


## Human resources strategy in hospital industry development with the mediating role of competitive advantage

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### Abstract

**Introduction:** Today's organizations are looking for factors that create a competitive advantage. Human resources are one of the best factors in creating a competitive advantage. Human resource strategies focus on the organization's goals, what needs to be done, and what needs to be changed. Therefore, the realization of growth and development strategies depends on the desirability of human resource strategies. The present study aimed at investigating the effect of human resource strategies in hospital industry development considering the mediating role of competitive advantage.

**Methods:** The study is applied in terms of purpose and descriptive-correlational in terms of data collection. The statistical population included private and public agencies and organizations related to hospital industry and hospital industrial development. Using Cochran's formula, 265 people were determined as a statistical sample and a simple random sampling method was used to distribute the research questionnaires. To collect data, three questionnaires, including human resources strategy questionnaire, hospital industry development questionnaire, and competitive advantage questionnaire were used. To analyze data, the structural equation technique in the form of SMART PLS software was used.

**Results:** The results revealed that the competitive advantage mediated the relationship between human resource strategy and hospital industry development. In fact, the direct impact of human resource strategies on industrial development was 0.343 and indirect impact of human resource strategies on industrial development mediated competitive advantage was 0.228.

**Conclusion:** The research results suggest that human resource strategies should create competitive advantages to move towards hospital industry development based on existing potentials in the province.

**Keywords:** Hospitals; Industry; Organization and Administration; Workforce.

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### Introduction:

Considering human resources as a strategic resource in organizations, indicates the need to pay attention to the role and the importance of human resources in management decisions. (1).

Increasing pressure to ensure the productivity and effectiveness of resources of companies to improve hospital management systems has made them more complex, and this process, which requires a focus on high-quality task

areas, is observed in implementation stage (2).

Practical experience and academic research suggest that the implementation of strategy has a great impact on the competitive advantage and effectiveness of the organization and is a key factor in the success of a business or organization (3).

Being aware of their facilities and limitations to achieve long-term goals and missions in the light of equipping resources, procedures, processes, today's organizations have adopted the strategic planning approach and have developed several strategic plans with this framework.

Although they have realized that development of such plans can bring success for them, they have ignored the fact that successful development of these strategies does not guarantee their success, since until these strategies have not been implemented successfully, they would be useless (4).

Lack of emphasizing strategy implementation in many organizations has caused that only 10 to 15 percent of organizations to implement the strategies successfully. To survive in today's dynamic environment, responding to market threats and opportunities is essential (5).

In other words, companies not only need to adapt to the changing environment, but also need to take advantage of change to gain a competitive advantage. Thus, organizations and institutions must compete to create a competitive advantage in the 21st century (6).

### ***Theoretical Framework***

Human resource activities play a vital role in creating and strengthening competitive advantages with their proper interaction. Optimal human resource strategies along with other factors that create a competitive advantage result in superiority of the hospital industry. Thus, organizations must design

effective human resource activities by identifying the characteristics of employees and by applying appropriate human resource strategies to create a competitive advantage. Effective human resource activities are not easily imitated. The effectiveness of these activities depends on a set of works done in an integrated and coordinated way and it is difficult to imitate it (7).

In general, human resource strategy is about decisions that have a major and lasting impact on recruitment and improvement of employees and on the relationship between hospital management and their staff. Human resources strategies focus on the organization's goals (what needs to be done and what needs to be changed) (8).

Organizations face new challenges for their survival, and overcoming these challenges requires paying more attention to development and strengthening of internal skills and abilities (9). Development of strategy in organizations and different sections of society is a response to developments taking place in various areas, especially in the areas of economics and hospital industry. In today's complex and dynamic world, an organization, institution, region, and country that do not recognize its internal strengths, capacities, and strengths as well as its environment will undoubtedly be a loser (10).

### ***Human resource strategies***

Human resource strategies are a set of what the organization considers to do on various aspects of human resource management policies and practices.

State that a strategy, human resource strategy, or any other type of management strategy should have two key elements, including strategic goals (what the strategy supports to achieve it) and a practical plan.

The goal of human resource strategies is to guide the development and implementation

of human resource management programs. These strategies enable communication with all goals related to organization to understand how to manage human resources. They also provide a basis for strategic plans and enable the organization to evaluate results with goals. Human resource strategies provide a vision for the future and define the activities needed and the way of realizing the vision. In this study, the human resource strategies proposed by Armstrong, are examined (11).

These strategies include human resource planning, human resource provision, human resource development, performance management, rewards and employee relationships. In human resource planning strategy, managers estimate the number, expertise, and skills of the work force to achieve goals (12).

In this regard, in the human resources provision strategy, information about jobs and knowledge and skills are collected to determine how to attract labor from inside or outside the organization (13).

### ***Competitive Advantage***

The concept of competitive advantage is directly related to desired values of customer, so that when the values offered by an organization are closer and consistent to the customer's desired values, it can be stated that the organization has competitive advantage over its competitors in one or more criteria (14).

Thus, to achieve a competitive advantage, an organization must consider both its external position and its internal capabilities. There are two important issues in the path of creating a competitive advantage: 1- This path is a continuous process that leads to excellent performance and competitiveness of the organization. It means that organization creates a sustainable competitive advantage that is valuable to customers and always superior to competitors

thanks to its competencies. 2- Due to increasing environmental complexity and intensity of competition, competitive advantage is either easily imitated by competitors or soon fades in the eyes of customers and must be replaced with new advantages. Accordingly, the organization should think about finding its competitive advantages (15).

Creating and maintaining a competitive advantage requires competencies that create value for customers by relying on the capabilities of organization. Company resources include a variety of assets, capabilities, organizational processes, information, knowledge, etc. that the company controls in such a way to develop and implement value creating strategies. These resources can be considered in three classes of tangible, intangible and organizational capabilities (16).

Human resources that can create competitive advantage include technology, financial resources, physical resources, human resources, organizational resources and communication resources. Financial, physical and technological resources can be easily imitated by competitors by investing, but human and organizational resources are capabilities that are formed over time and slowly, and their imitation by competitors is very difficult and requires investment and much time (17).

### ***Hospital industry development***

Competition is the basis of hospital industry development. The role and share of hospital industry in the national economy is due to its effect the growth and development of the factors of production (18).

Industrialization of country makes it possible to better meet the material and spiritual needs of society and enhance organization of production and social work to a higher and better level. In this regard, regardless of

social self-sufficiency, it brings economic and political independence for the country. Industrial development in addition to increasing the share of industrial goods in the export of goods has caused continuous changes in production methods, productivity growth, supply of new goods, increasing the share of urban population and changes in the share of capital expenditures and consumption in incomes (19).

This study aimed to investigate the effect of human resource strategies in hospital industry development considering the mediating role of competitive advantage.

**Method**

The present study was applied in terms of purpose and descriptive-correlational in terms of data collection. The statistical population included private and public agencies and organizations related to hospital industry and hospital industrial development, such as the Planning and Budget Organization, Provincial Government Office, Medical industry improvement room of the province. The statistical sample of the study was 265 people selected using Cochran's formula and a convenient random sampling method was used to distribute the research questionnaires. The data collection tool in this research included three questionnaires collected cross-sectionally, including human resource strategies questionnaire, competitive advantage questionnaire, and hospital industry development questionnaire. Cronbach's alpha was used to examine the reliability of questionnaires and content validity was used to examine its validity. The content validity of the questionnaires measures the ability of the selected items and its constituent areas to reflect the studied concepts.

To examine the content validity of the questionnaire, researchers suggested that items higher than 0.75 should remain in the study and the rest, which did not score at least

0.75, should be excluded to enrich the questionnaire (20). In this study, 5 questions, which scored less than 0.75, were excluded from the questionnaire and finally, 60 questions remained to examine the subject of research (Table 1).

Table 1. Research questionnaire description

Questionnaire	Component	Questions	Reliability
Human resource strategy	Human resource planning	1-8	0.85
	Providing human resources	9-17	0.77
	human recourse development	18-25	0.81
	performance management	26-29	0.91
	reward	30-33	0.82
Competitive advantage	Employee relationships	34-40	0.88
	Financial performance	1-5	0.75
	Services	6-9	0.85
	Profitability	10-12	0.77
Hospital industry	-	1 to 8	0.71

In the present study, structural equation modeling and partial least squares method were used to analyze and fit the model. The minimum partial least squares proposed by Huang et al., (21) for data analysis were considered in two steps. In the first step, confirmatory factor analysis and in the second step, path analysis was used to analyze the relationships between structures.

In this research, by introducing the sources used, the ethical principle of scientific fiduciary has been observed and the copyright of the authors of the works has been respected. In addition, all respondents have completed the questionnaires with their satisfaction and have participated in the research voluntarily. The structural equation technique in the form of SMART PLS software was used for analyzing the data.

**Results**

The demographic characteristics of the statistical sample are described in Table 2:

Table 2. Demographic characteristics of the statistical sample

Variable	Sub-categories	Number	Percent
Gender	male	154	58
	female	111	42
Education	Master	98	37
	Bachelor	109	41
	PhD	58	22
Years of service (Years)	less than 10	119	45
	10 - 20	80	30
	more than 20	66	25

The Stone-Geisler index has been used to evaluate the quality of the structural model. This criterion determined the predictive power of the model, and if an endogenous structure obtains three values of 0.02, 0.15 and 0.35, respectively, it had weak, moderate, and strong power to predict related exogenous structures.

The value obtained for the Human resource strategies variable was 0.72, for the Competitive Advantage was 0.76, and for the Hospital industry was 0.82. Since the values of variables were more than the proposed value of 0.35, Therefore, the exogenous structures of the model had high predictive power.

To assess the discriminative validity at the structure level (latent variables), two tables of Latent Variable Correlations and Average Variant Extracted (AVE) from the output of Partial Least Squares (PLS) algorithm were used. As shown in (Table 3), the values of the original diameter for each latent variable and its correlation with other latent reflective variables in the model were higher. Therefore, the discriminative validity of the measurement model at the structure level was confirmed.

Table 3. Examining discriminative or divergent validity using Fornell-Larcker criterion

Row	A	B	C
Human resource strategies	0.74		
Competitive advantage	0.71	0.72	
Hospital industry	0.72	0.65	0.66

In the present study, Goodness of Fit criterion was used to fit the model. This criterion had four indices of absolute, relative, inner model and outer model, and the results showed good fit of the model (Table 4).

Path analysis was the extension of regression methods and, in fact, it was application of multivariate regression with regard to development of causal models. The aim of path analysis was to obtain quantitative estimates of causal relationships between a set of structures. In fact, the inferences depend on the paths identified by the study design. The results of this test are shown in (Figure 1) and (Figure 2). The significance of the model is confirmed due to the high absolute T-value from level of 1.96. In other words, human resources strategies affect hospital industry development ( $t = 2.678 - \beta = 0.343$ ). The effect of human resources strategies on competitive advantage ( $t = 8.007 - \beta = 0.549$ ) was positive and significant. The effect of competitive advantage on the hospital industry development ( $t = 3.211 - \beta = 0.417$ ) was positive and significant. The effect of human resource strategies on hospital industry development was mediated by competitive

Table 4. Model fit indices

Model fit indices	Value
Absolute	0.677
Relative	0.814
Outer model	0.753
Inner model	0.658

advantage ( $t = 8.007 - \beta = 0.228$ ) was positive and significant.

In Figure 1, the absolute value of the number T in the relationships between the variables was examined. As can be seen, this number was obtained in all relations above 1.96 and therefore the significance of the relations was confirmed.

Figure 2 shows the standard beta coefficients of the relationships between variables. As can be seen, human resource strategies had a direct impact on industrial development of 0.343 and indirect impact on industrial development through a competitive advantage variable of 0.228.

**Discussion**

The results of present study showed that the significance of the model is confirmed. In other words, human resources strategies affect hospital industry development. This result suggests that one unit increase in human resources strategy will result in an increase in hospital industry development by

0.343. Also, the human resource strategy variable can predict about 12% of the hospital industry development variable, which is in line with the results of research conducted by Chen and Huang (21).

Results showed the effect of human resources strategies on competitive advantage was positive and significant. It means that an increase in the independent variable will increase dependent variable. In other words, one unit of increase in human resource strategy, increases the competitive advantage by 0.549. Considering the coefficient of determination between the two variables, it is also observed that more than 30% of the changes in the competitive advantage variable can be predicted through the human resources strategy variable. This result shows that with increasing the competitive advantage variable, the variable of hospital industry development also increases.

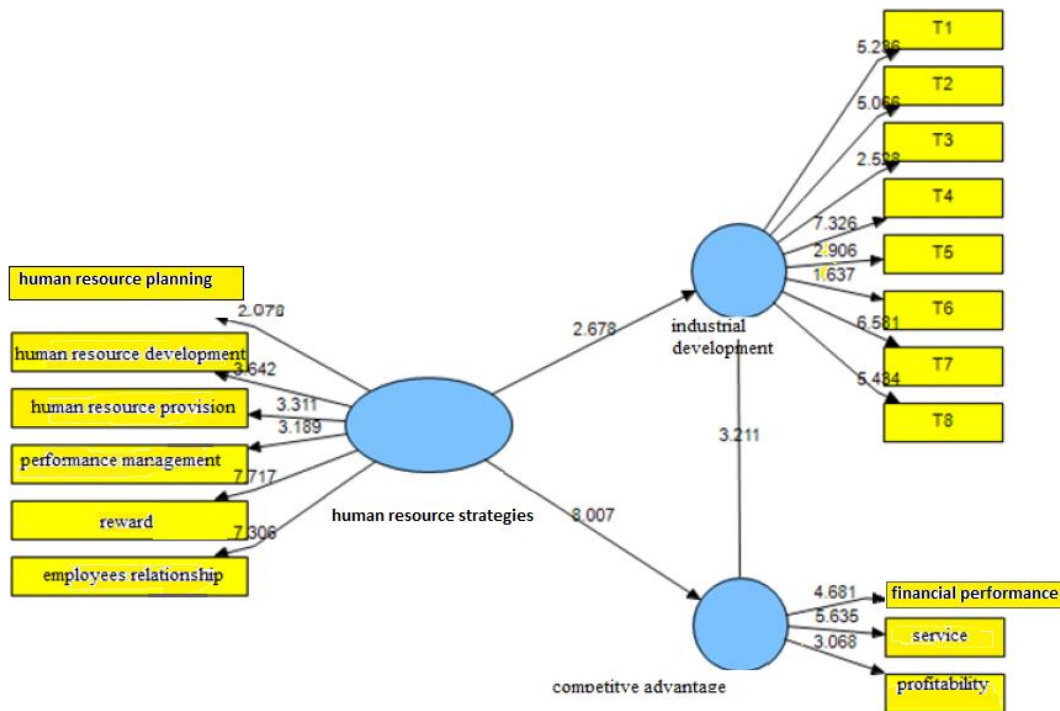


Figure 1. Examining significance of research model

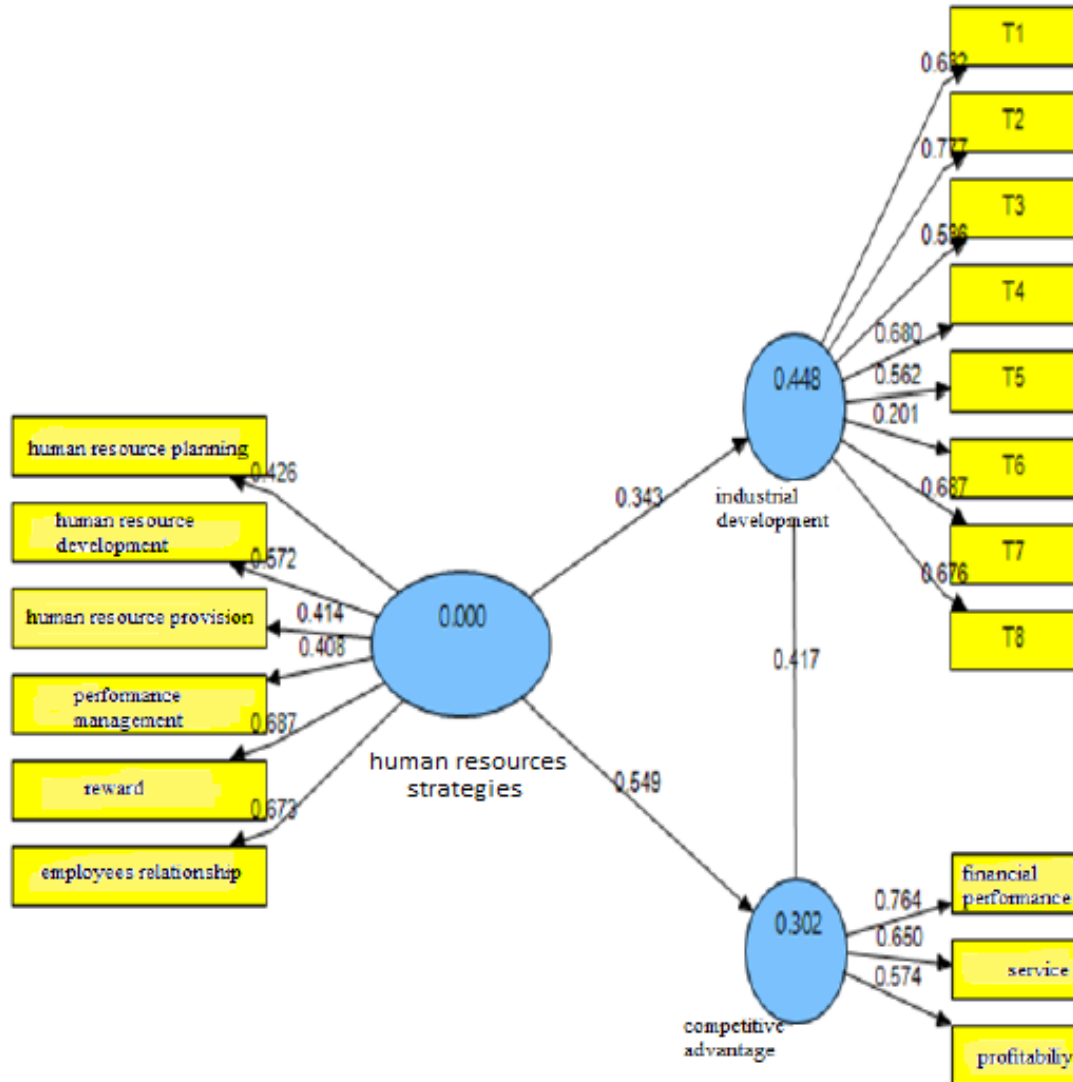


Figure 2. Examining beta coefficients o research sub-components

This result is in line with the results of research conducted by Amirnejad & Ajdari (14). The results also showed the effect of competitive advantage on the hospital industry development and this effect was positive and significant. This result indicates that with increasing the competitive advantage variable, the variable of hospital industry development will also increase. In other words, by increasing one unit in the competitive advantage variable, the variable of hospital industry development will increase by 0.417. Also, considering the coefficient of determination between the two

variables, the competitive advantage variable predicts about 18% of changes in hospital industry development. This result is consistent with the results of research conducted by Stuart & Brown (13). Finally, the results showed that the effect of human resource strategies on hospital industry development is mediated by competitive advantage and this effect is positive and significant. This result indicates that human resource strategies have an indirect effect on the industrial development of the hospital through the competitive advantage variable (0.228). In fact, the competitive advantage

through financial performance, services and profitability can have a better effect on the industrial development of the hospital.

This result is consistent with the results of research conducted by Nkuda, (22). It can be explained that human resource strategies both consolidate and strengthen the infrastructure needed to develop the hospital industry and development of the hospital industry will respond quickly and effectively to environmental change. In fact, a combination of coordinated and integrated human resource strategies, which have internal and external coordination with other strategies, play a key role in creating a competitive advantage and increasing the development capacity of the hospital industry. Therefore, creating a kind of alignment between human resource strategies and the development of hospital industry will be crucial for more flexibility in creating a competitive advantage. It should be noted that the hospital industrial development strategies need long-term orientations. In the external dimension, the framework and the hospital industry relationship with the global economy are important, and in the internal dimension, it should indirectly affect the allocation of resources among industries or influential groups in society.

Chen and Huang, human resource strategy plays a crucial role in development of hospital industry. In particular, planning and training of hospital work force and their benefits resulting from them are important factors in development of hospital industry (21).

Hospital industrial development strategies need long-term orientations. In the external dimension, the framework and type of relationship of hospital industry with the global economy are important, and in the internal dimension, it should indirectly affect the allocation of resources among industries or influential groups in society. To move

towards hospital industry development, West Azerbaijan Province needs to use coherent and efficient human resource strategies to train capable employees to create a competitive advantage and greater flexibility in the face of changes in the business environment. In fact, the ultimate goal of human resource strategies is to create a comprehensive and coherent framework for developing and training highly qualified employees to create a competitive advantage. However, in organizations, especially organizations involved in industrial development, little attention has been paid to importance and role of individuals in gaining the necessary skills to create a competitive advantage, as the main factor in the success of organizations in the hospital industry development. Since gaining competitive advantage and creating the necessary conditions for industrial development requires identifying effective human resource strategies, organizations involved in industrial development will be able to train motivated and unique employees with a talent of creating competitive capabilities through developing effective human resource strategies.

Results of testing the research hypotheses suggest that human resource strategies have a positive and significant effect on hospital industry development through the mediating role of competitive advantage. Stuart & Brown (13), and Amirnejad & Ajdari (14), emphasized the efficiency of human resources as a key factor in creating a competitive advantage. Nkuda, indicated that organizations that examine their human resources strategies would succeed in gaining competitive advantage (22).

Other influential factors in strategic human resource management are human resource managers who need to know how to align human resource strategies with strategies of hospital industry development and know how to prepare strategic plans and how to monitor



and evaluate their implementation. Therefore, it should be noted that the high level of hospital industry development will not be achieved merely by the mentioned measures and policies, but human resource strategies should be converted into practical plans, predicting the requirements and problems of implementation. In this regard, the ideas of the ideas of human resource employees should be used and the human resource unit should integrate its work force with the managers to evaluate the impact and importance of each of these ideas. In short, every organization needs to know and develop its core competencies for industrial development. These competencies show what capabilities are used by the organization. Then, barriers and bottlenecks to respond to change are identified, and mechanisms based on competitive characteristics are designed to address them.

Results of testing the research hypotheses suggest that human resource strategies had a positive and significant effect on hospital industry development through the mediating role of competitive advantage. Stuart & Brown (13), and Amirnejad & Ajdari (14), emphasized the efficiency of human resources as a key factor in creating a competitive advantage. Nkuda, indicated that organizations that examine their human resources strategies would succeed in gaining competitive advantage (22).

It can be stated that human resource strategies consolidate and strengthen the infrastructure needed for hospital industry development, and this stage, hospital industry development will respond quickly and effectively to environmental change. In fact, a combination of coordinated and coherent human resource strategies, which are internally and externally coordinated with other strategies, play a key role in creating a competitive advantage and increasing the development capacity of hospital industry. Thus, coordinating human resource strategies and hospital industry

development will be very important for more flexibility in creating a competitive advantage. Accordingly, it is recommended for other organizations involved in hospital industry development to assess and assess their existing status in terms of research variables and develop effective human resource strategies to achieve hospital industry development with the pathology of factors related to organization. Also, the limitation of this research was the use of special statistical population for data collection, which limits the generalizability of the results to other communities.

#### ***Author's contribution***

VAM and KRY developed the study concept and design. VAM acquired the data. VAM and KRY analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript.

#### ***Informed consent***

Questionnaires were filled with the participants' satisfaction and written consent was obtained from the participants in this study.

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#### ***Conflict of interest***

The authors declare that they have no conflict of interests.

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