“Designing an organizational engagement model using structural equation modeling: case study of National Iranian Oil Company”

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Abstract

Today’s organizations need energetic and engaged employees, those who are interested in their jobs. Generally, the engaged ones love their job and do their job tasks well. If there is no engagement in the organizations, the organization is encountered with serious problems in this ground. This study aims to design engagement assessment model in the organizations and its applied purpose is creating new theoretical basics in the maturity of engagement in the organization and this helps the organizations for better perception and consistency of organizational goals with the goals of employees. The employees of the National Iranian Oil Company constituted the population for this research. The National Iranian Oil Company was selected as the context, because employee engagement has emerged as a critical problem confronting this sector. 356 employees of this company were selected by simple random sampling method and data were collected using a questionnaire. The researcher attempts to answer the question how we can design an engagement assessment model in the organizations. The different dimensions of engagement are identified at individual and organizational levels and then based on the findings, the employees are classified based on the individual and organizational engagement and the results of this study can help the researchers for better recognition of this internal variable and this helps the better understanding of researchers to use it.

Keywords

employee, engagement, energy, involvement, development of employees

JEL Classification M54

INTRODUCTION

Today, one of the important issues of human life is engagement in the affairs and progress of people in the communities. One of the most important duties of managers in the organizations is establishing engagement in the employees and providing their development to fulfill the organization goals. Meeting the mental demands is of great importance in the organizations. Indeed, each organization, by assessing the engagement in different fields and its main mission, can find how capable it is and whether organizational engagement is achieved or not.

Engagement is considered as a priority among the managing directors, but in recent years, the organizations are encountered with different crises and some improvements should be made in this regard and the engagement should be kept stably.
Each person knows that the engaged employees can develop the work place. The investigations of the effectiveness of employees show that if the engagement of employees is considered, effectiveness is increased otherwise, the performance of employees is stopped to use the best capability. This study evaluates the discussions, basics and components of engagement maturity assessment.

1. REVIEW OF LITERATURE

Trepaniera et al. (2015) in a study “Revisiting the interplay between burnout and work engagement” evaluated the relationship between burnout and engagement by Maslach Burnout Inventory-General Survey (MBI-GS) and Utrecht Work Engagement Scale (UWES). The explorative results of structural equations showed that there was an inverse relationship between job burnout and engagement.

Gozukara et al. (2015) evaluated the link between transformational leadership, work engagement and the mediator effect of job autonomy. This study focused on the effect of this type of leadership on the work engagement of newly employed in job autonomy. The structural equation modeling is a quantitative study by which the data are collected by the questionnaires. The multi-variate leadership questionnaire evaluates the transformational leadership in the entire dimensions of ideal effects (charisma), intelligent simulation, inspirational motivation and individual consideration. The work engagement is evaluated by Utrecht Work Engagement Scale (UWES) (Chaufili & Bakker, 2004), considering three dimensions of power, assignment and attraction. The scale is used to evaluate the job autonomy. The data of this study include the new-employed people working in the private non-profit university. These data are analyzed using LISREL software. The results showed that job autonomy was a mediator of the effect of transformational leadership on work engagement.

Trépaniera et al. (2015) in the study “Revisiting the interplay between burnout and work engagement: an Exploratory Structural Equation Modeling (ESEM) approach” evaluated the relationship between burnout and work engagement. Namely, identification theory (identity) and continuous energy referred to the continuous relationship between engagement and burnout and were considered via Maslatch factor structure (general evaluation of the lists of burnout MBI_GS and engagement scale of Utrech, ESEM). The results of modeling approach showed that engagement and burnout were not mutual. In addition, ESEM referred to the relationship between burnout and engagement and job demands and its resources (work volume, autonomy and recognition), like health outcomes (psychological anxiety) and motivational (recursive goals). These findings open a new approach for health disorder and motivational processes as theorized by JD-R model.

Kaveh and Ganji (2015) evaluated the relationship between organizational commitment and engagement among the employees of Jihad Keshavarzi organization and education department of Shahre Kord. In this study, 80 people were selected by random sampling method. The descriptive and inferential statistics including Pearson correlation method are used. As a result, Pearson correlation coefficient at the significance level ($P > 0.01$) showed that there was a direct relationship between organizational commitment and engagement ($r = 0.526$) and between the subscales of engagement as dedication ($r = 0.616$), absorption ($r = 0.357$) and power ($r = 0.359$) or organizational commitment. Also, there is a correlation between the subscales of organizational commitment as emotional commitment ($r = 0.488$), continuous ($r = 0.159$) and normative ($r = 0.422$) with engagement. Based on the results of study, there is a significant relationship between engagement and organizational commitment and it is consistent with the results of the study of Nuri et al. (2010). These results mean that the higher the engagement to the job, the higher the commitment to the organization.

Noami and Shenavar (2015) evaluated the role of engagement, job control, innovative behaviors and transformational leadership in the prediction of job changes. The results of study showed that there was a positive and significant relationship between work engagement, job control, in-
novative behaviors and transformational leadership with job changes. Among the predictive variables, engagement, innovative behaviors and transformational leadership play an important role in explanation of the variance of job changes.

Naderi and Safarzade (2014) evaluated the relationship between organizational justice, organizational health, engagement and innovative organizational climate with psychological empowerment and civil organizational behavior. This study aimed to evaluate the relationship between organizational justice, organizational health, engagement and innovative organizational climate with psychological empowerment and organizational civil behavior among the employees of an industrial organization in Ahvaz city. The results showed that predictive and criterion variables had significant relationship in two dimensions with focal correlation coefficients (0.84 and 0.19). Based on the results, engagement with the coefficient of 0.99 has the strongest relationship with the first focal variable. Organizational health (0.77), organizational justice (0.71) and organizational innovative climate (0.51) are in the next ranks, respectively. In the second dimension, the strongest presence was dedicated to organizational health (−0.46) and organizational innovative climate (0.30), organizational justice (−0.24) and work engagement (0.08) in the next ranks. Based on the results, the first focal variable has the strongest relationship with psychological empowerment (0.98) and then with civil organizational behavior (0.78). The second focal variable has the strongest relationship with civil organizational behavior (0.63) and psychological empowerment with the coefficient of −0.20 is in the next rank.

2. RESEARCH METHOD

2.1. Statistical population and sampling method

The employees of the National Iranian Oil Company constituted the population for this research. The National Iranian Oil Company was selected as the context, because employee engagement has emerged as a critical problem confronting this sector. The National Iranian Oil Company, a government-owned corporation under the direction of the Ministry of Petroleum of Iran, is a national oil and natural gas producer and distributor headquartered in Tehran. It was established in 1948. NIOC ranks as the world’s second largest oil company after Saudi Arabia’s state-owned Aramco. As the number of members in the society was known, random sampling method was used. Therefore, research scales were sent to the customer via email. The tools were in electronic format to help the filling out process. In this first stage, 195 questionnaires were returned filled out; later another 161 questionnaires were filled out by requesting more customers to cooperate in the study. We started the analysis with 356 questionnaires. To analyze the data, a quantitative method has been used in this research. The structural equation model and SmartPLS software were used to analyze the collected data. Cronbach’s alpha and conformity factor analysis were used to ensure validity and reliability of the research tools. The former is actually a theory test model so that the researcher starts the study with an assumption. The model is based on a strong experimental and theoretical ground that finds correlation between variables-factors and factors-factors. To evaluate validity of the structure, the researcher enjoys a reliable method to examine hypotheses regarding factorial structure of data obtained from pre-set model with specific number and combination of factors. Having pre-test factors determined the confirmatory method tests optimum conformity of factor and theoretical structures for a set of data through determining fitness of the pre-set factorial model.

2.2. Research measurements

This research used items from three preexisting validated instruments to measure research variables. The instrument consists of three main sections. The first section deals with organizational factors, the second section is individual factors, and the third section measured the outcomes of organizational engagement. The validity and reliability of these measurements have also been analyzed using Cronbach’s alpha and confirmatory factor analysis method.
3. DIFFERENT MODELS OF ENGAGEMENT

3.1. The engagement model of Zinger

The engagement of employees is the knowledge of making people engaged in the authenticity, recognition, strategy, duties, performance, organization, communication, relationship, customers, professions, energy and leverage energies to keep and change the work to the results. Figure 1 shows Zinger’s model of employee engagement.

Zinger’s model considers all important aspects influencing the participation, engagement and sacrifice of the employees:

1. Achieve results: achieving the required results as achieving the high level of engagement of employees is the final goal of Zinger’s model.

2. Craft: although using the suitable crafts to achieve high level of engagement is an important duty of managers, it is useful to achieve the counselors of professional management to achieve the effective strategies.

3. Enliven roles: the employees love their job when it is interesting. The managers should determine the methods in the definition of duties and responsibilities to be relieved of fatigue and the employees should be interested in their job.

4. Excel at work: giving motivation to the employees to do their duties with reward systems to use their efforts for better performance of duties.

5. Get connected: the managers should be connected to their subordinates and share their views and ask them to connect with them for counselling. Connection is an important element in each managerial process.

6. Be authentic: a leader should show that the top managers, human resources and managers express their real concern to the problems of employees and remove the problems.

7. Stay: the staying of employees in the organization.

8. Complete engagement: we can achieve the results with the fastest and the employees are fully engaged.

Figure 1. The engagement model
9. The organization recognition: the employees who stay for a long time in the organization should feel that they are attached to the organization and the managers should perceive that they are the most important assets of organization.

10. Serve the customers: the engaged employees can serve the customers well and this requires presenting the best services to the customers.

11. Develop people: the organization should focus on achieving the goals and development of employees and the growth of employees can lead to the organization success.

12. The happiness of employees: the satisfied and happy employees are the most important assets of organization. The key of a productive business is the happy employees.

3.2. The engagement model of Anon Hewitt

Most of the workers of human resources department have explained that the engagement of employees is one of the main goals of a strategy and talent. In identity model, the engagement of operational employees is one of the items including say, stay and strives with each case. Anon Hewitt defines engagement as the behavioral and mental results leading to the better performance. The engagement model of identity deals with the results of engagement such as say, stay and strives:

- say: positive talk about an organization with the potential co-workers and employees and customers;
- stay: having feeling and belonging of organization;
- strive: they make efforts with motivation to achieve the organization success.

3.3. P7 model of organizational performance

The engagement of employees refers to the positive attitudes helping to increase the performance, as the engaged employees have high productivity. At individual and organizational level, this issue is of great importance. At individual level, the employees enjoy their job and feel that they are a part of organization and they belong to the organization.

3.4. Development of P7 model

P7 model was established after the extensive researches in more than 1,000 organizations. The model has two extensive goals. The first goal shows that the performance assessment is performed via a wide range of the performance of human resources and management in goal, asset, participation and wellbeing.

As for the second goal, the criteria of model regarding the key results include:

1) engagement;
2) effective progress.

The evaluation of these tasks enables the organization to identify the main drivers of the increase of engagement of employees and organizational progress. P7 model is shown in Figure 1.

The key measurements of P7 model in the organizational performance include:

1) passion/engagement of people: how much the employees are engaged, and they belong to the organization and they attend the tasks of organization;
2) fulfillment of purpose and progress: measurement of perception and information of people about organizational performance, how much the organization is successful in attaining the purpose, continuous improvement, change and presenting the services to customers as high or well?

3.5. Drivers

The result of drivers is engagement in the wide range of organizational actions, the current performance is measured in each of these actions.
and this helps the identification of key changes in achieving the high progress and engagement. For example, if the organization goals are not defined for the people, this affects the emotional engagement and progress assessment of people.

In this example, the strategy and organizational values relationship is clear.

1. Purpose: Clear vision of organizational identity. Are the employees informative of the strategies and vision of top management? Are the employees committed to the values and mission of organization?

2. Property: How much the employees feel there are adequate infrastructures and resources for their tasks?

3. Participation: How is the feeling of employees about their management, how much the development opportunities, satisfaction of wages, vertical and horizontal organizational relationship and many methods of human resources exist?

4. People: How is the relationship of people with their direct co-workers? Do they work in a good team? Do they have adequate motivation? Are they talented?

5. Peace: How much the employees keep peace, stress management, achieving the work and life balance and flexibility?

The above model has good reliability regarding organizational performance, turnover, productivity, absenteeism and reports of financial manager.

3.6. The effectiveness model of HAY group

High level of engagement leads to high productivity of employees, high loyalty of customers and high financial performance, job engagement and effectiveness of people.

4. RESULTS OF THE STUDY

4.1. The concept of job engagement

The term engagement is similar to the terms including satisfaction, motivation, commitment and loyalty, but it is beyond them and it includes all these concepts. Engagement of employees refers to the feeling of them about the job and as they are committed to do their tasks and they should be conservative in this regard.

The concept of job engagement is rooted in the studies of Kahn (1990), he defines personal engagement as the barrier of personal interests of the organization members to their duties and adds that people play the physical, cognitive and emotional roles in engagement:

1) physical engagement: physical engagement is making attempts at work. The physical aspects of engagement refer to the physical energy applied by people to perform their duties (Kula, Gatenby, Rees, Soane, & Truss, 2008);

2) cognitive engagement: the cognitive dimension of work engagement refers to the beliefs of employees about the organization, leaders and work conditions (Kula et al., 2008). Generally, the engagement dimensions can be shown in Figure 1;

3) emotional engagement: the emotional dimensions refer to the feelings of employees about whether they have positive or negative attitude to the organization and their leaders (Kula et al., 2008).

Katz and Kahn (1966) have emphasized on the need of employees in their engagement at work and the organization. They don’t use the term “employee engagement” directly and this concept is considered as the need for engagement and its consistency with the organization effectiveness.

Work engagement refers to the energy dedicated to do the tasks by a person and it also refers to the effectiveness and efficiency at work (Maslach, Schaufeli, & Leiter, 2001).

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Schaufeli et al. (2002) defines engagement as the positive and mental condition of the task as defined by work assignment. May et al., have evaluated the model of Kahn and have proposed that significant conditions of psychology, security and psychological factors have been positively associated with engagement.

Work engagement refers to the energy and job attachment and professional effectiveness and it consists of three dimensions of absorption, capability and self-dedication (Schaufeli, Marfínez, Pinto, Salanova, & Bakker, 2002). Work engagement: With high level of energy and mental flexibility during working, it is defined as the interest in investment at work and resistance in encountering the work problems (Salanova, Agut, & Peiro, 2005). Self-dedication: It is feeling meaningful, engagement and pride and challenging feeling of work (Cooper-Hakim & Viswesvaran, 2005). As it was said, the components of engagement are shown in Figure 2.

4.2. Different types of employees based on engagement level

An organization is a set of people being gathered to fulfill the common goals. The more the number of working people, the bigger the size of the organization and vice versa. For a growing organization, it is important that the employees use their capability fully, but this is not so in the organizations. It is possible that the goal of employees is not consistent with that of work and organization and they can have problem with their team or chief. Based on these items, the classification of employees into three types of engagement is necessary. Although there are other classifications, this classification is based on the commitment and engagement of employees as follows.

- actively disengaged: these employees are dissatisfied, and they don’t feel happy in the organization, they are barriers of other employees and they leave the job;
- engaged: the second group is the employees staying at job with the words as love, innovation, they are engaged and creative and help the organization by presenting new ideas and they actualize their ideas. These employees have positive vision and develop it positively.

Figure 2. The components of work engagement concept
They are active and predict the future conditions of market;

- not engaged: this is the third group of employees in the organization as 50%. They do their work only with orders. They don’t have energy and interest. Their vision to the organization is positive or negative.

In a study by Gallop institute, it was found that 16% of people working in the organization are not actively engaged and 28% are engaged and 56% are not engaged, but these statistics cannot be generalized, but they are mostly true.

The researches show that the engaged employees are efficient and they have better understanding of business, focus on the customers and are committed to them.

4.3. Effective factors of employee engagement

Based on the importance of employee engagement, the effective factors of engagement in different theories are evaluated. The different classifications are considered for employees’ engagement. Also, different factors including individual and organizational factors are effective for engagement. Two factors, individual and organizational, are effective for employee engagement in this study by which the organizational engagement maturity and outcomes of organizational engagement are defined.

Table 1 reports the $t$-values for study paths. $T$-values above $\pm1.96$ to $\pm2.58$ are significant at the level of 0.01 and $t$-values above $\pm2.58$ are significant at the level of 0.01. The path coefficients of individual and organizational factors for organizational engagement maturity are positive and significant at the level of 0.01. Also, the effect of organizational engagement maturity on outcomes of engagement is positive and significant at the level of 0.01. Table 1 shows the estimation of coefficients and variance of study variables.

As shown in Table 1, 47% of variance of organizational engagement maturity is explained by the study model and organizational engagement maturity explains 22% of variance of organizational engagement outcomes. Table 1 illustrates that all values of CV-communality are positive and this shows good quality of the model of the present study.

**CONCLUSION AND SUMMARY**

The present study is aimed to design the engagement assessment in the organizations. In the present study, based on the review of literature, the effective individual and organizational factors on engagement and the outcomes are identified.

The results of study show that in the individual field, innovation, motivation, respect, trust, well-being experience, success, pride and good feeling lead to engagement among the employees. Robinson et al. (2014) emphasized on the individual factors and the significance of pride at work and having motivation as a key driver of engagement of employees. This feeling is affected by other elements as participation in decision and opportunities that people have for development in their job and each one has differ-
Figure 3. The effective factors of employees’ engagement
ent effect on the feeling and engagement of people. Indeed, work engagement of people includes three dimensions: cognitive, emotional and behavioral. The cognitive aspect of work engagement refers to the beliefs of people about organization, leaders and work conditions. The emotional aspect of engagement refers to the feeling of people and their attitude to the organization, leaders and work conditions. Finally, the behavioral aspect of work engagement is a factor creating value added for the organization and includes the voluntarily efforts of employees to increase their work engagement and this leads to do the tasks with high interest and low time. The study findings on the effective individual factors on engagement are consistent with the studies of Trepaniera et al. (2015), Kaveh and Ganji (2015), Noami and Shenavar (2015).

Based on the study findings, the organizational factors are effective on engagement. The results showed that in the organizational factors, the components of organization orientation, communication, value and mission, role clarity, team work, reputation, reward, job opportunities, health and safety have significant effect on engagement in the organization. The qualities of relationship between managers and people, team work and job opportunities are the vital links to increase the work engagement of people. Besides the leaders, the managers have major role in the increase of work engagement of employees. The researches of Chughtai and Buckley (2011) showed that the trust of managers and trust of people to their inclination to job increased work engagement of employees. The managers are obliged to identify the key components of work engagement of people and the design of methods to evaluate the progress of people in this regard. They should provide the financial and non-financial resources of work engagement plans of employees and complete their support to implement the strategy of job engagement of employees. According to Vance (2016), the employee engagement is associated incredibly with the actions of the managers of organization. To clarify this issue that the actions of top managers are effective on the performance and job engagement, he presented a job performance model. According to this model, work engagement of the employee is the result of personal traits as knowledge, skill, ability, mood, attitude and personality; organizational content as leadership, physical and social environment and human resources methods effective directly on a person, process and content of work performance components.

The combination of above components causes that people perform their duties voluntarily and they do well without any supervisor. Glantz (2010), Macey and Schneider (2008) stated that the interaction between the work engagements of people is started from the view of engagement at work and refers to the view of people to their work environment. High correlation of engagement at work and ability of employees in freedom for decision making can be increased and high correlation of engagement at work and submersion can create interest in work of employees to do their duties. The majority of drivers leading to work engagement are non-financial and any organization with committed leadership can achieve good level of engagement with low costs. We should pay attention that the organizations should select the rewards as non-financial namely they improve acknowledgement and encourage them to be committed to their job (Holko et al., 2012; Kompaso, 2010).

The results of study showed that work engagement of employees had positive outcomes both directly and indirectly for the organization and people. These benefits are manifested at different levels of organization. Some benefits are shown at internal level of organization, but some other benefits have direct effect on the external beneficiaries of organization. The internal benefits of work engagement include the improvement of knowledge management, reduction of absenteeism of employees, improvement of morale of people, increase of safety, high application of internal volunteers by succession plans, reduction of transfer of employees and increase their motivation. The external benefits of engagement of people include the increase of productivity, increase of profit margin, increase of loyalty of customers and increase of absorption of talented employees outside the organization. The positive effects of work engagement of employees are not only for the benefit of organization, but for the benefit of one by one of employees. These benefits include the increase of productivity of employees, increase wage, self-esteem and improved health of employees. The study results on positive outcomes of engagement are consistent

The study results on testing the organizational engagement maturity showed that path coefficients of individual and organizational factors were positive and significant at the level of 0.01 on organizational engagement maturity. Also, the effect of organizational engagement maturity on engagement outcomes is positive and significant at the level of 0.01. The results showed that 47% of variance of organizational engagement maturity was explained by the study model. Also, the organizational engagement maturity explained 22% of variance of organizational engagement outcomes.

Based on the outcomes of engagement for people and organizations, we should consider the following solutions for engagement:

- improve trust culture;
- consistency of individual performance with the organizational performance;
- considering reward;
- create continuous relationship in all levels;
- create diverse culture;
- improve team work and respect;
- getting feedback and create work improvement;
- propose development opportunities.

**MANAGERIAL IMPLICATIONS**

The research framework highlights the key components and structural influencing factors of organizational engagement, with a focus on the individual factors and organizational factors, which have a significant role in organizational outcomes such as productivity, satisfaction, performance, commitment and innovation. There is an urgent need of human resource interventions, which is reflected by the results of the study. There are a lot of concerns related HR policies and practices as reflected from the results. Human resource managers can take pride in knowing that they have helped others develop and grow. Similarly, it is recommended to strengthen communications by creating an internal communication function within human resources department. This is to ensure clear and consistent information is communicated to employees across the company through a common channel that encourage employee engagement by keeping the workforce energized, focused and productive which is critical to long-term organizational success. Also the leaders of the organization, by providing shared insights, mental stimulation and inspirational motivation, can reinforce emotions such as meaningful job occupation in the workplace, the effectiveness of job activities in organizational outcomes, and the independence and autonomy of employees. HR managers should encourage innovation by creating the necessary space for the creativity and support of employees. Another factor that human resource managers should take into account is the respect for employees, which can improve the trust among the members of the organization and increase their organizational engagement. HR managers should create a supportive atmosphere for achieving good job experience among employees and increase their financial and non-financial incentives in proportion to the success of each employee. Also results showed that organizational orientation, communication, value and mission, role clarity, team work, reputation, reward, job opportunities, health and safety have significant effect on engagement in the organization. Therefore, it is suggested to managers to focus their organizational orientation on motivating organizational engagement and focus their decisions on strengthening organizational engagement. Since team work is crucial for retaining and engaging staff, the managers should invest in staff training for improving teamwork skills. However, opportunities for upward mobility should be identified or created to enable staff take up higher roles to utilize gained capabilities. In addition,
rotation should be encouraged and where no openings for promotion exist, then job enrichment should be pursued by the employer. Managers are encouraged to provide a safe atmosphere for employees to improve their organizational attachment. HR managers should define clear roles for employees so that they can perform their duties efficiently. This makes them feel effective and gradually makes them more loyal to the organization. Finally, the framework of this research helps managers to improve their organizational attachment through organizational factors and individual factors.

LIMITATIONS AND FUTURE STUDIES

The present study has some limitations. First, like previous studies using survey research method, this study suffers from issues typically associated with self-reported data, which could lead to biases associated with social desirability. To eliminate this limitation, future researchers are encouraged to use qualitative research methods to examine the factors affecting organizational engagement. This research has examined only organizational factors and individual factors on organizational engagement. Therefore, it is suggested to future researchers to investigate the other factors such as managerial factors in order to improve the generalizability. Furthermore, the cross-sectional nature of our data provides limited references regarding causality. Thus, future studies can use other methods to confirm the research findings of our study.

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