The Impact of Financial and Non-financial Measures on Employee Motivation to Participate in Organization’s Target Setting (Case Study: Telecommunication Infrastructure Company TIC)

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Abstract

Human resource is one of the most important production factors in organizations which can be managed in order to realize organizational goals and provide a background for the growth and development of an organization. Therefore, this production resource (human resource) is much more important than other resources. Through the effective and efficient use of this production resource, managers of governmental or private organizations and institutions can accomplish their goals. To that end, managers should have adequate familiarity with their human resources and understand their needs and personal characteristics in order to use this information to motivate their employees to improve their performance and subsequently increase the organization’s productivity. In this regard, reward is an effective mechanism which can help achieve this goal. The purpose of the present research is to study the effects of financial and nonfinancial measures on employee motivation to participate in target setting. The present research examines six hypotheses. As far as the study of variables is concerned, this research uses a descriptive-survey design; and by purpose, it is an applied study. The statistical population is comprised of employees of the Telecommunication Infrastructure Company (TIC) in Tehran and Kermanshah provinces. The timeframe in this study is the months of March to September 2015. The present study uses stratified sampling method through which 334 employees are selected as sample members using Cochran’s formula. The data analysis and hypothesis examination is carried out using Confirmative Factor Analysis by the AMOS software Ver.22. Considering the obtained results, financial and nonfinancial performance evaluation measures have a positive and significant impact on employees’ intrinsic and extrinsic motivation to participate in organization; also, both intrinsic and extrinsic motivations have positive and significant impacts on job performance.

Keywords: financial measures, non-financial measures, intrinsic motivation, extrinsic motivation, job performance.
1- Introduction

In today’s world, management of organizational affairs with regard to two principles of quality and service enhancement and competition has become an increasingly difficult task. Managers in modern organizations seek to make better use of productive, up-to-date, and efficient human resources. They are also aware of the fact that the human resources devote their time, energy, and capabilities to the organization only when they feel good about management, organization, and their occupational future, see the manager as their supporter, and feel assured about their job security and sustainability [3]. Managers should have adequate familiarity with their human resources and understand their needs and personal characteristics in order to use this information to motivate their employees to improve their performance. Through correct management, appropriate behaviors can be evaluated; therefore, reward management can potentially affect employees’ performance and organization’s strategic programs. Organizational targets which are in alignment with managers’ intentions and plans are accomplished by reforming individuals’ performance [1].

1-1- Statement of problem

Motivation of a self-aware or unaware human being originates from his/her needs. In this sense, the effectiveness of managerial activities depends on the employees’ willingness to carry out their tasks [4]. On the other hand, behaviors of every individual are purposeful. Satisfaction of employees and making them eager toward their job and realization of organizational goals are of utmost importance. If the reasons for their dissatisfaction are identified, effective measures can be taken to improve their conditions and satisfy them. When people are satisfied with their jobs, they tend to their responsibilities more accurately and feel happy to do their jobs [5]. Employees can be motivated to participate in target setting intrinsically or extrinsically. Intrinsic motivation for target setting starts from within the employees and becomes a prioritized goal. On the other hand, extrinsic motivation to participate in target setting is a controlled activity. Recent studies reveal that systems of performance evaluation affect employees’ behavior by mean of intermediate variables such as role ambiguity, fairness, and feedback [2]. The present study focuses on the role of employee motivation to participate in target setting in relation to performance evaluation and job performance. Some researchers suggest that different dimensions of employees’ participation such as intrinsic and extrinsic motivation can affect employees’ behavioral attitudes and job performance. However, the role of this aspect of employees’ participation i.e. employee motivation to participate in target setting is the main focus in this study. So far, no study has been conducted on the intermediate roles of employee motivation to participate in target setting in relation to performance measures (financial measures in comparison to nonfinancial measures) and employees’ performance. Therefore, the main issue investigated in this research is the effects of financial and nonfinancial measures on employee motivation to participate in target setting in Telecommunication Infrastructure Company in Tehran and Kermanshah provinces.

1-2- Research necessity and importance

The issues of employee motivation and its related factors as well as factors contributing to job satisfaction and their importance role in organization’s effectiveness and efficiency have long
been investigated by managers; presence of various views and approaches in this regard is a testament to this statement. The most prominent reasons for such efforts are to find ways to create motivation and prioritize the factors and elements of motivation [6]. If the organizational goals are close to those of the employees and managers can create necessary motivation in employees, the organization’s success in achievement of its goals would be guaranteed. Employees can be motivated to participate in target setting intrinsically or extrinsically. Intrinsic motivation for target setting starts from within the employees and becomes a prioritized goal. On the other hand, extrinsic motivation to participate in target setting is a controlled activity. In the meantime, there are financial and nonfinancial measures which play their part in employee motivation to accomplish organizational target as well as to participate in organizational target setting [3]. For reasons such as the ones mentioned here, it is important to investigate the effects of financial and nonfinancial measures on employee motivation to participate in target setting in Telecommunication Infrastructure Company in Tehran and Kermanshah provinces. Therefore, identification and improvement of these factors is highly crucial.

1-3- Research hypotheses
Hypothesis 1: certain non-financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting.
Hypothesis 2: certain financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting.
Hypothesis 3: nonfinancial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting.
Hypothesis 4: financial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting.
Hypothesis 5: intrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation.
Hypothesis 6: controlled extrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation.

1-4- Research concept model
Figure 1 demonstrates Chong & Roopnarain (2014) research concept model which is the basis for the present study. This model incorporates financial and nonfinancial measures as affecting employees’ intrinsic and extrinsic motivation to participate in target setting. The two variables of motivation might in return affect employees’ job performance. Financial and nonfinancial measures are referred to as two separate structures which evaluate their relative impact on employees’ motivation to participate in target setting and performance. This helps to determine if the systems affect through either financial or non-financial measures, or both. More importantly, it determines whether performance evaluation affects job performance via either intrinsic motivation to participate, or extrinsic motivation to participate, or both [3].
1-5- Research background

In their study titled “factors affecting job satisfaction in project-oriented organizations”, Kianian & Shams Ghareneh conclude that an important task of organizational managers is to identify employees’ potential talents and to provide grounds for their realization and growth; this drives managers to form the external and internal environment of the organization so as to set appropriate goals for employee satisfaction and to create motivation within the employees. In order to promote job satisfaction, it is necessary to identify employees’ needs and try to satisfy them. The main challenge before an organization is to create a balance between general objectives and employees’ personal values. Therefore, motivation is the product of participation and the results of a person’s mutual relationship (interaction) with the situation he/she is in [8]

In the study of “the effects of financial and nonfinancial measures on employee motivation to participate in target setting”, Chong & Roopnarain conclude that both financial measures and nonfinancial measures are associated with employee intrinsic motivation to participate in target setting. However, only nonfinancial measures are associated with controlled extrinsic motivation to participate in target setting and because this form of motivation to participate is controlled by
the organization as a means to achieve better performance, it is only this form of motivation which has a significant impact on employee job performance. These results provide important insights into the intricacies by which performance measures influence employee motivation to participate in target setting and job performance [3].

2- Research methods
By purpose, this is an applied research. By logic, this is a comparative study and in terms of time-period, it is a cross-sectional research. As far as the method of execution, it is a qualitative research and considering the type of data, this is a descriptive-survey and a cor relational-type research.

2-1- Statistical population
The statistical population is comprised of employees of the Telecommunication Infrastructure Company (TIC) in Tehran and Kermanshah provinces. As the company’s records and statistics suggest, the population is consisted of 2550 individuals. Among them, 2450 individuals work in Tehran province and 100 individuals work in Kermanshah province. The timeframe in this study is the months of March to September 2015.

2-2- Sampling method and sample size
The present research uses simple stratified sampling method. In this regard, the populations in Tehran province and in Kermanshah province are defined as two classes, and the sample members are selected from each one. Also, since the size of statistical population is definite, Cochran’s formula is used to determine the sample size.

\[
n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} \frac{1}{1 + \frac{1}{2550} \left[ (1.96)^2 \times 0.5 \times 0.5 \frac{(0.05)^2}{1} \right]}
\]

2-3- Instrumentation and methods of data analysis
In this research, in order to study and describe the general characteristics of the participants, conventional methods of descriptive statistics such as frequency distribution tables, frequency percentage, cumulative percentage, and mean are used. In order to analyze the data and examine the hypotheses, inferential statistics are used. To examine the normality of research data, the Kolmogorov–Smirnov test is used. To examine the relationship between independent and dependent variables and to calculate the correlation between research variables, with the help of SPSS software, the Pearson’s correlation test is used. The questionnaire used in this research is content validated by 5 university professors of the faculty of management and based on the content, the final questionnaire is designed. Also to measure the reliability of the questionnaire, the Cronbach’s Alpha is used and the obtained alpha coefficient of 0.799 confirms the reliability of the research instrument. With the help of AMOS software Ver.22, the data is analyzed using structural equation modeling and the correlation between variables is investigated using factor analysis. Using eight indices i.e. NFI, RFI, IFI, PCFI, RMSEA, PNFI, CFI, and PRATIO, the strength and fitness of the research model as compared to the default model is assessed.
3- Research findings
Based on the obtained sample size, 334 questionnaires are distributed among the selected statistical population; therefore the statistical analysis is carried out based on the information obtained from 334 questionnaires.

3-1- The demographic characteristics of the participants
First, descriptive statistics are used to determine the demographic characteristics of the sample group. On that basis, most of the participants are women with 74% frequency, 31 to 40 years of age with 45% frequency, mostly with bachelor’s degree with 54% frequency, and with 5 to 15 years of employment record with 54% frequency. Table 1 demonstrates the demographic characteristics of the studied sample group.

<table>
<thead>
<tr>
<th>Row</th>
<th>Demographic characteristic</th>
<th>Levels</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sex</td>
<td>Female</td>
<td>204</td>
<td>74%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>130</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20-30</td>
<td>57</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31-40</td>
<td>128</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41-50</td>
<td>100</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over 50</td>
<td>49</td>
<td>11%</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>Associate’s degree</td>
<td>56</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bachelor’s degree</td>
<td>165</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Master’s degree</td>
<td>105</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Doctorate</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Associate’s degree</td>
<td>56</td>
<td>6%</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td>Less than 5</td>
<td>65</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5-15</td>
<td>166</td>
<td>54%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over 15 years</td>
<td>103</td>
<td>42%</td>
</tr>
</tbody>
</table>

3-2- Results of data analysis
Using SPSS software, in order to assess the relationship between independent and dependent variables and examine the research hypotheses, the Pearson’s correlation test is used and the results and the correlation coefficient between variables at the 5 percent significance level and 95 percent confidence level are represented in table 2. The Pearson’s test of all hypotheses is significant at the 0.05 level and with 95% confidence. In the next step, the path analysis diagram is demonstrated.
Table 2: results of correlation test and hypotheses examination

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Sig.</th>
<th>R</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>certain non-financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting</td>
<td>0.004</td>
<td>0.188</td>
<td>Confirmed</td>
</tr>
<tr>
<td>certain financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting</td>
<td>0.012</td>
<td>0.177</td>
<td>Confirmed</td>
</tr>
<tr>
<td>nonfinancial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting</td>
<td>0.007</td>
<td>0.107</td>
<td>Confirmed</td>
</tr>
<tr>
<td>financial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting</td>
<td>0.007</td>
<td>0.683</td>
<td>Confirmed</td>
</tr>
<tr>
<td>intrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation</td>
<td>0.004</td>
<td>0.341</td>
<td>Confirmed</td>
</tr>
<tr>
<td>controlled extrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation</td>
<td>0.006</td>
<td>0.221</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

3-3- Structural equations and path analysis model
In order to examine the whole causal relationship between financial and nonfinancial measures and employee motivation, after the multicolinearity test of the dependent and independent variables, structural equation modeling is carried out using AMOS software to determine the main model’s explaining power. The relationships and paths in the main model are represented in figure 2.
In the diagram presented in fig. 2, the value 0.73 represents the regression coefficient between the variables of financial measures and extrinsic motivation; as another example, the value 0.97 represents the regression coefficient between the variables of nonfinancial measures and extrinsic motivation.  

**Figure 2: the path analysis diagram for the research variables**

In the diagram presented in fig. 2, the value 0.73 represents the regression coefficient between the variables of financial measures and extrinsic motivation; as another example, the value 0.97 represents the regression coefficient between the variables of nonfinancial measures and extrinsic motivation.
According to table 3, the ratio of structural model Chi-squared to the degrees of freedom is 2.820 which is acceptable. All comparative fit indices are over 90 percent and acceptable. The RMSEA index is less than 5 percent and acceptable. The parsimonious fit indices are over 50 percent and acceptable. Therefore, the designed research model has the desired fit.

<table>
<thead>
<tr>
<th></th>
<th>&gt;0.50</th>
<th>&gt;0.50</th>
<th>&gt;0.50</th>
<th>&gt;0.9</th>
<th>&gt;0.9</th>
<th>&gt;0.9</th>
<th>&gt;0.05</th>
<th>&lt;3</th>
<th>Acceptable value</th>
<th>Obtained value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtained</td>
<td>0.662</td>
<td>0.642</td>
<td>0.758</td>
<td>0.965</td>
<td>0.975</td>
<td>0.973</td>
<td>0.947</td>
<td>0.007</td>
<td>2.280</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: general indices of model’s fit

4- Conclusion and discussion

Hypothesis 1: certain non-financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting.
Considering the results presented in table 2, the level of significance for this hypothesis is 0.004 which is less than 0.05; therefore the hypothesis is confirmed. This means that certain non-financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting. The coefficient of this correlation equals 0.73; since this is a positive value, it is concluded that the impact is direct i.e. for a unit of increase in nonfinancial measures the intrinsic motivation is improved by 0.73.

Hypothesis 2: certain financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting.
According to the results presented in table 2, the level of significance for this hypothesis is 0.012 which is less than 0.05; therefore the hypothesis is confirmed. This means that certain financial measures in employees’ performance evaluation have positive effects on their intrinsic motivation to participate in organizational target setting. The coefficient of this correlation equals 0.97; since this is a positive value, it is concluded that the impact is direct. In other words, for a unit of increase in financial measures the intrinsic motivation is improved by 0.97.

Hypothesis 3: financial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting.
Considering the results demonstrated in table 2, the level of significance for this hypothesis is 0.007 which is less than 0.05; therefore the hypothesis is confirmed. Hence, financial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting. The coefficient of this correlation equals 0.33; since this is a positive value, it is inferred that the effect is direct i.e. for a unit of increase in financial measures the extrinsic motivation is improved by 0.33.

Hypothesis 4: non-financial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting.
Based on the results presented in table 2, the level of significance for this hypothesis is 0.007 which is less than 0.05; therefore the hypothesis is confirmed. Therefore, nonfinancial measures as indicators of employees’ performance evaluation have positive effects on their controlled extrinsic motivation to participate in organizational target setting. The coefficient of this
correlation equals 0.25 which is a positive value. Therefore it is concluded that the effect is direct i.e. for a unit of increase in nonfinancial measures the extrinsic motivation is enhanced by 0.25.

**Hypothesis 5:** intrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation.

Considering the results presented in table 2, the level of significance for this hypothesis is 0.004 which is less than 0.05; therefore the hypothesis is confirmed. This means that intrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation. The coefficient of this correlation equals 0.16; since this is a positive value, it is concluded that the impact is direct. Therefore, for a unit of increase in the intrinsic motivation, the extrinsic motivation is improved by 0.16.

**Hypothesis 6:** the controlled extrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation.

Based on the results demonstrated in table 2, the level of significance for this hypothesis is 0.006 which is less than 0.05; therefore this hypothesis is confirmed. This means that the controlled extrinsic motivation to participate in organizational target setting has a positive relationship with employees’ performance evaluation. The coefficient of this correlation equals 0.21 which is a positive value. Hence, it is concluded that the effect is direct. Therefore, for a unit of increase in extrinsic motivation, the intrinsic motivation is improved by 0.16.

The results and findings of the present research have similarities and contrasts to those obtained in the 2014 study by Chong & Roopnarain in Korea:

In the study by Chong & Roopnarain, both financial and nonfinancial measures along with intrinsic motivation of employees have positive effects on their participation in target setting; similarly in the present research, both financial and nonfinancial measures have positive and significant effects on employees’ participation in target setting. As for the third hypothesis, the impact of nonfinancial measures on controlled extrinsic motivation to participate in target setting is positive because this form of motivation is used as a method to accomplish better performance. This form of motivation has a significant effect on employees’ job performance. The present research also confirms the statement in the third hypothesis. In the previous research as well as in the fourth hypothesis if the present research the impact of financial measures on extrinsic motivation is positive and significant. Also, the fifth and sixth hypotheses have been similarly confirmed in both studies. This indicates that in any organization, financial and nonfinancial performance affects employees’ intrinsic and extrinsic motivation; and positive reinforcement of intrinsic and extrinsic motivation enhances employees’ job performance and subsequently, organizational goals are achieved more rapidly through employees’ participation.

**4-2- Suggestions**

- Concern with human factors engineering (Ergonomics) in designing employees’ work environment.
- Observation of fairness and justice in distribution of payments among employees in order to realize personal equality.
- Attention to and comparison of payment levels in other organizations in the country in order to realize external equality.
- Improvement of organizational climate and culture through common recreational programs for employees and further use of teamwork in the organization.
- Providing employees with teamwork trainings.
- Use of performance-based payment programs.
- Revision and updating of organizational job classification system in order to realize internal equality.
- Redefining jobs and tasks which are deemed hard and tiresome according to organizational personnel.
- Assigning and allocation of adequate responsibility and autonomy to individuals in carrying out their organizational tasks.
- Employees’ share scheme: the employees’ share scheme is a type of reward which distributes a percentage of organization’s profits among employees; it can help retain employees or motivate them toward further productivity.
- Employees’ stock ownership plan (ESOP): many organizations allocate a certain percentage of their corporate stocks to their employees; this plan has a lot of benefits i.e. employees’ interests become tied to organizations’ benefits and improves employees’ motivation effectively.
5- References