

The Relationship between Organizational Intelligence and Staff Performance Based on the Model of Karl Albrecht **(The case of Iran Branch, China National Petroleum Company)**

Amir Babak Marjani

Faculty member at Central Tehran Branch
Islamic Azad University
Tehran, Iran

Mojdeh Soheilipour

Master in public administration
Department of Public Administration
Central Tehran Branch
Islamic Azad University
Tehran, Iran

Abstract

This article mainly examines the relationship between organizational intelligence and employee's performance in Iran Branch, China National Petroleum Company based on the model of Karl Albrecht. The statistical population of this research included all employees -115 people- in Iran Branch, China National Petroleum Company. Seven hypotheses were set forth which studied the relationship between the components of organizational intelligence and such indicators as strategic vision, common fate, application of knowledge, performance pressure, intend to change, union and consencus, employee morale, and the dependant variable of performance of the staff in Iran Branch, China National Petroleum Company. The results from the statistical testing of the hypotheses showed that all the seven hypotheses were approved and there is a significant relationship between all the above-mentioned indicators and the perfrmance of the staff in Iran Branch, China National Petroleum Company.

Keywords: organization, organizationalintelligence, staff performance, China National Petroleum Company,

Introduction

The organizations are not independent business units. They are located in given environments—market environments (business environments). Market environment is treated as an external factor. Besides, firms are organizations of individuals and organization development is concerned with the analysis and diagnosis of the factor that determine organizational effectiveness, and the planning and delivery of programmes to increase that effectiveness. Organizations want to obtain the commitment of their employees. Management would like its employees to identify with the values, norms and artefacts of the organization, hence the need for organizational culture (Ojo, 2009). According to Geert Hofstede's research on culture dimensions, individuals in different countries have different characteristics. With the development of the concept of "Organizational IQ", some researcher notices the relationship of Organizational IQ and Firm Performance. Haim Mendolson mentioned that "Organizational IQ has a strong effect on a company's financial performance..." (Mendelson and Ziegler, 1999).

The concept of Organizational IQ (Organizational Intelligence Quotient) was first developed by Haim Mendelson and other researches, who conducted a questionnaire survey of firms in Silicon Valley and used the results to analyze the relationship between organizational IQ and Firm Performance. [Mendelson and Ziegler, (1999)] Organizational IQ is a quantitative measure of an organization's effectiveness in information distribution, decision making and execution [Synesis, (2001)]. China National Petroleum Corporation (CNPC) is a world-leading integrated international energy company with businesses covering oil and gas upstream and downstream operations, oilfield services, engineering and construction, petroleum material and equipment manufacturing and supply, capital management, finance and insurance services, new energy operations¹.

¹ <http://www.cnpc.com.cn/eng/company/>

CNPC is the government-owned parent company of public-listed PetroChina, a company created on November 5, 1999 as part of the restructuring of CNPC. In the restructuring, CNPC injected into PetroChina most of the assets and liabilities of CNPC relating to its exploration and production, refining and marketing, chemicals and natural gas businesses. CNPC and PetroChina develop overseas assets through a joint venture, CNPC Exploration & Development Company, which is 50% owned by PetroChina. CNPC holds proved reserves of 3.7 billion barrels (590,000,000 m³) of oil equivalent. In 2007, CNPC produced 54 billion cubic metres of natural gas. CNPC spun off most of its domestic assets into a separate company, PetroChina, during a restructuring. CNPC has 30 international exploration and production projects with operations in Azerbaijan, Canada, Iran, Indonesia, Myanmar, Oman, Peru, Sudan, Thailand, Turkmenistan, and Venezuela.

CNPC has become increasingly involved in development of Iranian oil fields following Western sanctions that target the Iranian oil and gas sectors leading many European energy companies such as Shell Oil, Repsol, and etc. to shut down operations in Iran. The CNPC along with Sinopec is involved in various projects relating to Iran oil/gas development. As of 2011, CNPC is undertaking development of Iran's age-old Masjed Soleyman Oil Field, (the oldest oil field of the Middle East) in collaboration with Iranian counterpart NIOC in a deal worth 200 million dollars. Production from this particular oil field is expected to increase this year from current 2,500 barrels (400 m³) a day to 25,000 barrels (4,000 m³) after the completion of the first phase, and to 55,000,000 bbl/d (8,700,000 m³/d) following the completion of phase 2 of the project.² This research studies the relationship between organizational intelligence and employee's performance in Iran Branch, China National Petroleum Company based on the model of Karl Albrecht.

Organizational Intelligence, Cognitive Intelligence, and Job Performance

Intelligence can be seen as the ability to learn, reason, and understand (Longman, 1987). Organizational intelligence (OI) refers to the management of both business and public policy intelligence. Nonaka and Takeuchi (1995) elucidate the mutually-reinforcing ways in which tacit and explicit knowledge interact to create the totality of organizational intelligence (Kesti et al., 2011). Organizational intelligence can be considered as some kind of cognitive intelligence and is related to emotional intelligence. Cognitive intelligence is positively related to the dimensions of job performance—task performance and organizational citizenship behavior (OCB)—in most, if not all jobs (Motowidlo and Van Scotter, 1994; Schmidt and Hunter, 1998; Chan and Schmitt, 2002). Task performance concerns the core substantive duties that are formally recognized as part of a job, and OCB concerns activities that contribute to the achievement of the objectives of an organization but that are not necessarily formally recognized as part of a job (Organ, 1988; Borman and Motowidlo, 1997; Rotundo and Sackett, 2002). In theory, cognitive intelligence enhances task performance through the knowledge of facts, procedures, and rules relevant to the technical core of the job (Motowidlo, Borman, and Schmit, 1997). Cognitive intelligence enhances OCB through the knowledge of facts, procedures, and rules relevant to effective helping, cooperating, and endorsing the organization (Motowidlo, Borman, and Schmit, 1997).

Individuals with low cognitive intelligence may reap relatively large returns from high organizational intelligence because they tend to exhibit low job performance in most, if not all jobs. When job performance is low, the room for correction and improvement is large. For example, a salesperson who fails to hold the interest of potential customers has high potential for reducing mistakes in the future. Job performance that is not attained through cognitive intelligence may be attained through organizational intelligence via multiple complementary mechanisms. The first mechanism concerns expertise at identifying and understanding the emotions of other individuals. In most, if not all jobs, organization members interact with supervisors, coworkers, support staff, and outsiders such as customers, clients, or patients. These individuals publicly display their emotions through facial, vocal, and bodily signals that provide important information about their goals, attitudes, and intentions (Rafaeli and Sutton, 1987; Sutton, 1991). This information may, in turn, be converted into high task performance by individuals with high emotional intelligence and low cognitive intelligence. An employee who accurately detects colleagues' emotions may facilitate coordination and interpersonal functioning that may, in turn, enhance task performance (Law, Wong, and Song, 2004). Information about other people's goals, attitudes, and intentions may also be converted into frequent OCB by individuals with high emotional intelligence and low cognitive intelligence. For example, these individuals can detect other individuals' sadness and anxiety, which often signal a need for assistance (Eisenberg, 2000), and therefore they may exhibit frequent OCB.

² http://en.wikipedia.org/wiki/China_National_Petroleum_Corporation

A second mechanism by which organizational intelligence may enhance the job performance of individuals with low cognitive intelligence concerns how regulating emotion influences the quality of social relationships. Employees who generate and display genuine emotions elicit more favorable reactions than employees who choose to display fake emotions (Grandey, 2003; Grandey et al., 2005). Employees who display genuine concern about their coworkers' problems should build stronger relationships than employees whose concern seems less genuine. Individuals with high emotional intelligence and low cognitive intelligence may employ their abilities to manage emotions to develop good social relationships (Wong and Law, 2002) that may in turn enhance task performance via advice and social support (Sparrowe et al., 2001; Pearce and Randel, 2004). Good social relationships may also compel employees to engage in OCB frequently to benefit close colleagues.

A third mechanism by which organizational intelligence may enhance the job performance of individuals with low cognitive intelligence concerns the effects of emotions on how people think and act (Loewenstein and Lerner, 2003; Seo, Feldman Barrett, and Bartunek, 2004). Emotionally intelligent individuals with low cognitive intelligence may achieve high levels of task performance and OCB in most, if not all jobs by managing their emotions in ways that enhance their motivation and the quality of their decisions (Law, Wong, and Song, 2004). A manager who understands that anger tends to lead people to underestimate the degree of risk in situations (Lerner and Keltner, 2001) may suppress anger before making an important financial decision and, in turn, exhibit good task performance. In addition, an organization member who understands that motivation is often enhanced by positive emotions (Erez and Isen, 2002) and successfully boosts positive emotions may exert more effort to engage in OCB (Côté and Miners, 2006).

The preceding discussion suggests that organizational intelligence may positively relate to the job performance of organization members with low cognitive intelligence and, as such, compensate for low cognitive intelligence. Organizational intelligence, however, should become less positively associated with job performance as cognitive intelligence increases. Individuals with high cognitive intelligence are expected to exhibit high job performance and hence leave little room for correction and improvement. Although organizational intelligence may help individuals with high cognitive intelligence identify other people's emotions, manage their own emotions, improve their own decisions, and enhance their own motivation, organizational intelligence should contribute little to their job performance because they already achieve high job performance.

Organizational knowledge management and organizational development

The development and measurement of essential competencies is essential to strategic knowledge management in organizations, since such competencies include organizational learning attributes that are critical for sustained productivity and growth (Kesti and Syvajarvi, 2010; Kesti, 2005, 2007; Bakker and Demerouti, 2007; Hackman and Oldham, 1980). Competencies can be measured for each distinct group in the organization with use of the aforementioned tacit-signal method (Kesti et al., 2008). Competency measures are in turn linked to scorecards like quality costs, absenteeism and turnover, and net profits. Tacit signal measures fit well with Balanced Scorecard methods, in particular with regard to the dimensions of organizational learning and growth (Kaplan and Norton, 1996). Defining elements of organizational learning and development include employee participation in managerial decision-making, planning, implementation, and the engagement of self-directed groups and teams. It is by virtue of such employee investment in management processes that the quality of work life is improved, and with it staff and organizational performance (Ramstad, 2009; Kesti and Syvajarvi, 2010; Welch and Welch, 2005, Ketsi et al., 2011).

Research objectives

Main goal: The main objective of this study is to examine the relationship between organization intelligence and performance of the staff in Iran Branch, China National Petroleum Company, based on the model of Karl Albrecht.

Sub-goals:

- 1 – Studying the relationship between strategic vision and performance of the staff in Iran Branch, China National Petroleum Company.
- 2 - Assessing the relationship between employee morale and performance of the staff in Iran Branch, China National Petroleum Company.

Research method

This study is functional in terms of purpose and descriptive-survey in terms of method.

Statistical population

The study population in this research is consisted of all employees -115 people- in Iran Branch, China National Petroleum Company.

Sampling method

In this study, the data is collected by random sampling method.

statistical sample size determination

The number of samples for field analysis is obtained from following formulas (Kukran Formula):

$$n = \frac{n_0}{1 + \frac{n_0}{N}}$$

And

$$n_0 = \frac{z_{\alpha/2}^2 pq}{d^2} \quad \text{Or } n = \frac{N z_{\alpha/2}^2 PQ}{Nd^2 + z_{\alpha/2}^2 PQ}$$

Data collection tools

The data in this research is mainly collected by the two following methods:

1. Referring to the documentation;
2. Preparing and distributing questionnaires.

Research hypotheses

Main hypothesis

The overall hypothesis of this research is that there is a significant relationship between organizational intelligence and performance of the staff in Iran Branch, China National Petroleum Company.

Sub-hypotheses

1. There is a significant relationship between the strategic vision and performance of the staff in Iran Branch, China National Petroleum Company.
2. There is a significant relationship between the employee morale and performance of the staff in Iran Branch, China National Petroleum Company.
3. There is a significant relationship between the common fate and performance of the staff in Iran Branch, China National Petroleum Company.
4. There is a significant relationship between the application of knowledge and performance of the staff in Iran Branch, China National Petroleum Company.
5. There is a significant relationship between the performance pressure and performance of the staff in Iran Branch, China National Petroleum Company.
- 6 - There is a significant relationship between the union and consensus and performance of the staff in Iran Branch, China National Petroleum Company.
- 7 - There is a significant relationship between the intend to change and performance of the staff in Iran Branch, China National Petroleum Company.

Research domains:

Thematic domain: The theme of this research is the organizational intelligence, which is a subset of human resource management.

Periodical domain: This research has been conducted from June till December 2011.

Geographic domain: This research has been conducted in Iran Branch, China National Petroleum Company which is located in two cities of Tehran and Ahvaz.

Results from the research hypotheses testing

Result from the 1st hypothesis testing:

The first hypothesis studied the relationship between strategic vision and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the employee morale and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the strategic vision and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.02), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the strategic vision and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 2nd hypothesis testing:

The second hypothesis studied the relationship between the employee morale and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the employee morale and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the employee morale and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.00), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the employee morale and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 3rd hypothesis testing:

The third hypothesis studied the relationship between the common fate and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the common fate and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the common fate and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.00), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the common fate and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 4th hypothesis testing:

The fourth hypothesis studied the relationship between the application of knowledge and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the application of knowledge and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the application of knowledge and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.00), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the application of knowledge and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 5th hypothesis testing:

The fifth hypothesis studied the relationship between the performance pressure and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the performance pressure and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the performance pressure and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.00), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the performance pressure and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 6th hypothesis testing:

The sixth hypothesis studied the relationship between the union and consencus and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the union and consencus and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the union and consencus and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.00), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the union and consencus and performance of the staff in Iran Branch, China National Petroleum Company.

Result from the 7th hypothesis testing:

The seventh hypothesis studied the relationship between the intend to change and performance of staff in Iran Branch, China National Petroleum Company.

H0: There is no significant relationship between the intend to change and performance of the staff in Iran Branch, China National Petroleum Company.

H1: There is a significant relationship between the intend to change and performance of the staff in Iran Branch, China National Petroleum Company.

The sig calculated by the software of spss 17 and comparison of it with the first type of error showed that since the sig is smaller than 0.05 (sig = 0.02), H0 is not accepted and thus, H1 is confirmed and accepted. In other words, H0 is refused in a confidence level of 95% and it is concluded that There is a significant relationship and co-efficiency between the intend to change and performance of the staff in Iran Branch, China National Petroleum Company.

Conclusion

the relationship between organizational intelligence and employee's performance in Iran Branch, China National Petroleum Company based on the model of Karl Albrecht. The results from the statistical testing of the hypotheses showed that there is a significant relationship between the components of organizational intelligence and such indicators as strategic vision, common fate, application of knowledge, performance pressure, intend to change, union and consencus, employee morale, and the dependant variable of performance of the staff in Iran Branch, China National Petroleum Company.

References

- Bakker A. and Demerouti E. (2007). The job demands-resources model: state of the art, *Journal of Managerial Psychology*, 22 (3), pp. 309-328.
- Borman, W. C., and S. J. Motowidlo (1997). "Task performance and contextual performance: The meaning for personnel selection research." *Human Performance*, 10: 99-109.

- Chan, D., and N. Schmitt (2002). "Situational judgment and job performance." *Human Performance*, 15: 233–254.
- Côté, S. and Miners, T. H. (2006). *Emotional Intelligence, Cognitive Intelligence, and Job Performance*, Administrative Science Quarterly, 51, 1–28, by Johnson Graduate School, Cornell University.
- Eisenberg, N. (2000). "Emotion, regulation, and moral development." *Annual Review of Psychology*, 51: 665–697.
- Erez, A., and A. M. Isen (2002). "The influence of positive affect on the components of expectancy motivation." *Journal of Applied Psychology*, 87:1055–1067.
- Grandey, A. A. (2003). "When 'the show must go on': Surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery." *Academy of Management Journal*, 46: 86–96.
- Hackman J.R. and Oldham G.R. (1980). *Work redesign*, Reading, MA: Addison-Wesley.
- Kaplan R.S. and Norton D.P. (1996). *The Balanced Scorecard*, Harvard Business School Press, Boston, United States of America.
- Kesti M. (2005). *Tacit signals – key to organization development*, Edita publishing, Tallinna (in Finnish).
- Kesti M. (2007). *High performance organization*, Edita publishing, Helsinki (in Finnish).
- Kesti M. and Syvajarvi A. (2010). *Human tacit signals at organization performance development*, *Industrial Management and Data Systems*, Vol. 110, No. 2, pp. 211-229, Emerald Group Publishing Limited.
- Kesti M., Syvajarvi A. and Stenvall J. (2008). *E-HRM in Competence Recognition and Management – the Tacit Signal HRIS*, In Torres-Coronas, T. and Arias-Oliva, M. (eds.) *Encyclopedia of Human Resource Information Systems: Challenges in E-HRM*, Idea Group Publishing Inc, USA.
- Kesti M., Syvajarvi A., Stenvall J., Rivera M. (2011), *Human capital scenario analysis as an organizational intelligence tool for performance management*, *Problems and Perspectives in Management*, Volume 9, Issue 1.
- Law, K. S., C.-S. Wong, and L. J. Song (2004). "The construct and criterion validity of emotional intelligence and its potential utility for management studies." *Journal of Applied Psychology*, 89: 483–496.
- Lerner, J. S., and D. Keltner (2001). "Fear, anger, and risk." *Journal of Personality and Social Psychology*, 81: 146–159.
- Loewenstein, G., and J. S. Lerner (2003). "The role of affect in decision-making." In R. Davidson, K. Scherer, and H. Goldsmith (eds.), *Handbook of Affective Sciences*: 619–642. New York: Oxford University Press.
- Longman (1987). *Dictionary of Contemporary English*. Longman House.
- Mendelson H. and Ziegler J. (1999). *Survival of the smartest: Managing information for rapid action and world-class performance*, Wiley.
- Motowidlo, S. J., W. C. Borman, and M. J. Schmit (1997). "A theory of individual differences in task and contextual performance." *Human Performance*, 10: 71–83.
- Motowidlo, S. L., and J. R. Van Scotter (1994). "Evidence that task performance should be distinguished from contextual performance." *Journal of Applied Psychology*, 79: 475–480.
- Ojo, O. (2009). *Impact Assessment Of Corporate Culture On Employee Job Performance*, *Business Intelligence Journal*, Vol. 2 No. 2.
- Organ, D. W. (1988). *Organizational Citizenship Behavior: The Good Soldier Syndrome*. Lexington, MA: Lexington Books/D. C. Heath.
- Pearce, J. L., and A. E. Randel (2004). "Expectations of organizational mobility, workplace social inclusion, and employee job performance." *Journal of Organizational Behavior*, 25: 81–98.
- Rafaeli, A., and R. I. Sutton (1987). "Expression of emotion as part of the work role." *Academy of Management Review*, 12: 23–37.
- Ramstad E. (2009). "Promoting performance and quality of working life simultaneously", *International Journal of Productivity and Performance Management*, Vol. 58, No. 5, Emerald Group Publishing Limited.
- Rotundo, M., and P. R. Sackett (2002). "The relative importance of task, citizenship, and counterproductive performance to global ratings of job performance: A policy-capturing approach." *Journal of Applied Psychology*, 87: 66–80.
- Schmidt, F. L., and J. E. Hunter (1998). "The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings." *Psychological Bulletin*, 124: 262–274.
- Seo, M.-G., L. Feldman Barrett, and J. Bartunek 2004 "The role of affective experience in work motivation." *Academy of Management Journal*, 29: 423–439.
- Sparrowe, R. T., R. C. Liden, S. J. Wayne, and M. L. Kraimer (2001). "Social networks and the performance of individuals and groups." *Academy of Management Journal*, 44: 316–325.
- Sutton, R. I. (1991). "Maintaining norms about expressed emotions: The case of bill collectors." *Administrative Science Quarterly*, 36: 245–268.
- Welch J. and Welch S. (2005). *Winning*, Harper Collins Publishers, New York.
- Wong, C.-S., and K. S. Law (2002). "The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study." *Leadership Quarterly*, 13: 243–274.