Determinants of Human Resource Quality in Dong Nai Province, Vietnam

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ABSTRACT

Human resource plays important role in the survival and development of every organization; thus, having high quality human resources is always a permanent and fundamental need of the society from micro to macro levels to improve their competitive advantages on the marketplaces. Several researches have been conducted to realize the key factors affecting the human resource quality so as to taking proper actions to improve it. Similarly, this paper aims at identifying the determinants of human resource quality in Dong Nai province, Vietnam and providing practical managerial recommendations to help policy-makers improve current policies for better human resource quality. With some statistical analyses, it is found that four key factors, including: (1) the human resource training and development, (2) the supports from leaders, (3) working environment, and (4) work efficiency and work capability significantly affect the human resource quality of the province. Moreover, the evaluation of the human resource quality is not affected by the demographic characteristics of the participants like their gender, working experience, and industry sectors.

Key words: Human resource, Human resource quality, Determinants, Dong Nai province, Vietnam

INTRODUCTION

The importance of human resource in the survival and development of every organization has been well recognized with the numerous studies conducted by many scholars and practitioners worldwide.¹⁻⁶ With the recent advances in a new era of modern science and technology, the current economy is usually referred to as “knowledge economy” in which the competition on both macro and micro marketplaces becomes more and more fierce in all aspects of technology, management, finance, quality, price, etc.⁷⁻⁹ In such a competitive business environment, every organization must continuously improve themselves in order to be adaptable. And in order to have better competitive advantages, special investment in physical facilities and infrastructures has attracted the focus of the leaders from not only the national and local levels but also the organizational levels. The contemporary literature of management reveals that human resources must be properly utilized in order to make the most of organizational productivity and optimally exploit their resources¹⁰ because employees and their competences comprise the crucial factors of organizational performance.¹¹,¹² Over the past few decades, the value of human resources has been discussed and it is pointed that the development of a country or an enterprise depends heavily on the human resource quality.

Dong Nai Province is located in Southeastern Vietnam and bordered with other 6 provinces, including: Binh Thuan, Lam Dong, Binh Duong, Binh Phuoc, Ba Ria-Vung Tau, and Ho Chi Minh City. Its location is very important for the development of the Southern economic main hub and a junction of the South Eastern and Tay Nguyen Highland because many backbone national roads cross by, such as: National Road 1A, National Road 20, National Road 51, North–South railway lines. Moreover, as it is adjacent to the most advanced port system in Ho Chi Minh City and Tan Son Nhat International Airport, there are several industrial parks operating; thus, it has special advantages in developing its economy and other ecosocial activities in the area.

With the rising competition from the other provinces, especially Binh Duong, Dong Nai should pay more...
attention to improve the quality of its human resources for its sustainable development in the context of international and regional integration. In order to have proper policy to achieve the goals, it is therefore important to clearly understand what are the key factors affecting the quality. And this paper aims at identifying such determinants and proposing some managerial implications which can help the local authorities and businesses in directing their feasible policy to improve the quality of the human resources in the province.

The rest of this paper consists of three parts. Section 2 briefly reviews the literatures of human resource quality and its affecting factors whereas Section 3 presents the research methods using in this paper. Section 4 displays the data analysis results in the empirical case of Dong Nai province. Some conclusions and managerial implications make up the last section.

**LITERATURE REVIEWS**

**Human Resource Quality**

Nowadays, human resources, especially high quality employees in an organization have been well considered as intellectual capital which plays critical roles in its sustainable development. Thus, high quality human resource is a very important factor for the growth of an industry and the local or national economy in general. It is also believed that the development of the human resource should consider the “capacity, equity, empowerment and sustainability”. Meanwhile, it is suggested that there are at least three necessary skills to be considered in the quality of the HR, including technical skills, human skills and conceptual skills. Besides, Levine et al. proposed other aspects such as the competence (ability) and motivation policies, while the performance of local governments can be seen from the aspect of “productivity, quality of service, responsiveness, responsibility and accountability”. Human resource quality is the level of education, experience, knowledge and skills required to perform assigned tasks to achieve organizational goals. Thus, the human resource quality can be measured based on education; experience; knowledge; and skills.

As a matter of fact, several researches have proposed different approaches for the measurement. One of the commonly used approach is the comprehensive human resource quality index discussed by Nair. Practically, the human resource quality index is an integrated indicator combined of Cultural Change Index (CCI), Quality of Work Life Index (QWLI) and Employee Satisfaction Index (ESI). The measurement of these sub-indexes have been well developed; specifically, CCI can be measured with five indicators: (1) workmanship value, (2) management attitude, (3) employee motivation, (4) ability and skill attainment, and (5) cohesive workforce; and QWLI can be measured via four indicators: (1) motivational programs, (2) orientation and training, (3) communication effectiveness, and (4) employee responsibility, whereas the ESI can be assessed by other five indicators: (1) employee involvement, (2) attitude towards change, (3) grievance rate, (4) accident rate, and (5) defect rate. These 14 indicators can be effectively assessed via proper questionnaires.

**Determinants of Human Resource Quality**

Literally, several researches have been conducted to fully determine the determinants of human resource quality. Their relationships have also been thoroughly investigated by different scholars such as Berson & Jonathan, Zahari & Shurbagi, Ali & Hossein, Amarjit et al., Fatima et al., etc. Thao classified them into four key factors as the following:

**Support from leaders**

Avolio & Bass, Bass & Avolio, Avolio & Bass, Avolio, Avolio et al., Bass et al. (2003), Bass & Riggio, and Hamidifar found that the support from the leaders is one of the key factors existing in each organization. The support conveyed by the leaders to their subordinates is usually affected by the leadership styles which crucially determines the way the leaders discover the internal potentials of their employees because their views, personal attitudes, and supports can close the gaps between them and their employees so that they can understand them better and assign appropriate tasks based on their personal knowledge, skills, characteristics, etc. Hence, an appropriate leadership style is of great help to optimize the employee potential in implementing their assigned works. Moreover, the supports also establish the trust in the employees, and improve the collaboration effectiveness among the employees because any conflicts can be mutually settled in a cooperative manner. More importantly, with appropriate leadership styles, proper policies to motivate the employees in improving their capacity, knowledge and skills, thus improving their own quality to well perform their jobs.

**Human resource training and development**

The training and development of human resource has been commonly appreciated in forming an effective workforce by improving the quality of workforce for further corporate strategic objectives because an effective training program practically helps to increase the production, reduce job turnover, and enhance the satisfaction of workers. As a consequence, the training and development of human resource has been regarded as a means for promotion and compensation.
Basically, the term “training” is defined as the learning activities that help the employees to gain useful knowledge and skills to perform their jobs and duties more effectively; or it is also considered as a learning process for employees to comprehend and improve their knowledge, skills and standards in order to fulfill their assigned jobs. Meanwhile, the term “development” is referred to as the learning activities that are usually higher than the current scope of work to give employees new job chances based on the strategic directions of the organizational development. Obisi claimed that the two terms are normally used interchangeably. However, several researchers have clearly shown their differences in terms of time value, purpose and subject; for example, the training is normally used for short-term, specific purpose and non-managerial individuals while the development is used for long-term general target and managerial personnel; or Miller et al. argued that training is used to show the current performance and progress of an employee whereas the development is used to demonstrate the future performance and progress.

Holton et al. stated that the training and development of human resource significantly helps employees to apply what they have learnt into work, and appropriate design of training programs helps to improve the satisfaction of the employees because a training program is usually designed to help employees to attain practical skills their daily jobs. Consequently, they are more satisfied once the training programs are well-designed to maximize their abilities.

Working environment
Liu et al. pointed that the working conditions of occupational safety and health, work pressure, equipment, etc., significantly affect the retention of the employees and their performance in the assigned tasks because a professional working environment has been found to determine 90% of job performance. The working environment may relate to their life’s demands, health, company’s geographical location, families and other personal issues. Moreover, it has been found that employees who have the support from leaders, encouragement from and co-operation with colleagues usually perform better than those who do not have. Hence, colleagues has also been considered as an important factor of the organization’s sustainable development. Moreover, working facilities and equipment are also identified as the critical factors affecting the organizational success and the employee satisfaction.

Work efficiency and work capability
The work efficiency of an organization provide employees with the feelings of security, equity, pride, internal democracy, ownership, autonomy, responsibility and flexibility because such organization treats their employees in a fair and supportive manner, with several open communication channels at all levels as well as offers more opportunities for their employees to participate in important decision making process. Practically, the work efficiency traditionally reflects the organizational changes to widen the horizontal flexibility of job levels and enhance the vertical task flexibility with new responsibilities for future promotion.

Differently, work capability refers to the abilities of an employee to work efficiently and effectively. Nonetheless, Bodnarchuk pointed that the actual work capacity can be easily observed when an employee is assigned with tasks that he/she feels confident. Particularly, the work capacity is classified into five groups, including:

- Work-related work capability which refers to the personal experiences, professionals, salary, management and leadership capabilities.
- People work capability which is the ability to upgrade the work of an organization via the practical interaction with others to promote respect, mutual understanding, and productive working relations.
- Social work capability which is referred to as the abilities to reinforce other people; or the ability of hiding anger feeling. This kind of capability can be trained and changed by different social factors.
- Soft work capability which consists of good interpersonal communication and self-communication, trustfulness, be able to work in a team, leadership capacities.
- Labor capability which is the collection of “characteristics, behaviors and traits necessary for successful job performance; or it is also referred to as the required capabilities in terms of motivation, trait, job skill, and social role to enhance basic abilities and improve the job performance.

RESEARCH METHODS

Conceptual Framework and Research Hypotheses
Our conceptual research framework is shown in Figure 1, from which, the following hypotheses are investigated in this paper:

H1: There is a positive impact of support from leaders to the human resource Quality.
H2: There is a positive impact of human resource training and development to the human resource Quality.
H3: There is a positive impact of work efficiency and work capability to the human resource Quality.
H4: There is a positive impact of working environment to the human resource Quality.
Data Collection and Analysis
The data of the investigated observed variables for this research were collected with a self-completed questionnaire designed on five point Likert scale. There are 26 items for the four independent variables; specifically, there are 5 items coded as SUPP1 – SUPP5 for the support from leaders (SUPP), 8 items coded as TDEV1 – TDEV8 for human resource training and development (TDEV), 7 items coded as WEWC1 – WEWC7 for work efficiency and work capability (WEWC), and 6 items coded as WENV1 – WENV6 for working environment (WENV). The dependent variable of human resource Quality is measured from the three components discussed in Nair. There were 218 questionnaires directly delivered to the managers of personnel departments of different organizations located in Dong Nai Province during June 2016 to August 2016. There were 127 completed questionnaires collected, equally to the response rate of 58.26%; among them, there were only 103 valid observations used in our data analysis phase. In this paper, we employ descriptive statistics and other sophisticated analyses such as Exploratory Factor Analysis, Reliability Analysis using Cronbach’s Alpha, and Multiple regression analysis with the support of a software package called SPSS 22.0.

Literally, the reliability analysis of a scale is used to measure the internal consistency of the investigated items; and it is most appropriately used when the items measure different substantive areas within a single construct. In the field of social sciences, the index should be no less than 0.6 and the corrected item-total correlation of each item be at least 0.3 so that the items are capable to measure the construct. It is always suggested to perform the reliability analysis of every scale before the exploratory factor analysis (EFA) is implemented. The EFA is usually used to cluster highly correlated variables into a factor to exemplify a certain dimension within the data set. Therefore, in the EFA approach, a number of correlated variables are identified to be grouped into a representative variable for use in subsequent multivariate analysis. With the 103 valid observations used in this study, the overall criteria to be evaluated in EFA approach are summarized in Table 1.

After the factors extracted from the EFA are determined, it is better to test the reliability of the constructs to further validated the internal consistency of these factors. Then, these factors are mandatorily converted into appropriate variables so that they are further used in regression analysis. The conversion is done through the computation of factor scores based on the factor loadings of all variables on the factor, and therefore, it can represent the measure of the cluster of variables in the factor. In the SPSS software, the factor scores are easily computed by selecting the factor score option.

Besides, it is well known that multiple regression analysis is a statistical tool for getting to know the causal effect of one variable upon another. Hence, the underlying variables of interest should be first assembled before the regression is employed to evaluate the quantitative effect of the independent variables upon the dependent one. Researchers typically assess the “statistical significance” of the estimated relationships to test the degree of confidence that they are close to the true ones. Significance level is usually chosen at 0.05.

EMPIRICAL RESULTS
Structure of Survey Object
Table 2 briefly describes the key characteristics of the participants in terms of gender, working experience and industry sectors. Particularly, among the 103 valid observations, the male accounts for 63.11%, and majority of them (65%) are in the age of 30-50 years old, and more than 70% of them are working in manufacturing industries.

Reliability Analysis and Exploratory Factor Analysis
The four scales representing the four independent variables are firstly tested for their scale reliability. With the Cronbach’s Alpha values of greater than 0.6 in Table 3 and their corrected item-total correlations all greater than 0.3, we conclude that the scales are all reliable for further analysis such as EFA. Moreover, the mean values of three out of the four scales are greater than 4 in a scale of 5 and that of SUPP is more than 3.8, indicating that all of the participants have positive evaluation of the current conditions in the local context.

The 26 statements in the survey questionnaire are analyzed with EFA to actually identify the determinants of the human resource quality in Dong Nai province. Table 4 briefly displays the outputs of EFA obtained from SPSS. Besides, it is also found that the eigenvalues for the
The first four components are all greater than 3.116 and they account for 66.5% of the total variance, indicating that the scale items are unidimensional. Moreover, Table 5 shows that all of the factor loadings of the four extracted factors are greater than 0.5. Combining with the results in Table 4, and comparing with the criteria mentioned in Table 1, we conclude that using EFA in this study is appropriate.

As all of the items in the four scales are significant, the reliability of the four extracted factors remains valid. Table 5 provides more details of the reliability tests in supplementing the ones in Table 3. Consequently, with the results briefly shown in Table 5, we conclude that the items in the extracted factors have high internal consistency.

And, these four determined factors are good enough and reliable for further analysis.

**Multiple Linear Regression Analysis**

In this paper, the dependence of the human resource quality (HRQ) on the four factors can be presented in a form of multiple linear regression model as $HRQ = f(SUPP, TDEV, WEWC, WENV)$. The result of ANOVA analysis to test the model fitness is shown in Table 6.

Table 7 shows the results of the mentioned model. From the table, the four extracted factors including supports from leaders (SUPP), human resource training and development (TDEV), work efficiency and work capability (WEWC), and working environment (WENV) are all found statistically significant in the model. The significance level of F-statistics in Table 6 is too small compared to the given significance of 5%. Therefore, it can be concluded that the regression model is good enough for further applications in this study. Moreover, small values of VIF (Variance Inflation Factor) in Table 7 indicate that no collinearity is found in the model.

Moreover, the standardized coefficients of the investigated factors show that the importance of each factor is ranked in descending order as human resource training and development, supports from leaders, working environment, and work efficiency and work capability. Especially, the positive coefficients of these factors obviously support the four proposed hypotheses as briefly demonstrated in Table 8.

**Tests for the Equality of Sample Means**

This section presents the tests of the equality of sample means based on the demographic characteristics, such as gender, working experience, and the industry sectors. These tests were conducted with independent-sample t-test and one-way ANOVA test.

Based on gender

The significance value of 0.505 of the t-test in Table 9 indicates that there is insignificant difference in the evaluation of the human resource quality between male and female participants.

Based on working experience

The significance value of 0.141 of the ANOVA test in Table 10 indicates that there is insignificant difference in the evaluation of the human resource quality by the participants of different ages.

Based on industry sectors

The significance value of 0.190 of the t-test in Table 11 indicates that there is insignificant difference in the
evaluation of the human resource quality between the participants in manufacturing industries and those in the service ones.

CONCLUSION AND MANAGERIAL IMPLICATIONS

This paper investigated the determinants of human resource quality in Dong Nai Province. The human resource quality considered in this paper is constructed from three key components, including cultural change index, quality of work life index, and employee’s satisfaction index. By using reliability analysis, exploratory factor analysis, and multiple linear regression analysis, it is found that there are four key factors, including the human resource training and development, the supports from...
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leaders, working environment, and work efficiency and work capability significantly affecting the human resource quality of Dong Nai province. Moreover, the evaluation of the human resource quality is not affected by the demographic characteristics of the participants like their gender, working experience, and industry sectors.

As the training and development of the human resources is the most important factor among the four, investment from the local government should be considered to provide further training with more reasonable tuition fees, flexible time schedule to fit the needs of various workforces. Moreover, each enterprise should also provide more training opportunities for their human resources to update their knowledge, skills and gain new techniques for a better performance and productivity. Especially, the selection of right people for the trainings determines the effectiveness of the trainings programs and organizational development policies. To make sure that the trainings are useful, an effective evaluation method should be developed with the involvement of key leaders, managers, and training professionals.

Second, the support from the leaders always play important roles in motivating workforces to have their best performance. Practically, leaders always want and require their organizational goals and objectives to be implemented and achieved in such effective and efficient ways. If they fail to provide sufficient support, they might fail to meet those goals and they will be in trouble because it lowers the cooperation among the people or they may fail to perform their tasks at their utmost capability. As a consequent, they can gain the trust and loyalty from their staffs, their followers.

Third, all enterprises should continuously improve the physical environment of a workplace because it greatly affects the positivity and productivity of the whole organization. An appealing and comfortable physical working environment is a good source of energy for the creativity and innovations. A fresh work environment without much untidiness allows employees to focus on their assigned tasks and work effectively. More importantly, it is literally found that an open work environment promotes group communication and helps them to have a better understanding of each other and build a cooperative relationship among them. An ideal work environment should welcome creative, diverse opinions

<table>
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<th>Hypothesis</th>
<th>Conclusion</th>
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<tbody>
<tr>
<td>H1</td>
<td>There is a positive impact of support from leaders to the human resource quality</td>
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<tr>
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<td>There is a positive impact of human resource training and development to the human resource quality</td>
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<tr>
<td>H3</td>
<td>There is a positive impact of work efficiency and work capability to the human resource quality</td>
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<tr>
<td>H4</td>
<td>There is a positive impact of working environment to the human resource quality</td>
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Table 9: Independent-sample test

<table>
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<tr>
<th>Levene’s test for equality of variances</th>
<th>t-test for equality of means</th>
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</thead>
<tbody>
<tr>
<td>HRQ</td>
<td>F</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>2.839</td>
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<tr>
<td>Equal variances not assumed</td>
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Table 10: One-way ANOVA test

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<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>0.547</td>
<td>3</td>
<td>0.182</td>
<td>1.863</td>
</tr>
<tr>
<td>Within groups</td>
<td>9.694</td>
<td>99</td>
<td>0.098</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>10.241</td>
<td>102</td>
<td>-</td>
<td>-</td>
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Table 11: Independent-sample test

<table>
<thead>
<tr>
<th>Levene’s test for equality of variances</th>
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<tbody>
<tr>
<td>HRQ</td>
<td>F</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>1.893</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-</td>
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</table>
and people as well as foster the growth of the employees and the organization. As a matter of fact, interpersonal communication, team spirit, and the physical environment of a workplace are all connected to each other. Hence, a good working environment is really worth of paying special attention for the sustainable development of the human resources in any organization.

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