

Designing the Work Motivation Model

staff employees of Iranian offshore Oil Company

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Abstract— This research has been conducted to identify and analyze motivational factors for staff employees of Iranian Offshore Oil Company. Current applied research population, is 400 members of staff employees in IOOC and among these, 107 members has chosen as simple random samples, in order to collecting the data. Motivation factors are consisting of Intrinsic and Extrinsic factors. The factorial analysis of motivational index of peoples using Lisrel software (internal consistency of options by using Cronbach's Alpha measure was $\alpha > 0.7$) have indicated that intrinsic motivation factors (work nature, success and development, prestige and rank) and extrinsic motivation factors (participation in decision making, perceived justice, salary and rewards, connection with direct manager, work condition) all of these motivation factors have over 0.5 values in motivation model. Also Goodness of Fitness value shows that collected sample data are totally suited and fitted on research model. Moreover, there is a high correlation between intrinsic and extrinsic motivations. Unlike the point of view that: extrinsic motivation decreases the intrinsic motivation, it can be mentioned here that both act as complements.

Keywords- motivation; intrinsic and extrinsic factors; staff employees; lisrel; Iranian Offshore Oil Company (IOOC)

I. INTRODUCTION

Incentives are causes of initiation and continuing of the activities and determine the orientation and the overall path that is to be taken. Motivational theories explain the reasons and the ways of conducting activities. These theories attempt to describe the intensity, orientation and durability of activities. Then, motivation has been identified as a key determinant of general behavior [1], information technology acceptance behavior [2, 3], and work-related behavior [4, 5].

In one hand, Motivational theories of workplace have been categorized as two kinds of conceptual and procedural. Conceptual theories indicate the importance and the kind of need while procedural theories indicate the reasons and the importance of a specific need. Conceptual theories are more directly related to customer's satisfaction than occupational attempts. While, conceptual theories are not directly related to occupational attempts and performance concepts.

In another word, motivational theories classify incentives into two categories of intrinsic and extrinsic motivation. Intrinsic motivation is the indication of behaviors that by themselves (not the rewards) leads to satisfaction of the individual. While, extrinsic motivation means a set of

behaviors with outcomes leading to motivating of individual on performing actions which are outcome oriented.

Two broad classes of motivation – extrinsic and intrinsic – have been defined and examined across various contexts and studies [1, 6, 7, 8]. Extrinsic motivation focuses on the goal-driven reasons, e.g. rewards or benefits earned when performing an activity [7], while intrinsic motivation indicates the pleasure and inherent satisfaction derived from a specific activity [9]. Together, extrinsic and intrinsic motivation influence individual intentions regarding an activity as well as their actual behaviors [2, 9, 10].

A. Extrinsic Motivation

From an extrinsic motivation perspective, individual behavior is driven by its perceived values and the benefits of the action. The fundamental goals of extrinsically motivated behaviors are to receive organizational rewards or reciprocal benefits [9, 11]. Organizational rewards are useful for motivating individuals to perform desired behaviors [12]. Organizational rewards can range from monetary incentives such as increased salary and bonuses to non-monetary awards such as promotions and job security [13, 14]. Several organizations have introduced reward systems to encourage employees to share their knowledge. For example, Buckman Laboratories recognizes its 100 top knowledge contributors through an annual conference at a resort. Moreover, Lotus Development, a division of IBM, bases 25% of the total performance evaluation of its customer support workers on the extent of their knowledge sharing activities [15].

B. Intrinsic Motivation

From an intrinsic motivation perspective, behavior is evoked by the need of employees to feel competence and self-determination in dealing with their environment. Intrinsic motivation refers to engaging in an activity for its own sake, out of interest, or for the pleasure and satisfaction derived from the experience [9]. Competence or self efficacy is defined as the judgments of individuals regarding their capabilities to organize and execute courses of action required to achieve specific levels of performance [16]. Competence or Self-efficacy can help motivate employees to share knowledge with colleagues [17, 18, 19]. Researchers have also found that employees with high confidence in their ability to provide valuable Knowledge are more likely to accomplish specific tasks [19, 20].

There has been an enormous increase in research into motivation. Many studies have implicated relation between motivation and other behavioral and organizational variable

such as workable levers over work motivation such as comparing job satisfaction, job involvement, and organizational commitment[21]; Work Motivation, worker attitudes and the perception of effective public service Craig Boardman [22]; Testing an explicit and implicit measure of motivation[23]; integrated model of intrinsic motivation and career self-management[24]; Work motivation and job satisfaction in the Nordic countries[25]; Understanding Reactions to Workplace Injustice Through Process Theories of Motivation[26]; Effects of extrinsic and intrinsic motivation on employee knowledge sharing intentions[27]; Public service motivation and the job satisfaction and turnover Intentions of Public Employees [28]; Rewards and recognition in employee motivation[29]; The Intersection of a deeper level of intrinsic motivation such as meaningfulness, commitment, and engagement [30]; Worker motivations, job satisfaction, and loyalty in Public and nonprofit Social Services[31]; Performance-related pay and work motivation for the French civil service[32]; A meta-Analytic review of achievement goals and intrinsic motivation[33]. Moreover, existing studies have reported aspects of motivational factors on an oil company in Iran.

II. METHODOLOGY

This study has been conducted to identify motivational factors on an oil company in Iran. The thesis question is "which factors do determine staff motivations on this company?" is it possible to classify these elements into two intrinsic and extrinsic classes?" and finally, "do extrinsic factors complement intrinsic ones or analyze them?"

Statistical sample consists of 400 individuals of officials and staff member of IOOC. This company has been funded in august 1980 to meet the operational and study needs of development, extraction and exploiting of crude oil and natural gas of Persian Gulf. Study sample here consists of 133 staff of IOOC. Samples have been estimated using Cochran formula (finite population). However the number obtained on this way is conservative showing the highest rate of the sample. Also, this number is in harmony with some other researcher's point of view considering the sample rate in finite population equal to 30 per cent of the society. Sample study characteristics have been shown in table I.

TABLE I. CASE STUDY FEATURES

	range	frequency	percentage	cumulative
Age	Less than 30 years old	21	19.6	19.6
	30-35 years old	32	29.9	49.5
	36-40 years old	19	17.8	67.3
	41-45 years old	12	11.2	78.5
	46-50 years old	10	9.3	87.9
	Over 50 years old	13	12.1	100
Gender	male	71	66.4	66.4
	female	36	33.6	100
Education	High	7	6.5	6.5

	school diploma			
	Associate degree	17	15.9	22.4
	Bachelor degree	58	54.2	76.6
	Master degree	25	23.4	100
Experience	Less than 3 years old	11	10.3	10.3
	3-6 years old	27	25.2	35.5
	7-10 years old	20	18.7	54.2
	11-15 years old	15	14	68.2
	Over 15 years old	34	31.8	100
Marital Status	Single	26	24.3	24.3
	married	81	75.7	100

To analyze data structural equation models (LISREL) have been used. Structural equation modeling is a comprehensive statistical strategy to test assumptions of observed and hidden variables. The main constituents of structural equation modeling are regression tests, path analysis, and factorial analysis. By using hidden variable relation to total indices of that hidden variable, measuring variable has been obtained. Also using relations among hidden variables structural model would be gained. Observed variables are graphically in the shape of triangles or squares having a one-tailed straight line toward hidden variable, and hidden variable is in the form of a circle or oval with a two-tailed curve indicates a correlation among hidden variables (not casual).

III. AFFIRMATIVE FACTORIAL ANALYSIS OF MOTIVATIONAL ELEMENTS

Determining relations among variables using LISREL software and selecting (maximum likelihood) a method of estimation in affirmative factorial analysis primary model outputs indicate that all factorial loadings related to variables have been significantly meaningful. Primary estimation is reliable by 99% accuracy. However, analyzing fitness indices of theoretical model with empirical data determined that k-square amount of (51.53) with freedom degree of 19 is significant (0.00008) and the amount of RMSEA (0.127) is bigger than 0.05, so it is in the interval of 0.086-0.17. (It is more than confidence interval of 0.05-0.1), therefore, primary estimation model lacks favorable fitness. Analysis of LISREL suggestions to improve model showed that adding covariance error between "procedures and work condition" and "prestige and rank" bears the lowest decrease in the amount of k-square (15.2). On the other hand, since all suggested covariance errors had theoretical justifications, all proposed modifications have been applied in the final model. It needs to be mentioned that although in the output of LISREL program a line between intrinsic motivation and work nature is being suggested, due to lack of theoretical justification this suggestion has not being applied in the

model. Therefore, the final model of employee's motivation has been extracted.

The summary of the final amounts of estimation model have been illustrated in table II. and Figures I. and II. Amounts in the tables and diagrams show that the significant amount of motivational factors for employees has all been more than 5 with 99 per cent of reliability. Describing factorial loading of observed variables of prestige and rank indicated that for each unit of change in the hidden variable of intrinsic motivation, there would be a change of 69 per cent in above variables.

TABLE II. ESTIMATIONS, SIGNIFICANCE, STANDARD ERROR, COEFFICIENT OF VARIABLE DETERMINATION IN PRIMARY MODEL

Hidden variable	indices	Natural land a	Standard land a	Sig .	St d. Er r.	determinat ion coefficient
Intrinsic	Prestige and rank	0.44	0.69	7.30	0.060	0.48
	Work nature	0.31	0.72	8.14	0.038	0.51
	Success & development	0.33	0.70	7.37	0.045	0.48
extrinsic	Relationship with manager	0.28	0.57	6.16	0.046	0.33
	Salary and rewards	0.25	0.59	6.36	0.040	0.34
	Work condition	0.33	0.77	8.86	0.038	0.60
	Perceived justice	0.29	0.55	5.90	0.049	0.30
	cooperation	0.39	0.83	10.0	0.039	0.69

Furthermore, over viewing fitness indices of theoretical model with regard to accumulated data have shown that the amount of k-square (19.64) with the degree of freedom of 16 is significantly meaningful; the amount of RMSEA is (0.046) which is less than 0.05. It is in the interval of 0.11-0.0. As a result, final estimated model of data in this study bears a favorable fitness. Other indices are being presented in table III.

TABLE III. FITNESS OF FINAL ESTIMATED MODEL INDICES

Pointer title	quantity	Accepted range of index	result
RMSEA	0.046	Less than 0.06	fitness
RMSEA Confidence interval	0-0.11	Between 0.1-0.06	fitness
Insignificance of k-square	0.23	Over 0/05	fitness
Ratio of K- square to freedom degree	1.241	Less than 2 or 3	fitness
Significance of K- square minimum normal square weight	0.24	Over 0.05	fitness
Index of proper fitness	0.96	Over 0.95	fitness
Index of proper modified fitness	0.90	Over 0.95	Lack of fitness
Index of normative fitness	0.94	Over 0.95	fitness
Index of comparative fitness	0.99	Over 0.95	fitness
RMR	0.0096	Approximately 0	fitness

SRMR	0.041	Less than 0.08	fitness
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IV. RESULTS AND DISCUSSIONS

Research findings show that standardized coefficients in the final model of all variables have been more than 0.5; and their range is between 0.55-0.83. Here, the most standardized relation have been found between intrinsic motivation hidden variable and work nature, though cooperation variable bears the most relation with extrinsic hidden variable. All meaningful significant amounts have been more than 5, so with a 99 percent reliability factorial loads are reliable.

Finally, final model fitness indices have all acceptable minimums of estimated model. In total, based on strong relations between intrinsic and extrinsic motivations obtained in this research, it seems these classes are complementary.

In work nature variable work specification model by Halkman and Oldham has been used [34]. According to them, each occupation must have five distinctive features to motivate individuals to perform their tasks [35]. These factors are variety of tasks, work identity, meaningfulness of work, independence and freedom in performance and feedback [36].

Findings by LISREL in final model have indicated that this variable plays the most important role in the variance of hidden intrinsic motivation. Accordingly, from the perspective of IOOC staff, the most important intrinsic motivation factors have been work features like freedom of action, challenges of the tasks and the variety of tasks, the volubility of task range, accountability and authority, and receiving of performance feedbacks.

The second intrinsic variable based on three dimensional theory of Alderfer, Maslo's needs hierarchy and Herzberg's two factor models is prestige and rank [37,38]. The interesting point is the high coefficient of correlation of prestige and rank variable and work nature variable compared to other dual correlations of motivational factors. Therefore, simultaneous decrease or increase in these two variables has significant impact on the level of motivation or lack of it in employees. If an individual is not satisfied with his/her work position and consider its work elements are not motivating, more probably he/she will not have any incentives to success in the career and gain satisfaction. Finally, this variable is the first rate in Friedman test, it means that from the perspective of IOOC staff, prestige and rank variable (when all other intrinsic and extrinsic variables available) play the most role in the determination of staff motivation.

The third motivational factor is seeking success and feeling of development. It should be determined based on seeking success theory by McClelland goal setting theory by John Lock and Herzberg's two factor model. This variable has the most correlation with extrinsic variable of cooperation in decision making; therefore, if an individual is being participant of organizational decision making, with the opportunity to engage in team work and cooperation and free access to information, he/she will feel the feeling of success and improvement.

On the other hand, extrinsic motivation consists of behaviors leading to gaining of administrative awards like salary, ownership, creditability, and positive assessments. Five indices of perceived justice, cooperation, salary and fringe benefits, connection with direct manager and procedures and work condition are extrinsic motivators. Work condition shows the utmost correlation in the final model with relationship with direct manager. It means that, favorable work condition is positively related to favorable relationship with direct manager.

Perceived justice as the second extrinsic motivation variable is the indication of individual feeling toward organizational behavior with him/herself in comparison to others. According to Pierson's findings of correlation test, perceived justice bears the utmost correlation with procedure and work condition variable which in turn means that IOOC staff are more susceptible to procedure and work condition.

The third extrinsic motivation factor is salary and fringe benefits. Taylor in his theory of scientific management and McGregor in X theory believe that individuals are only motivated by monetary incentives. From this point of view of Taylor plan on the basis of attention to monetary incentives is being peak of considerations. Finally, it should be remembered that salary and rewards variable has the utmost correlation with success and development variable. It means that gaining salary and fringe benefit gives the sense of success and development.

Fourth extrinsic motivation is cooperation with others and in decision making. This variable bears the most factorial load among other motivational indices. This is that cooperation among co workers and in decision-making may affect staff motivation. Receiving positive energy, opportunity of being a team member, the chance of offering organizational and occupational suggestions can motivate people to apply their utmost efforts in the workplace.

The fifth and the last extrinsic motivation index is the connection with the direct manager or supervisor. In this variable, employees through a decent relation with their direct manager and the feeling of support offered by managers in difficulties and also reliance on technological and technical knowledge of manager will reach to a favorable motivational level.

V. CONCLUSION AND RECOMMENDATIONS

Motivated by a need to understand the underlying drivers of employee, this study analyzes motivational factors for staff employees of Iranian Offshore Oil Company. Results showed that employee attitudes toward intrinsic motivation factors (work nature, success and development, prestige and rank) and extrinsic motivation factors (participation in decision making, perceived justice, salary and rewards, connection with direct manager, work condition) that all of these motivation factors have been valued in motivation model and totally suited and fitted on research model. Moreover, there is a high correlation between intrinsic and extrinsic motivation. Unlike the point of view that: extrinsic motivation decreases the intrinsic motivation, it can be mentioned here that both act as complements and significantly impacted behavioral intentions.

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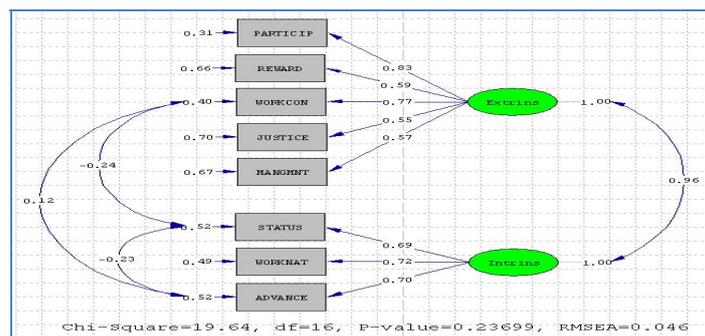


Figure 1. Standard estimation for Affirmative Factorial Analysis

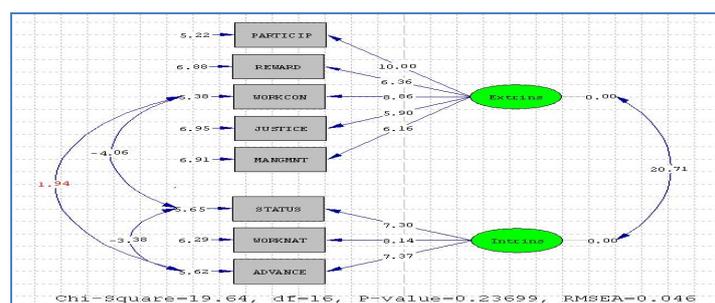


Figure 2. Significant amount of motivational factors for Affirmative Factorial Analysis