Human resource development practices and organizational performance: Examining the mediating role of transformational leadership style

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Abstract

Human resource development practices focus on the specific goals of the organization, about what needs to be done and the change that needs to be applied. The most important and effective ways of human resource development are training and development, employee involvement and professional development. The employees of the organization pointed out. The main purpose of this study was to investigate the effect of using human resources practices on improving organizational performance with regard to the mediating role of transformational leadership style in the electricity industry in Iran. The present study was based on the purpose of an applied research and in terms of method was a descriptive-survey study. A questionnaire was used to collect research data. The statistical population of the present study consisted of senior and middle managers of companies under the Ministry of Energy that were active in the Iranian electricity industry. The number of these people was estimated at 883 in the initial study, and finally, using the Cochran’s formula, 268 people were selected as the sample size. After collecting data through a questionnaire, data analysis was performed using structural equation modeling. The results showed that human resource development practices have a positive and significant effect on the organizational performance of the companies under study. Has an effective mediating role. Since transformational leadership style is one of the prerequisites for the development of service organizations, by applying this style of leadership in the organization, as well as implementing effective measures and practices such as training with individual development approach and employee participation, organizational performance can be improved.

Keywords: Human resource development practices, organizational performance, transformational leadership, electricity industry, Iran.
Introduction

In recent years, the world has witnessed an increase in globalization in which the economies of many countries are connected to promote foreign trade through technological advances and interconnections (Cooke et al., 2020). Globalization, in a surge, has transformed the relations between nations and governments and has rapidly created complex links between cultures and human societies. In this situation, what is considered as an effective and influential pivotal element is to pay attention to human elements and components (Anwar & Abdullah, 2021). The leap has also boosted competition in domestic and foreign markets, encouraging organizations to hire and retain more talented workers. Several companies rely on their employees to gain a competitive advantage in the competitive market, which is strongly related to their human resource efficiency and human resource management (Lombardi et al., 2020). Human resource management includes tasks such as human resource preparation, human resource management, strategic recruitment, staff training, growth reward management, efficiency, employment relationships, health care, employee satisfaction, and employee service delivery. This includes policies and practices designed to improve organizational efficiency, employee engagement, and quality of work (Zhao & Zhou, 2020). Employee empowerment is the set of systems, methods and actions that go through Empowering the development of capabilities and competencies of individuals to improve and increase productivity, growth and prosperity of the organization and human resources are used according to the goals of the organization (Margherita & Bua, 2021). Human resource development practices is characterised as a blend of organised and unstructured learning activities, as well as performance-based activities, that improve individual and organisational competency, capability, and capacity to cope with and manage change (Gopinath & Poornappriya). Having human resource management practices positively improves company performance such as returns, profits, competition and market share. (Boon et al., 2018). The long-term profitability of organizations is the result of a clear strategy in applying effective practices of human resource development and having efficient employees (Aldamoe et al., 2012). Applying business visions that have been developed for the organization through leadership style will bring more benefits to the organization and will facilitate the organization's day-to-day processes and performance. Human resource development practices are a model of decisions that address policies and procedures related to human resource development and seek to improve the performance of employees and, by nature, the performance of the entire organization (Lai et al., 2020). By this definition, human resource development practices can be considered as the result of the existence of the organization. The purpose of developing and implementing human resource development strategies and practices is to link human resource policies and practices with strategic human resource goals, including human resource development, so that the organization can have internal coordination between human resource subsystems (Bazrkar & Moshiri-pour, 2021). That is, it creates integration and coherence, and in addition, it creates external integration and coordination between the human resources strategy and the organization's strategy (McClean et al., 2019). It is that effective human resource planning ensures increased productivity, profitability and social status of the organization. The organization paid attention to the importance of the role of human resources in converting data into outputs and concluded that among all the input data to the organization, including financial resources, raw materials, information and technology, human resources as the most valuable resources of organizational resources. It has a major and more effective role in converting data into outputs, so it is worthwhile for people to pay more attention to top managers of the organization (Jianget al., 2012). The main goal of human resource planning in any organization is to achieve organizational goals (Bazrkar, 2020). When working with an organization as an employee, people encounter various manage-
ment styles during their service that are sometimes considered appropriate and sometimes inappropriate. Employees' perceptions of how managers deal with issues depend on a variety of factors. But what is important is to provide an appropriate approach based on the level of maturity of employees, which in general leads to increased productivity of the organization and by describing the current situation of the organization and comparing it with existing models in leadership on the one hand and the existence of failures and experiences of failure to achieve The overall strategies of the organization and the lack of attention to the desired state of leadership and the application of management tastes on the other hand, occurs (Otoo, 2019). Today, research has shown that the performance of organizations is largely influenced by leadership styles (Chang, 2016). Leadership in the organization can increase guidance and motivation in employees by implementing the right styles and use it to achieve the goals of the organization. By choosing the right leadership style, managers can improve their morale and increase their ethical behaviors by positively influencing their work behaviors (Lopez-Cabrales et al., 2017). Managers are judged by the performance of the organization, attributed the success or failure of an organization to its leaders, and make a close relationship between the performance of the organization and the management style. Therefore, the issue of leadership in the organization is of great importance (Zhu et al., 2005). Companies operating in Iran's electricity industry, as one of the largest service providers in Iran, are no exception to this rule, and despite the desire of managers to implement the best management style and apply appropriate human resource development strategies, this question arises. What is the desired leadership style in this organization? The answer to this question depends on a correct understanding of the leadership style, which can be examined from two perspectives. First, from the point of view of managers who have made a certain leadership style their profession and believe in its implementation, and second, from the perspective of employees who recognize the leadership style of their managers. Because there is a deep relationship between organizational management style and employee productivity and satisfaction. However, for various reasons, such as following the example of organizations in other countries, regardless of the local situation in Iran or the involvement of external factors in the management of managers, tangible and tangible results are not seen in terms of organizational capabilities. Appropriate leadership and its mediating role in the relationship between human resource development practices and organizational performance in Iran's electricity industry, the purpose of this study is to investigate the relationship between human resource development practices and organizational performance with respect to the mediating role of transformational leadership style.

Due to the emphasis of Iran's 20-year vision on an economy based on the knowledge electricity industry Axis, Recognition of Challenges and Necessary Requirements in Achieving the Industry Vision Document in The next decade has attracted the attention of researchers, practitioners and experts And the need for strategic planning in the development of human capital has once again been raised more firmly. Although the need for high technology and capable and developed manpower with strategic thinking has long been considered and pursued in the Iranian electricity industry as one of the most important and strategic industries, but the bedrock and requirements of this planning are still in There are early stages of formation and this is a necessity Research in the field of human resource development methods and choosing the appropriate leadership style with human resource empowerment becomes even more necessary.

Thus, the importance and necessity of the present research can be examined in both theoretical and practical dimensions. Theoretically, this research can identify the role of organizational leadership and human
resource development strategy in an integrated and coherent model and determine the contribution of each of these elements and the effect of their mutual coordination on the success and performance of organizations. From a practical point of view, this research can help improve the performance of organizations by identifying different types of human resource development practices and its subsystems and providing a suitable model for their coordination. Also, since managers' intuition of how human resource development practices relate to leadership style can ultimately affects the performance of the organization, the study of leadership styles is also of particular interest in this study.

Theory and hypotheses development

Human resource development practices and organizational performance

Human resource development practices focus on the specific goals of the organization, on what needs to be done and what needs to be changed. The issues that these practices will address are: Ensuring that the organization has the authority to guarantee the employees it needs in the organization's practices to its goals (Su et al., 2018). The most important and effective practices of human resource development are training and development, employee participation and involvement, and professional development of the organization's employees (Otoo, 2019). In the model of human resources strategies, the styles of human resource management are committed (based on knowledge), productivity (based on job), obedient (based on contract relationships) and participatory (based on strategic alliance) for core employees, respectively, key, subsidiary and dedicated partners are offered. Recent theoretical studies on business practices show that competitive advantage can be derived from the organization's developed human resources (Chuang et al., 2016). Organizational resources that have the potential to create a competitive advantage include: technology, financial resources, physical resources, human resources, organizational resources and communication resources (Thite, 2020). Financial, physical and technological resources can be easily imitated by competitors' investments, but human and developed human resources are capabilities that are formed over time and slowly, and their imitation by competitors is very difficult and requires a lot of investment and time. (Kurland et al., 2010). Human resource development practices are one of the most important opportunities that employees expect the employer to create for them. Encouragement, rehabilitation and efforts to develop human resources will help retain and motivate employees (Fulmore et al., 2020). Human resources developed as an intangible asset when used in an operating system increases the company's ability to respond to turbulent environments and therefore can have a positive and significant impact on organizational performance. Accordingly, the first hypothesis of the research is as follows:

H1: Human resource development practices have a positive and significant effect on the organizational performance of the electricity industry.

Human resource development practices and transformational leadership

Human resource development is generally defined as a combination of structured and unstructured learning and performance-based activities that build individual, organizational competence, ability, and capacity to cope and manage change successfully (Otoo, 2019). And the constant changes that today's organizations are facing is the issue of human resource development and better performance of roles assigned to employees is one of the serious concerns of managers (Vermeeren et al., 2014). In order to deal with the highly unstable atmosphere in the global competition scene, the need for people in the role of leader is strongly felt. It is obvious that leadership will not survive in the third millennium and organizations will
need transformational leaders (Judeh, 2010). One important task of leadership revolves around energizing organizational constituencies and motivating followers and mobilizing resources towards the fulfillment of the organization’s mission (Ehrnrooth et al., 2021). Transformational leaders can improve productivity and performance in an unpredictable competitive environment by engaging in continuous change. These leaders can maintain the commitment of employees by considering the framework of appropriate practices in relation to human capital, and for this they must use the participation of employees in decision-making and provide an acceptable level of security for them, commitment and commitment. Increase (Ferris, 2013). Adopting appropriate practices in the field of human resource development will play a decisive role in the successful implementation of this type of leadership. Thus, the application of appropriate practices for human resources along with transformational leadership can guarantee emotional commitment and increase organizational productivity and performance (Lau et al., 2020). Accordingly, the first hypothesis of the research is as follows:

**H2**: Human resource development practices have a positive and significant effect on the transformational leadership of the electricity industry.

**Transformational leadership and organizational performance**

Leadership plays an important role in growing organizations and in individual performance (Yücel, 2021). Performance is the analytical procedure with the intention of ensuring that all organizational processes are in order to maximize employees’, teams’, and the organization’s productivity (Yücel et al., 2020). Transformational leadership directs followers’ attention to collective goals and encourages employees to pursue organizational goals to stimulate high-level motivations (Hoffmeister et al., 2014). Leadership is a process of social interaction; where leaders can influence the behaviors of their followers, they can strongly control performance outcomes (Birasnav et al., 2013). As the environment around organizations becomes more dynamic than before and organizations must move towards change to achieve success. Transformational leadership as one of the leadership paradigms to improve organizational performance in today's turbulent environment by empowering employees and creating an organizational culture in which ethical practices are considered the norm of behavior seeks to anticipate changes in the environment (Gumusluoglu et al., 2013). The results of many studies show that transformational leadership creates a high degree of employee satisfaction and improves individual and organizational performance (Su et al., 2012). Today we recognize a transformational leadership model which assumes that four human needs cannot be negotiated, namely needs that must be met if we want to be healthy, fully happy, fully functional human beings, where these needs can be met by leadership that is transformational (Astuty & Udin, 2020). Many theorists believe that transformational leaders get the most out of subordinates because they are able to inspire subordinates to increase their capabilities to succeed and develop subordinates’ problem-solving skills and innovation (Keevy & Perumal, 2014). Accordingly, the third hypothesis of the research is as follows:

**H3**: Transformational leadership has a positive and significant effect on the organizational performance of the electricity industry.

**The mediating role of transformational leadership**

The goal of human resource development practices is to provide guidelines for developing and implementing programs, as well as providing a means of conveying the organization's intentions on how to
manage human resources (Collins, 2021). These practices enable the organization to measure progress and evaluate the results, according to the desired goals (Amrutha & Geetha, 2020). Employee Relationship Strategy shows how to build lasting and collaborative relationships with employees and minimize conflict; increase their commitment to the organization and develop mutual benefits through processes of employee participation and intervention (Acosta-Prado et al., 2020). In addition to these practices, using transformational leadership style can improve organizational learning by supporting group building and change processes, and lead to intellectual motivation, creativity and innovation, and increase employee confidence, and the organization is on track to achieve To improve continuous performance (Nishii & Wright, 2007). The results of studies show that the leaders of high-performing and sublime organizations are people who portray the future and realize it, and always play a role as a model for organizational values and ethics, and are inspiring (Bazrkar & Iranzadeh, 2017). They are flexible and enable the organization to predict the future in a timely manner and respond appropriately to ensure continued success (Tzabbar et al., 2017). Accordingly, the fourth hypothesis of the research is presented as follows:

H4: Human resource development practices through transformational leadership have a positive and significant impact on the organizational performance of the electricity industry.

Conceptual models

According to the theoretical foundations of the research, the main purpose and the hypotheses expressed, the conceptual model of this research will be as follows.

Figure 1. Conceptual model. Source: the authors

Methodology

The present research is applied in terms of purpose because the purpose of applied research is to develop applied knowledge in a specific field. Since the present study examines the impact of human resource development practices on organizational performance with respect to the mediating role of transformational leadership, in terms of purpose is in the category of applied research and in terms of descriptive-survey implementation method. Because first, it describes and recognizes the current situation of companies operating in the Iranian electricity industry as a study community, and then, through opinion polls as well as completing questionnaires, surveys ideas and collects information, and finally analyzes the collected data. And measuring the amount and type of data correlation used statistical tests to assess the relationships between research variables.

The statistical population of the present study consists of senior and middle managers of companies under the Ministry of Energy who were active in the Iranian electricity industry and had at least 10 years of
experience. Since the volume of the statistical population was estimated at 883 people, the sample size required for the research was calculated through Cochran's formula at an error level of 5%, which showed that the sample size of the research is 268 people.

The research data collection tool in this research was designed as a questionnaire. In the mentioned questionnaire, the Likert spectrum was used and a spectrum of 5 was used: very high, high, medium, low and very low. It is worth mentioning that the present research questionnaire was developed based on the research literature and based on the questionnaires used in relation to human resource development practices, organizational performance and transformational leadership. It should be noted that in order to develop this questionnaire from the questionnaires: 1- Human Resources Development Practices Questionnaire with 13 items taken from Otoo (2019), 2- Organizational Performance Questionnaire with 6 items taken from Úbeda-García et al (2021) and 3- Transformational Leadership Questionnaire with 6 items taken from the study of Kloutsiniotis et al (2022) was used. It is worth mentioning that in order to assess the structure of human resource development practices, three practices: staff training, employee participation and professional development of employees were the basis for defining the items of the questionnaire.

It is necessary to explain that the items mentioned in the reference questionnaires were matched with a detailed study based on the statistical population studied, which was the Iranian electricity industry.

In this study, first the face validity method was used, for this purpose, the questionnaire was given to 20 experts and they will be asked about each question and regarding the evaluation of the relevant goal, and the questionnaire was approved with minor modifications. Content validity ratio was also used to evaluate the validity of the questionnaire in more detail. Considering that the opinions of 20 experts were used to examine this ratio, the acceptable value of this ratio was determined to be 0.37 based on 20 experts according to the minimum CVR index. The results of examining this ratio in relation to 25 items of the research questionnaire showed that the obtained values are all higher than the standard value of 0.37. As a result, it can be said that the content validity of the questionnaire items is confirmed. Also in the present study, Cronbach's alpha method was used to determine the reliability of the measuring instrument. For this purpose, the reliability of the questionnaire was measured using SPSS software version 23 and Cronbach's alpha method. The results showed that the value of this coefficient for each of the research structures was: Human resource development practices 0.86, performance Organizational 0.88 and transformational leadership 0.82. Considering that these values are higher than the minimum value of 0.7, it can be concluded that the questionnaire used has high reliability. In this study, descriptive statistics and inferential statistics approaches were used to analyze the collected data. The main method for conducting the research was structural equation modeling and each of the research hypotheses was tested through path analysis. The software used in this study were SPSS 22 and Smart PLS.3.

The results of some studies show that the PLS method is used to estimate models in which only structures exist as common factors. But also when CB-SEM is followed to estimate models in which the structures are hybrid(Marin-Garcia& Alfalla-Luque,2019). Therefore, it is necessary to choose the most desirable method from PLS-SEM or other methods such as CBS-SEM. Since there was not much transparency in the present study regarding the nature of the structures, the PLS method was chosen. of course, other reasons such as the complexity of the research model, predicting the effects with models that arise from the data instead of previous theories, and also estimating the relative importance of indicators and not just structures were effective in choosing the PLS-SEM. PLS allows weights based on correlations or regres-
sions to be estimated, or correct with PLSc (consistent PLS) the correlations of those constructs are specified as common factors to make the results consistent with that measurement model (Dijkstra & Henseler, 2015). This provides versatility when analyzing mixed models where the constructs that are present are composites.

In this study, to avoid the destructive effect of common errors on the research results, we tried to make the items used conceptually consistent with the theoretical definition chosen for the structure, as well as by explaining how the indicators relate to the structures or How to connect to them, reduce the destructive effects. Also, according to some points in the implementation of the software, we tried to reduce these errors, for example, in relation to model prediction (PLSpredict), it was noted that by configuring with k-folds=10 and at least 10 repetitions. If the $Q^2$ prediction is positive, the prediction error of the PLS-SEM model results is less than the prediction error based only on the mean of the values.

Findings

In the present study, a descriptive study of the statistical sample consisted of two parts: analysis of demographic variables and descriptive statistics of research Components.

Findings of Descriptive Statistics

Descriptive statistics of demographic characteristics

In this section, the situation related to the demographic characteristics of the statistical sample was analyzed. These characteristics included gender, education level and work experience of the respondents. The questionnaire was distributed among the members of the sample size with 268 people. The results showed that 0.70 of the statistical sample size were men, 0.30 were women, and 0.52 of the statistical sample size were respondents with a bachelor's degree, 0.37% with a master's degree and 0.11 with a degree. They also have a doctoral degree, and 14% of respondents are less than 10 years old, 40% are between 10 and 15 years old, 32% are between 15 and 20 years old, and 14% have more than 20 years of work experience.

Descriptive statistics of research Constructs and indicator

In this part of descriptive statistics, mean, standard deviation, minimum, maximum, skewness, and kurtosis related to each constructs an indicator have been examined by the respondents. The results are reported in Table 1.

| Component                          | Item                                                                 | Mean | Stdv | Min | Max | Skewness | Kurtosis |
|------------------------------------|----------------------------------------------------------------------|------|------|-----|-----|----------|----------|
| Human resource development practices| Adequate and relevant knowledge and skills are acquired through training program. | 3.86 | 0.293| 3   | 4   | 1.148    | -0.713   |
|                                    | The skills and knowledge related resources that were used in the training program are available for use on the job. | 3.67 | 0.268| 3   | 5   | 0.775    | -0.085   |
|                                    | Training programs for employees in all aspect of quality             | 3.87 | 0.354| 3   | 5   | -0.157   | -0.011   |
| Human resource development practices | | | | | |
|---|---|---|---|---|---|
| The activities of the training program provided meet the needs of the employees | 4.10 | 0.321 | 2 | 5 | 0.287 | -0.777 |
| Employees are sponsored to training programs on the basis of relevant training needs | 3.99 | 0.228 | 3 | 5 | 0.811 | 0.632 |
| Information is widely shared in this organization | 3.97 | 0.294 | 1 | 5 | 0.863 | 0.412 |
| Collaboration and team work across working functions are vigorously emboldened | 4.11 | 0.375 | 2 | 5 | -0.635 | -0.079 |
| Everyone believes that he/she can make an impact | 4.10 | 0.399 | 2 | 5 | 0.555 | 0.310 |
| The capacity of employees is regarded as an essential determinant of competitive edge | 3.66 | 0.394 | 1 | 5 | 0.891 | 0.240 |
| The organization relies on horizontal control and coordination | 4.50 | 0.403 | 3 | 5 | 0.108 | -0.520 |
| Organization provides training to help develop my career | 4.13 | 0.447 | 3 | 5 | 0.398 | -0.444 |
| Organization provides a personal development plan | 4.00 | 0.381 | 2 | 5 | 0.910 | 0.481 |
| Organization provide me impartial career advice whenever required | 3.82 | 0.411 | 2 | 5 | 1.052 | -0.512 |

| Organizational performance | | | | | |
|---|---|---|---|---|---|
| The revenue of each organizational unit in our organization has improved compared to similar organizations over the past three years. | 4.16 | 0.420 | 3 | 5 | -0.044 | -0.832 |
| Employee satisfaction in our organization compared to similar organizations has improved over the past three years. | 3.60 | 0.455 | 2 | 5 | -0.443 | -0.011 |
| Customer satisfaction in our organization compared to similar organizations has improved over the past three years. | 3.75 | 0.438 | 1 | 5 | 0.109 | -0.701 |
| The average growth of service delivery in our organization compared to similar organizations has improved over the past three years. | 3.59 | 0.444 | 1 | 5 | 0.200 | -0.610 |
| The image of our organization has improved over similar organizations over the past three years. | 3.41 | 0.448 | 1 | 5 | 1.010 | -0.429 |
| Customers' knowledge of our organization's brand compared to similar organizations has improved over the past three years. | 4.20 | 0.510 | 3 | 5 | -0.901 | -0.059 |
Findings of inferential research statistics

In this part of the analysis of research data collected before using the structural equation modeling method to measure the conceptual model of the research, first Kolmogorov-Smirnov test is used to test the normality of data collection.

Kolmogorov–Smirnov test

Since in this research, to test the hypotheses, the method of structural equations based on partial least squares is used in Smart PLS software, so it is necessary to examine the normality of the distribution of collected data. Kolmogorov-Smirnov (KS) test was used to check the normality of the data. The results of them, which were calculated using SPSS software, are reported in Table 2.

Table 2. Kolmogorov-Smirnov test results. Source: the authors

| Component                              | Significance level |
|----------------------------------------|--------------------|
| Human resource development practices   | 0.224              |
| Organizational performance             | 0.179              |
| Transformational leadership            | 0.216              |

Kolmogorov-Smirnov test was tested with an error level of 5%. In this case, it can be said that if the significance level in this test is more than 5%, the data can be assumed to be normal. Otherwise, the distribution of data cannot be said to be normal. According to the above table and the values of the significance level, the assumption of normality of the research variables was confirmed.

To test the research conceptual model and also to test the research hypotheses in the model analysis algorithm in the structural equation modeling method in Smart PLS software, the necessary analyzes were performed in three parts: 1) measurement model fit, 2) structural model fit. In this way, first, the accuracy of the relationships in the measurement models was ensured using reliability and validity criteria, and then the relationships in the structural part were examined and interpreted.
Fitting measurement models

According to the model analysis algorithm in PLS-SEM method, three criteria of reliability, convergent validity and divergent validity have been used to evaluate the fit of measurement models and the following results have been obtained.

- Reliability: This index is tested and measured using three criteria of factor load coefficients, Cronbach's alpha and combined reliability:

- Factor loading measurement: In confirmatory factor analyzes values higher than 0.5 indicate a strong level of significance and high correlation between observation and factor variables and also indicate that the structure is well defined. The results of this measurement in Table 3.

- Cronbach's alpha: Cronbach's alpha value above 0.7 is an acceptable final indicator. However, Hair et al. (2014) for variables with a small number of questions introduced the value of 0.6 as the limit of Cronbach's alpha coefficient. The results of this test are presented in Table 3.

- Combined reliability: Because in calculating the Cronbach's alpha coefficient for each structure, all indices are entered in the calculations with equal importance, while for calculating CR, the indices with higher factor loads are more important. The CR values of the structures are more realistic and accurate than their Cronbach's alpha. The results of this test are presented in Table 3.

Convergent validity: Convergent validity is the second criterion used to fit measurement models in the partial least squares method. The indicators show that the higher this correlation, the greater the fit. The results of this test are reported in Table 4.

| Component                          | Item                                                                 | Factor Loading | Cronbach's Alpha | Combined Reliability | Convergent Validity |
|------------------------------------|----------------------------------------------------------------------|----------------|------------------|----------------------|---------------------|
| Human resource development practices| Adequate and relevant knowledge and skills are acquired through training program. | 0.836          |                  |                      |                     |
|                                    | The skills and knowledge related resources that were used in the training program are available for use on the job. | 0.869          | 0.871            | 0.893                | 0.636               |
|                                    | Training programs for employees in all aspect of quality             |                |                  |                      |                     |
|                                    | The activities of the training program provided meet the needs of the employees |                |                  |                      |                     |
|                                    | Employees are sponsored to training programs on the basis of relevant training needs |                |                  |                      |                     |
|                                    | Information is widely shared in this organization                    |                |                  |                      |                     |
|                                    | Collaboration and team work across working functions are vigorously emboldened |                |                  |                      |                     |

Table 3: Fitting results of measurement models. Source: the authors
| Human resource development practices                      | Description                                                                 | Score  
|------------------------------------------------------------|-----------------------------------------------------------------------------|--------
| Everyone believes that he/she can make an impact          |                                                                             | 0.673  
| The capacity of employees is regarded as an essential determinant of competitive edge |                                                                             | 0.552  
| The organization relies on horizontal control and coordination |                                                                             | 0.691  
| Organization provides training to help develop my career   |                                                                             | 0.557  
| Organization provides a personal development plan          |                                                                             | 0.671  
| Organization provide me impartial career advice whenever required |                                                                             | 0.757  
| The revenue of each organizational unit in our organization has improved compared to similar organizations over the past three years. |                                                                             | 0.682  
| Employee satisfaction in our organization compared to similar organizations has improved over the past three years. |                                                                             | 0.585  
| Customer satisfaction in our organization compared to similar organizations has improved over the past three years. |                                                                             | 0.893  
| The average growth of service delivery in our organization compared to similar organizations has improved over the past three years. |                                                                             | 0.662  
| The image of our organization has improved over similar organizations over the past three years. |                                                                             | 0.783  
| Customers' knowledge of our organization's brand compared to similar organizations has improved over the past three years. |                                                                             | 0.772  
| Transformational leadership                                | My manager communicates a clear and positive vision of the future           | 0.753  
| My manager treats staff as individuals, supports and encourages their development |                                                                             | 0.781  
| My manager gives encouragement and recognition to staff    |                                                                             | 0.801  
| My manager fosters trust, involvement and cooperation among team members |                                                                             | 0.845  
| Transformational                                           |                                                                             | 0.867  
|                                                             |                                                                             | 0.881  
|                                                             |                                                                             | 0.587  

Organizational performance

Customer satisfaction in our organization compared to similar organizations has improved over the past three years.

The image of our organization has improved over similar organizations over the past three years.

Customers' knowledge of our organization's brand compared to similar organizations has improved over the past three years.
After obtaining the results of the values of factor loads and Cronbach's alpha coefficients, the combined reliability and validity of the partner and the analysis of software outputs, and since the values of each of the above criteria for each of the latent variables are defined above the quorum and threshold, the suitability of the convergent reliability and validity of the research model can be confirmed.

Divergent validity: In Fornell & Larcker (1981) method, the degree of relationship of a structure with its indicators is compared with the relationship of that structure with other structures, so that the acceptable divergence validity of a model indicates that a structure in the model interacts more with its indicators than with other structures. This is done by a matrix. The results of this matrix are presented in Table 4. In the matrix subdiagonal inferior are correlations, and diagonal AVE squared.

| Component                  | Human resource development practices | Organizational performance | Transformational leadership |
|-----------------------------|--------------------------------------|----------------------------|-----------------------------|
| Human resource development practices | 0.797                                |                            |                             |
| Organizational performance  | 0.782                                | 0.813                      |                             |
| Transformational leadership | 0.779                                | 0.806                      | 0.766                       |

According to the results obtained from Table 4, it can be concluded that in this study, the model structures have more interaction with their indicators, in other words, the divergence validity of the model is acceptable.

In this study, in addition to the method proposed by Fornell and Larker (1981), the HTMT test was also used. The Heterotrait-monotrait (HTMT) value of correlations lower than 0.90 (the Fornell-Larcker criterion has been proven to not evaluate discriminant validity very well, especially if the loadings of all the indicators fall within a narrow range of values (0.65-0.85) (Henseler et al., 2015)). To perform this test, the PLS-SEM Algorithm in Smart PLS.3 software was used. The values obtained from this test were 0.800, 0.667 and 0.771, respectively. Accordingly, it can be noted that the discriminant validity of research Components was confirmed by this test.

Fitting structural research model

After fitting the measurement models, we will fit the structural model (conceptual model) of the research and then we will test the research hypotheses. In order to fit the conceptual model of the research, t-values, R2, Q2 were used.

R²: This criterion is the necessary criterion to examine the fit of the conceptual model of research. Regarding the acceptable value of this criterion, three values are introduced. These three values are 0.19, 0.33 and 0.67, which indicate the weak, medium and strong criteria of R² criterion. The results obtained from this criterion are presented in Figure 2.

| Component                  | Human resource development practices | Organizational performance | Transformational leadership |
|-----------------------------|--------------------------------------|----------------------------|-----------------------------|
In general, the study of coefficients of determination is related to the endogenous (dependent) variable of the model. It should be noted that the values of $R^2$ are shown within the circles of the research model and are calculated only for endogenous structures of the model, and in the case of exogenous structures, the value of this criterion is zero. According to the value obtained for the endogenous variables of the research in relation to the $R^2$, it can be concluded that because the values of 0.586 and 0.776 are more than the values of 0.19, 0.33 and 0.67, the structural model of the research can be fitted. It is acceptable.

**T-values:** In the partial least squares method, various criteria are used to evaluate the report of the structural model of the research, the most important criterion being the significance coefficient $t$. If the value of $t$-statistic is more than 1.96 at the level of 5% error indicates the correctness of the relationship between the research structures and thus confirms the research hypotheses. To calculate this statistic in Smart PLS software, Bootstrapping command is used. The results of this test are shown in Figure 3.
According to the results obtained in Figure 3, it can be concluded that all the obtained numbers are higher than 1.96 and this indicates a good fit of the model and can be a reason to confirm the research hypotheses.

$Q^2$: This criterion was introduced by Geizer (1974), it determines the predictive power of the model. Henseler et al. (2009) on the intensity of the model's predictive power for endogenous structures, three values of 0.02, 0.15 and 0.35, which indicate the weak, medium and strong predictive power of the structure or structure, respectively. Has exogenous properties, introduced. Since the value of $(1 - \text{SSE} / \text{SSO})$, the endogenous structures of the model, Organizational performance and Transformatio nal leadership are 0.258 and 0.339, respectively, it can be said that this result indicates acceptable predictive power.

**Test results of research hypotheses**

Based on the research data analysis algorithm using the partial least squares method, at this stage, according to the results obtained from the values of $t$ and path coefficients, the research hypotheses are tested. If the value of the significance coefficient of each path is more than 1.96, the relevant path is significant at the 95% confidence level and the related hypothesis is confirmed. The results are reported in Table 5.

**Table 5. Test results of test hypotheses. Source: the authors**

| Hypotheses | T-value | P-value | Path coefficient | Result   |
|------------|---------|---------|------------------|----------|
| HRDP $\rightarrow$ OP | 6.206 | 0.002 | 0.750 | support |
| HRDP $\rightarrow$ TLE | 7.318 | 0.001 | 0.789 | support |
| TLE $\rightarrow$ OP | 7.392 | 0.000 | 0.917 | support |
| HRDP $\rightarrow$ TLE $\rightarrow$ OP | 5.356 | 0.004 | 0.723 | support |
The results obtained from Table 5. It shows that the component of human resource development practices has a positive and significant effect on the organizational performance of Iran's electricity industry and also in the relationship between human resource development practices and organizational performance of the studied industry, the transformational leadership variable has a mediating role.

Discussion & Conclusion

Human resources as the key pillars of the implementation of organizational strategies have always played an effective role in the development of the organization and the promotion of its position. Employing inefficient and underdeveloped personnel, in addition to incurring high costs such as paying employment costs, providing new training courses or retraining the required expertise of employees, will help the organization to achieve proper performance and predetermined goals with many challenges. The importance of human resources and attention to improving organizational performance of employees has been one of the most important issues for researchers in recent decades. The main purpose of this study was to investigate the effect of using human resource development practices on the organizational performance of companies operating in the electricity industry in Iran with respect to the mediating role of transformational leadership style. Based on the results, it can be said that companies active in the study industry can have a positive impact on improving individual and organizational performance and improve the performance of their organization by selecting and applying effective practices of human resource development. In the following, we analyze the results of research hypotheses.

The result of testing the first hypothesis of the research showed that human resource development practices have a positive effect on organizational performance and human resource development practices directly predict 0.750 of changes related to organizational performance. Accordingly, it can be concluded that paying attention to practices such as continuous training of employees and professional development of employees in order to provide job guidance to employees and also holding a development center for them, companies active in the Iranian electricity industry in the development path. And will put organizational excellence. Studies show that the test results of this hypothesis were consistent with the research results of Otoo & Mishra (2018), Otoo (2019), Anwar & Abdullah (2021), Manzoo et al (2019). The results of testing the second hypothesis showed that human resource development practices have a positive effect on the use of transformational leadership style and human resource development practices directly predict 0.789 of changes related to transformational leadership. Accordingly, it can be said that the application of human resource development practices can create the conditions for cultivating leaders with the characteristic of inspiring motivation who have high expectations from their followers and inspire them through motivation to commit and be part of the organizational common vision. Are created and the organization can take a step towards cultivating effective forces. Studies show that the test results of this hypothesis are consistent with the results of research by Kloutsiniotis et al (2022) Hentrich et al (2017). The results of testing the third hypothesis showed that the application of transformational leadership style in the studied companies will have a positive effect on organizational performance and transformational leadership directly predicts 0.917 of changes related to organizational performance. Accordingly, it can be said that since traditional practices of management and leadership, in today's changing and dynamic conditions, do not have the necessary effectiveness, leaders who exhibit transformational behaviors create a set of positive results in the organization. These leaders empower their followers and motivate them to perform beyond their expectations, encouraging them to pursue group and organizational goals instead of pursuing
personal interests, and the companies surveyed can take advantage of this. Leadership styles take a step towards continuous improvement of their organizational performance. The study shows that the test results of this hypothesis were consistent with the results of research by Zafar & Mehmood (2019), Wen et al (2019) and Mukhtasar et al (2021). The results of testing the fourth hypothesis showed that in the relationship between human resource development practices and organizational performance of companies in the Iranian electricity industry, transformational leadership has an effective mediating role and the structure of human resource development practices through transformational leadership style 0.723 Predicts changes in organizational performance indirectly. Accordingly, it can be said that the companies under study can take a favorable step towards improving the quality of services and continuous improvement of organizational performance when they benefit from effective leadership style and effective human resource management development practices. Paying attention to human resource development practices such as employee empowerment, participatory management and employee motivation management through the proper use of transformational leadership can provide the basis for sustainable development of employees and the nature of the organization. It is also recommended that managers always pay attention to the fact that the development of human resources along with the adoption of appropriate leadership styles and management of employees is one of their main tasks and through this they can turn their employees' abilities into effective and efficient job performance.

The management of current organizations believes that employees are the most important source of competitive advantage of the organization (Chadwick & Flinchbaugh, 2021). They believe that efficient human resources are very important because of their scarcity and irreplaceability. Therefore, organizations strive to maintain skilled human capital and develop their commitment. Employees who are more committed to the values and goals of the organization; They participate in the organization and enjoy membership in it, which in this regard increases the performance and productivity of the organization. The results of many studies showed that paying attention to the correct choice of human resource management methods as well as managing the organization's staff with an effective leadership style such as transformational leadership can lead to improved operations in different parts of the organization. Followers of transformational leadership show greater commitment to organizational mission, willingness to work harder, higher levels of trust in leaders, and cohesion. Transformational leadership is expected to create better conditions for followers to understand strategic visions, missions, goals, and acceptance.

Therefore, according to the results of this study, it is suggested that companies active in Iran's electricity industry as well as organizations in general pay special attention to human resource development practices and practices related to selection, training and development, performance evaluation. Consider service security and compensation, along with adopting an effective leadership style such as transformational leadership style, as ways that can both directly and indirectly improve organizational performance.

Limitations and Suggestions for Future Research

The present study, like other research in the field, faced limitations. Since the present study is an exploratory study, the research findings are limited to the sample size and if the sample size is changed, the results may change. Also, different opinions about the research topic among members of the statistical community can affect the research results to some extent. Affect. The study population in the present study consisted of companies active in the Iranian electricity industry. It is not industries, it is suggested that researchers in future research, the subject of this study in other organizations and manufacturing and
service industries inside and outside Iran, and compare the results with the present study. Given that this study examined the impact of using human resource development practices on organizational performance, it is suggested that given the importance of individual and organizational productivity as well as achieving a competitive advantage in the electricity industry, researchers in future research the impact of human resource development practices on the structures of productivity and competitive advantage. Also in this study, transformational leadership style was considered as a mediating variable, therefore, it is suggested that researchers in future research examine the mediating role of other variables such as employee commitment and employee satisfaction as a mediating variable.

Authors Contribution

The first and second authors have completed the theoretical foundations and development of the hypothesis, and the third author has completed the methodology and data analysis section. The discussion and conclusion section is done by all authors.

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