natural position in organizations and enterprises, and in fact, between the importance of human resources and the position of human resources management as a process that is responsible for providing,

maintaining, nurturing and motivating employees and increasing their productivity. Therefore, the desired presence in the global markets and the professional performance of affairs in public and private sectors require professionalism in all jobs, especially human resource management [8]. Although there is a general agreement that if employees have two characteristics of expertise and ethics, it indicates their professional status [8, 9], the professionalization of human resources behaviors and functions is a challenging practice despite its necessary consequences. Based on the functions of human resource management, professionalism, and its dimensions are not defined. Based on previous research, the lack of standard policies in professionalizing employees' behaviors is one of the biggest challenges facing future organizations to exploit the professionalism of employees. Studies have shown that the lack of indicators of professionalism in organizations could lead to a decrease in organizational commitment, job satisfaction, and professional-organizational conflicts [10, 11]. Most studies in the field of professionalism have been done only among doctors, nurses, and teachers. According to these challenges, as the statistics and evidence narrate, most of the targets of human resource professionals, especially in governmental organizations, have not happened. Strengthening this concept in a ministry such as the Ministry of Industry, Mining, and Trade is of double importance due to its hierarchical effects on organizations and subordinate bodies [12, 13]. The Ministry of Industry, Mines and Trade is a professional organization that carries out professional activities according to the defined mission and vision requirements. Basically, in a situation where the economy and industry are struggling in crises caused by internal mismanagement and external political pressures, the existence of behaviors arising from professional principles and internationally approved standards by the employees of governmental organizations and in Iran, in particular, micro and macro managers and decision-makers of human resources can have a positive effect on the proper use of assets and reducing program deviations due to unprofessional behaviors [14, 15]. Despite all the efforts made in the Ministry of Industry, Mines, and Trade, unfortunately, in this organization, the topic of human resources development is based on a superficial view and based on solving the task and only on holding numerous training courses for earning career points leads. One of the problems of these government agencies is the approximate weakness in developing specialized approaches in human resources and the neglect of specialized training, including in the field of environmental management. Concerning this issue, it is now largely acknowledged that employees play an important role in achieving corporate greening by performing a wide range of pro-environmental behaviors. Despite the growing interest in studying environmental management and its potential benefits to industry, few studies have examined the antecedents of employees' pro-environmental behaviors. While the success of the organization in reaching some of the predicted goals and also the access to environmental initiatives at the organizational

level depends on the behavior of the employees. As such, these behaviors are considered to be important contributors to corporate environmental performance that have implications not only for the natural environment but also for organizations (e.g., financial performance) and their members (e.g., leader effectiveness and employee job satisfaction). Therefore, the main issue is the urgent need to develop and expand the culture of professionalism and professionalism in human resource management by the Ministry of Industry, Mine and Trade [16]. In this regard, it is necessary to identify influencing factors, general and specific dimensions, and consequences of governmental organizations in the form of a conceptual model so that future decisions and policies in this area can be adopted in the shadow of this knowledge. Therefore, the present study was conducted to determine the effective factors on the professionalism of human resource management in the industry, mining, and trade sectors, emphasizing environmental management. This study was conducted based on the previous work of the authors [16].

2. Materials and Methods

2.1 Participants

The statistical population in the quantitative part of the research consists of all the Ministry of Industry, Mines, and Trade managers, numbering 288 people. Simple random sampling was used. Cochran's formula determined the sample size. It was observed that at least 165 samples should be selected to generalize the results to the statistical population at the confidence level of 95% and with an error of 0.05.

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N}\left(\frac{z^2 pq}{d^2} - 1\right)} = \frac{\frac{(1.96)^2 \times 0.5 \times 0.5}{0.05}}{1 + \frac{1}{288}\left(\frac{(1.96)^2 \times 0.5 \times 0.5}{0.05} - 1\right)}$$

$$\cong 164.81$$

2.2 Tools

Based on a previous study [16] eighty-three indicators related to the professionalism model of human resources management in the Ministry of Industry, Mining, and Trade were included in the first round Delphi questionnaire. In the second round, 80 indicators were validated in the Delphi questionnaire. We gathered the opinion of the experts about the importance of each index with a fuzzy spectrum of 7 degrees. The measurement criterion was also the de-fuzzed value. The structure of the model test questionnaire included elements of the paradigm model, including 80 items, 25 components, nine sub-dimensions (categories), and six main dimensions. Lawshe's content validity ratio (CVR) was used to validate the indicators in the test phase of the presented

model. To calculate this index, the opinions of experts were used in the field of the desired test content, and by explaining the objectives of the test to them and providing operational definitions related to the content of the questions, the experts were asked to rate each of the questions based on the three-part Likert scale "It is necessary", "the item is useful but not necessary," and "the item is not necessary" to classify. Then, the content validity ratio was calculated. In the previous study [16], the viewpoint of 12 experts was used to ensure the correctness of the selected indicators. Based on the number of experts who evaluated the questions (12 people), the minimum acceptable CVR value was considered 0.56. The questions for which the calculated CVR value was lower than the desired value, according to the number of experts evaluating the question, were excluded from the test.

2.3 Data analysis

In the first step, screening and identifying the final indicators of the research were done. The Delphi technique was used to "identify" and "sieve" indicators or reach an agreement on the importance of decision-making indicators which is one of the methods of acquiring group knowledge and is also used in making decisions about qualitative issues. The Delphi method was developed in the 1950s by the Rand Corporation. This method is based on structured surveys to use the insights of experts. Therefore, this method is intended for expert group decision-making, enabling the collection of evaluation standards and preserving the quality of expert judgments. Of course, since judgments are often expressed as "no" or "very," some ambiguity is likely to result in the Delphi process.

3. Results and Discussion

In this study, 165 participants were included in the analysis; from them, 139 participants were male (84%), 14 (8%) were less than 35 years old, and 61 (37%) were between 35 and 45 years old. To check the validity of the structure, the self-adjustment method (bootstrap) was used, which gives the t statistic. The observed correlations were significant at the 5% error level if the bootstrap t-value exceeds 1.96. The analysis showed that the factor loading value was more significant than 0.6 in all cases; therefore, the items play an essential role in explaining each factor. The t-statistic was also more than 1.96 in all cases Thus the observed factor loadings were statistically significant. The combined reliability value [17] was examined and was greater than 0.7 in all variables, so the reliability was confirmed. Convergent validity was checked based on the external model and calculating the average variance extracted [18]. The average variance extracted [18] greater than 0.5 was obtained, so the convergent validity is confirmed. Considering the assurance of the measurement models through the reliability test, convergent validity, and divergent validity, the results of the external model can be confirmed. The relationship between the investigated variables in each research hypothesis was tested based on a causal structure with the partial least squares (PLS) technique. The general research model is

shown in Table 1. In this model, the output of Smart PLS software and a summary of the results related to the standard factor load of the variables, are presented. The t-statistic and the value of bootstrapping to measure the significance of relationships are also shown in Table 1. The coefficient of determination of the endogenous structures of the research model is desirable. It was reported that the coefficient of determination of merit-oriented and health-oriented ministry creation is 0.527 and 0.707, which is an acceptable value. Also, the value of cross-validity redundancy and cross-validity commonality was obtained in the range of 0.15 to 0.35 or greater than 0.35. Therefore, the predictive power of the research constructs is estimated as a medium to strong. The goodness of fit value in this study is in Table 2. The Goodness of fit (GOF) index is equal to 0.754, so the model fits well. The final model is represented in Fig 1. The present study was conducted to present a paradigmatic model of professionalism in human resource management in the public sector. Based on the research findings, 83 conceptual codes, 25 components, nine sub-dimensions (categories), and six main dimensions were extracted. The main category consists of two categories "human resources management" under examples 1-talent management and succession planning 2-career path management and "utilizing professional management" under behavioral examples 1-professional performance of managers and 2-professional ethics of managers were identified. A person who performs an activity professionally must display his/her unique skills. The amount and level of activities assigned to human resource managers and specialists require defining and providing a framework for professional skills. However, the level of professional skills also depends on the position of specialists and managers. A set of professional skills is needed at the managerial level, and at the executive level, other skills are considered [19]. Two categories of "individual capacities" under the examples of 1- knowledge competencies, 2- skill competencies, and 3-attitudinal competencies, as well as "functional organizational factors" in the field of human resources, including 1-recruitment and employment of professionals, training, and improvement and 3- Performance evaluation and service compensation are causal conditions, i.e., root and effective conditions on the professionalism of human resources management. One of the most critical needs of human resources and one of the most important activities of human resources management in any organization is to gradually upgrade employees' knowledge and skills to match their capabilities with organizational needs and environmental conditions. In this context, previous studies pointed to individual and skill factors and competencies [20, 21]. Intervening conditions through "extra-organizational factors" by 1-the macro-political, legal and legal environment, that are, revision and development of human resource management policies and rules in upstream documents; also, having an educational setting through communication and scientific interaction-continuous and continuous research of the organization with the university, 3-having a social and cultural environment that supports the

culture based on Islamic values and human dignity in the society, the conditions are affecting the realization of professionalism They provide in the organization. In this regard, previous works also referred to the factor of reviewing and developing human resource management policies and rules in their research [22-24]. The background conditions based on the strengthening of "organizational-institutional factors" include: 1-strategic factors, such as the existence of a vision and the formulation of professional missions of human resources management; 2-structural factors, including providing the position and decision-making capacity for human resource managers; 3-structural elements (development of infrastructures information and communication technology for the effectiveness of the electronic and digital human resources management system, providing the necessary financial resources to support the professionalism of human resources, optimizing the knowledge management system); and 4-cultural factors such as respect for the human dignity of employees and non-instrumental attitude provide the ground for the realization of professionalism in the public sector. According to managers and sociologists, having organizational contexts appropriate to the nature of the activity of professional employees not only leads to their satisfaction but also helps the organization in a more precise way to achieve short and long-term goals by using the correct application of their professional. Managers and employees of governmental organizations carry out their organizational affairs; in addition to organizational and legal criteria, they need a set of moral and value guidelines to help them in organizational behaviors and actions. In this context, studies mentioned the factor of continuous and dynamic planning in the dimension of strategic elements [25-27] and the element of revising, modifying, simplifying, and updating the laws in the field of human resources, which is in the area of structural elements [17]. The strategy of re-creating human resources and governance and giving legitimacy to human resources along with intervening conditions and general background conditions will bring the result of creating professionalism in human resources management in the ministry through "creating merit-oriented and health-oriented organization" and "creating a growing human force" in the organization. Choosing competent people with the necessary abilities for crucial and sensitive positions and paying attention to the principle of meritocracy in the distribution of power and division of duties and responsibilities among the elites of the society is effective in the stability, growth, and progress of the country. Especially in the current sensitive situation, the diversity of political lines and tendencies and different attitudes in the economic, cultural, and social fields should not cause precious human resources and enormous human resources, and efficient managers to be deprived. Previous research also confirmed the efficiency of human resources

due to the realization of the professionalism of human resources management [28, 29]. In the present research, we developed and tested a model in which green HRM practices were positively related to employees' pro-environmental behaviors, and pro-environmental psychological climate mediates and environmental knowledge moderates the relationship between green HRM practices (green recruitment and selection, green training and development, green performance management and appraisal, green reward and compensation, and green empowerment) and pro-environmental behavior. The hypothesized model was supported by the findings of the study. Green HRM practices positively affected employees' pro-environmental behaviors. This finding was in line with the findings of Dumont et al. (2017). They showed how the pro-environmental behavior of employees was improved in companies with green HRM practices. Since pro-environmental behavior is not officially appraised and rewarded, these behaviors are principally influenced by individual perceptions of the organizational green climate resulting from the adoption of, rather than influenced directly by, green HRM practices. The past few years have witnessed growing academic interest in HRM's role in environmental management (Jackson & Seo, 2010; Renwick et al., 2013). The present results showed that green HRM has an indirect impact, through pro-environmental psychological climate, on pro-environmental behavior. Despite the conceptual linkages between green HRM and pro-environmental behavior, insufficient empirical evidence addresses this association. Establishing an institution or association called the Association of Human Resources Professionals at the highest level and the country's legislator by forming specialized human resources working for groups in the field of various industries and inviting competent, capable, and professional human resources deputies and managers in those fields, regarding education and develop their professional abilities and organize the processes of strategic human resource management with complete and comprehensive executive supervision and thus provide a suitable background and platform for the implementation of the main pillars of professionalism in their organization. The influence of professionalism and the professionalization of human resources in organizations, especially government organizations, is considered from the direction of human resources management and through the mediation of human resources professionalism associations, which have beneficial and constructive consequences for the individual, organization, and society.

3.1 Limitations

This model is presented for the Ministry of Health, it may not apply to other ministries or organizations with different structures.

Table 1: Summary of research hypothesis test results

Independent variables	Dependent variables	factor load	t
Individual capacities	Human resources management	0.44	5.451
Individual capacities	Professional human resources	0.45	6.900
Organizational-functional factors	Human resources management	0.37	3.344
Organizational-functional factors	Professional human resources	0.45	5.424
Human resources management	Regeneration of human resources	0.36	3.661
Human resources management	Governance and legitimacy	0.34	3.162
Professional management	Regeneration of human resources	0.33	3.475
Professional management	Governance and legitimacy	0.27	2.006
Organizational-institutional factors	Regeneration of human resources	0.31	3.892
Organizational-institutional factors	Governance and legitimacy	0.41	5.190
Extra-organizational factors	Regeneration of human resources	0.29	2.814
Extra-organizational factors	Governance and legitimacy	0.32	3.096
Regeneration of human resources	Creation of a competent ministry	0.40	3.173
Regeneration of human resources	Professional human resources	0.41	5.639
Governance and legitimacy of human resources	Creation of a competent ministry	0.40	5.533
Governance and legitimacy of human resources	Professional human resources	0.52	6.911
recruitment and selection	human resource management	0.43	5.791
training	human resource management	0.39	3.752
performance management	Professional manpower	0.42	5.813
reward and compensation	human resource management	0.51	5.750
Professional empowerment	human resource management	0.41	4.890

Table 2: Calculation of the overall fit index of the model

| Main structures	R_2	Communality	GOF
Regeneration of human resources	0.87	0.84	
Governance and legitimacy	0.80	0.91	
Creation of a worthy ministry	0.52	0.60	
Organizational-institutional	0.01	0.72	
Organizational-functional	0.01	0.77	0.75
Individual capacities	0.01	0.86	
Extra-organizational factors	0.01	0.88	
human resources management	0.60	0.82	
A growing human resource	0.70	0.83	
Professional manpower	0.73	0.83	
Professional human resources	0.03	0.81	
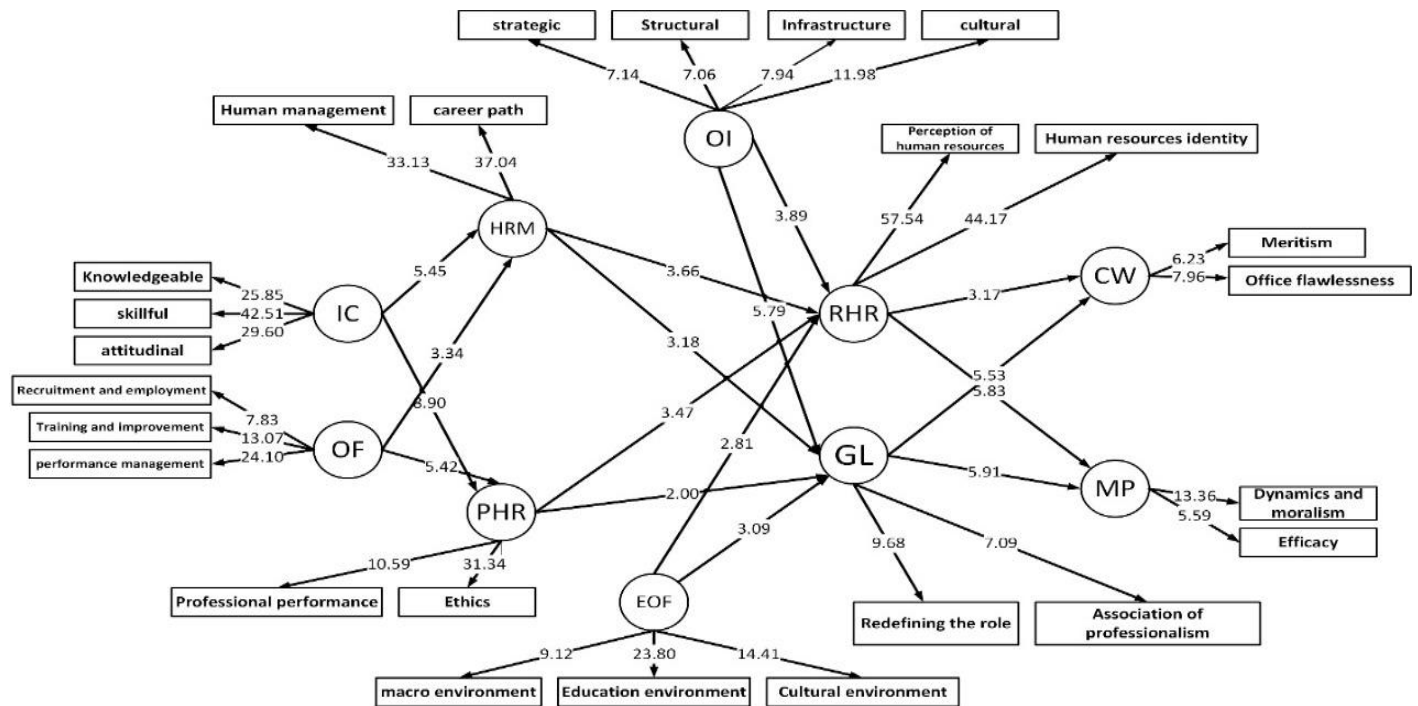
Figure 1: Significance of variable relationships with partial least squares method (bootstrapping)
*IC = Individual capacities OF = Organizational-functional HRM = human resources management RHR = Regeneration of human resources EOF = Extra-organizational factors OI = Organizational-institutional PHR = Professional human resources GL = Governance and legitimacy CW = Creation of a worthy ministry MP = Professional manpower

4. Conclusion

In general, professionalism should be considered a critical concept in governmental organizations because the weakness of these organizations in attracting professional human resources leads to the dissatisfaction of employees and clients and ultimately to the failure to achieve the goals foreseen for these organizations. Therefore, it is suggested that according to the model presented in the current research, governmental organizations should move toward creating the necessary conditions for realizing professionalism in the organization by following up on the determined measures and strategies while keeping in mind the existing platforms, the positive results obtained from the professionalism of resource management human being in the organizations.

Authors' Contributions

Ahmad Asadi: Data collection and article writing. Nabiullah Mohammadi: Study design; data analysis; supervision of all stages of the study; and its final approval. Homa Droudi: a review of the article. Arshad Farahmandian: Data collection. The text of the article was approved by all authors.

Conflicts of Interest

The authors declare no conflicts of interest.

Acknowledgements

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