

FACTORS AFFECTING MANAGEMENT MOTIVATION IN THE IRANIAN CONSTRUCTION INDUSTRY: A SURVEY OF SITE MANAGERS

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The present economic environment of Iran spells uncertainty and risk for construction contractors. They are affected by the unprecedented high inflation rate, which has prevailed since the war with Iraq ended. The international political situation and economic sanctions have produced market instability. This paper reports research which looks at productivity and motivation in the post war Iranian construction industry.

The research identified several factors affecting motivation of construction site managers and concludes that fairness of pay, incentive and financial rewards, management behaviour and policy, good relationships with colleagues, and timely payments were the most critical motivating factors. The paper concludes that those motivators identified should be placated by construction employers, whilst demotivators should be simultaneously removed; in striving to maximise productivity within the Iranian construction industry.

Keywords: Iran, motivation, site manager.

INTRODUCTION

Iran's eight years of devastating war with neighbouring Iraq (1980 – 1988), has left the country with an urgent need for rebuilding and development ranging from housing to infrastructure. The post-war surge in construction works coupled with an inflation prone business environment necessitates the optimisation of available resources. Construction, as one of the biggest sectors of the Iranian economy with more than 15% share of GNP and employing more than 10% of the total workforce, has the highest potential for lifting the economy towards recovery (Aghasadeh, 1995).

The 1979 revolution resulted in the substitution of the monarchy by an Islamic republican system; which gave popular hope that the new regime could bring justice and a fair distribution of income. However, the commencement of eight years of war with neighbouring Iraq (1980-88), produced instead, disaster and devastation. Hundreds of villages and cities were razed to the ground during the war. Mass migration of the population of border areas with Iraq ensued, to safer areas and larger cities. This was compounded by the destruction of most factories, dams, power stations, petrochemical factories, oil and gas refineries, and oil wells. A severe drop in oil revenue resulted, which used to generate more than 90% of the Iranian national income (Aghasadeh, 1995, Iranian Economic Yearbook, 1995).

Despite Iran's enormous oil revenue; the problems of the construction environment are very similar to most other developing countries. Typically, these problems are, according to Zakeri *et al* (1997), high and/or uncontrollable inflation rates; shortage of

materials, lack of spare parts; poor materials distribution policy; inappropriate contract documentation and procedures by public sector clients; irregularity in the payment of contractors' accounts (and consequential cash flow problems for contractors); casual employment practice; shortage of indigenous skilled labour; and problems of supervision.

THE IRANIAN CONSTRUCTION INDUSTRY

With 1,648,000 square km area (636,296 sq. mile) and a population of 56 million (Iranian Statistic Yearbook, 1992) Iran is one of the largest countries in the Middle East, and one of the world's leading producers of petroleum. The country has reserves of 92 billion barrels of crude oil and 21 trillion cubic metres of natural gas. It is currently the second biggest oil exporter and the fourth largest oil producer in the world (Aghasadeh, 1995). The wealth of oil, gas and the country's location at the entrance to the Persian Gulf (which contains three quarters of the whole oil reservoir of the world) means the country occupies one of the most strategic regions in the world.

With the exception of a few in the oil and gas industries and those in connection with power station projects (which utilise a limited number of foreign contractors), indigenous contractors have become virtually capable of meeting all construction demand. The surge in construction work and the government policy of encouraging self-sufficiency have enabled very large and specialist contractors and thousands of medium and small size construction companies to become established. These contractors have filled the vacuum left by foreign contractors and made good almost all of the war damage to the oil, gas and petrochemical refineries and factories; saving the country billions of dollars.

Since the end of the war, part of the huge Islamic Revolution's Guards Corps (IRGC), with a large amount of heavy construction equipment and machinery, and a highly skilled and dedicated personnel, have metamorphosed into a large construction firm for multi-million dollar infrastructure projects. With respect to dam construction, more specialist contractors have become established enabling 40 or so concrete and earth dam projects to get under construction. Some 122 other dam projects are presently at feasibility study stage (Iranian Year Book, 1992).

Site managers

Iranian site managers usually come to their position either because they possess a university degree, or by virtue of years of experience in the field. They usually have little knowledge of new management styles and rarely apply formal management techniques to their projects. It is rare for a manager (particularly in construction) to have been trained in management. Even if a manager is aware of modern management techniques, it is generally felt that such are not applicable to an industry subject to so much variation and uncertainty (Zakeri et al, 1997).

Site managers are the project anchors, having ultimate responsibility for delivering the project within time, cost and quality constraints. It is therefore, important to have a thorough understanding of them from various points of view. Site managers are an extremely important category of construction workforce upon which success or failure of construction projects are highly dependent (Sammuelson and Borcharding, 1980). Resource scheduling is infrequently applied, even to highly prestigious developmental projects. Computer facilities have not yet been introduced to most construction managers even though the size and complexity of construction projects make it

difficult to cope adequately without this facility. Iranian site managers plan, organise, co-ordinate, and control their projects on the basis of their personal initiative and experience. They are mostly technically oriented rather than management oriented, and tend to spend more time in project execution work than in management.

Motivation of site managers

Awareness of the managers' motivation and de-motivation variables is important in effectively applying incentive schemes. Every manager adopts an individual and specific style in dealing with the problems encountered in their working environment. Iranian managers are no exception (Hundel, 1971; Price, 1992). They apply all kinds of management style according to their knowledge, experience, and leadership capability. While some managers are highly task oriented and give little priority to the people they work with, there are those that support the employee-oriented approach. The latter give higher priority to good working relationships with subordinates and among themselves. There are also managers who employ a mix of the above two styles (Walker, 1989).

Although leadership principles are universal, the methods and procedures adopted in each culture and work location decide success or failure of such principles (Hundel, 1971). The fact is, that every working environment has its own culture, which requires a special management style to be effective. Culture and leadership practice cannot be separated (Dinsmore, 1984; Zakeri *et al*, 1996). However, the favoured management style in Iran seems to be autocratic in most companies, with less chance of participation of subordinates (for example) in decision-making. This is even more likely on large projects run by different parties or specialist groups. Most Iranian managers feel that if they allow subordinates into the decision-making process, they will then be perceived as incompetent managers.

Management studies on productivity improvement are based on how to exploit operatives fairly and justifiably. Generally speaking, what makes operatives more productive are high levels of skill and motivation, good availability of materials, tools and equipment, and ultimately, proper supervision and fair financial reward (Enshassi and Burgess, 1991). In particular, motivation plays an important role in workers' inclination to work productively. The literature on motivation studies suggested 20 motivating variables and 15 de-motivating variables (Maloney, 1982; Sammuelson and Borcharding, 1980).

DATA COLLECTION

Since the main concern of this research was the study of Iranian construction managers' efficiency and their impact on construction productivity, a thorough understanding of their potential and capabilities in this respect was necessary. The experimental procedure adopted was through a method of questionnaire survey (Cronbach, 1990; Holt, 1997). After the questionnaire was designed the next step was to select sample of construction companies to adequately reflect the Iranian construction industry. Arrangements to contact potential survey respondents were made through officials in the Iranian Ministry of Residence and Urbanisation (MRU) for government housing projects in Tehran and neighbouring cities, and through directors of private construction companies. Sources for this selection were:

The Iranian Ministry of Planning and Budgeting for a list of construction contractors;
The Iranian Society of Consulting Engineers' Year book (list of members); and
The Construction Contractors' Syndicate Yearbook (list of members).

After the sample was selected, a pilot questionnaire survey was conducted. At this stage, 65 were sent to site managers. A total of 34 (52%) were returned duly completed. Following some modifications to the questionnaire resulting from the pilot survey, a total of 112 questionnaires were then distributed to site managers across various construction project sites in Iran. Of the 112 questionnaires sent out to site managers, a total of 59 (52%) usable responses were received.

DISCUSSION OF THE RESULTS

In order to find out how the factors presented affect the motivation of Iranian construction site managers, it was essential first to have an understanding of site managers' personal characteristics. Variation in personality is one of the main factors in human motivation. Hence this was done with regard to age and experience. From the survey 8.5% of the respondents were below the age of 30, 18.6% were between the age of 30 to 40 years, 62.7% were in their 40-50's, and the remainder 10.2% were above 50 years old. As would normally be expected, they obtained sufficient experience of construction works before appointment to their role as site management roles. It is quite common practice for potential employers to analyse one's previous experience and performance before a job offer is made. Given the importance and demands of the project manager's job, it is understandable that employers will be very keen to know the performance of projects previously managed by prospective candidates. However, given the typically complex nature of construction projects, a detailed evaluation of a project's success or failure is a difficult task (Locke, 1976).

Table 1 illustrates site managers' working experience (in years) in the Iranian construction industry. Working experience and experience, as project managers are important indicators of managers' familiarity with their job, familiarity with controlling workmen and understanding the environment around the job. With 91% having more than 5 years construction experience and almost 80% having above 5 years experience in a management position, it can be concluded that the respondents were reasonably familiar with the Iranian construction industry and its constraints.

The total number of previous projects undertaken is also a measure of the experience of site managers. Table 2 indicates that 8.5% of Iranian construction managers had completed between 3 to 5 projects, 18.7% between 5 to 7 projects, 13.6% between 7 to 10 projects, and the majority of them (52.6%) had completed more than 10 previous projects. Different types of projects implemented by site managers acquaint them with the problems and constraints, encountered on construction projects in Iran.

Motivation factors

Motivational factors were surveyed among the Iranian site managers; who were asked to identify factors that motivate or de-motivate them and their perceived, gratification levels of these factors (i.e. with respect to their present site). Responses were scored (and ranked from calculated relative indices) as shown in Table 3.

Fair pay, was ranked as the most important motivator. This survey showed that the factor is highly motivating to Iranian site managers. The second most important motivator to managers is *participation in decision-making*. The overall responsibility on the part of managers to complete the project within the company's objectives particularly in setting schedules and budgets which are significantly related to project success (Murphy et al, 1974; Chan and Tam, 1995). *Recognition on the job* was ranked as third ranked motivator. *Chance of promotion* as the fourth most important motivator was not gratified on the sites surveyed (being ranked 14th on the

gratification scale). From the results, the five most motivating factors for Iranian site managers were determined as being: *fair pay* (1st); *participation in decision-making* (2nd); *recognition on the job* (3rd); *chance of promotion* (4th) and *good supervision* (5th).

Table 1: Site Managers' Past Experience

Years	Experience in the Industry	Experience in Management Position
	% of respondents	% of respondents
Below 5	8.48	20.34
5 to 10	11.86	18.64
10 to 15	13.56	33.90
15 to 20	47.46	27.12
Above 20	18.64	0.00

Table 2: Number of Projects Undertaken by Managers Surveyed

Number of Projects	% of respondents
1 to 3	6.78
3 to 5	8.45
5 to 7	18.64
7 to 10	13.56
Above 10	52.54

The level of gratification of these factors was also determined from the survey. The site managers were asked to rank the gratification level of the se factors. *Fair pay*, which was raked as the most important motivator was ranked 17th on the gratification scale i.e., fourth on the discontent scale. Good supervision was the list gratified factor on the present sites surveyed, followed by *good relation with the employer*. *Participation in decision-making*, which was considered as the 2nd most important factor was also ranked 3rd on the gratification scale. Chance of promotion which ranked the 4th most important factor was 14th on the gratification level. This factor was also poorly gratified. This could be a source of frustration and dissatisfaction to Iranian managers.

In an attempt to find out how motivated the Iranian site managers surveyed were, their expectation of motivation factors and satisfaction level on these factors were plotted as shown on Figure 1. What the site managers expect to get (or want) from these motivators, according to the given relative importance are shown as *want*. Also what they received from these factors according to gratification levels on their present sites are shown as what they get. Satisfaction level is reached where best line of *wants* coincides with that of *gets*.

De-motivation factors

Having identified factors influencing the de-motivation of construction site managers the respondents were asked to rank them according to the level attached to each of those variables and their discontent level with each factor on the present site. The highest ranked de-motivating variables are *disrespectful attitudes from superiors* (1st), *lack of co-operation* (2nd), *incompetence amongst colleagues* (3rd), *poor supervision* (4th), and *lack of supervision* (see Table 4). It was expected that managers give higher priority to these matters because the law makes them responsible towards the workforce's safety.

Table 3: Ranking of Site managers motivation factors

Motivating Factors	Ranking of the Importance of factor to site Manager	Ranking of Gratification Level of Factors on Present site
Fair pay	1	17
Participation in decision making	2	3
Recognition on the job	3	4
Chance of promotion	4	14
Good supervision	5	1
Accurate job description.	5	7
Good safety	7	19
Incentive and financial rewards	8	17
More responsibility	9	4
Good relation with employer	10	2
On-time pay	11	14
Good relation with colleagues	12	10
Job security	12	10
Challenging task	12	8
Working facility	12	20
Working condition	16	15
Work itself	17	4
Right to choose personnel	18	10
Company's prestige	19	8
Overtime	20	13

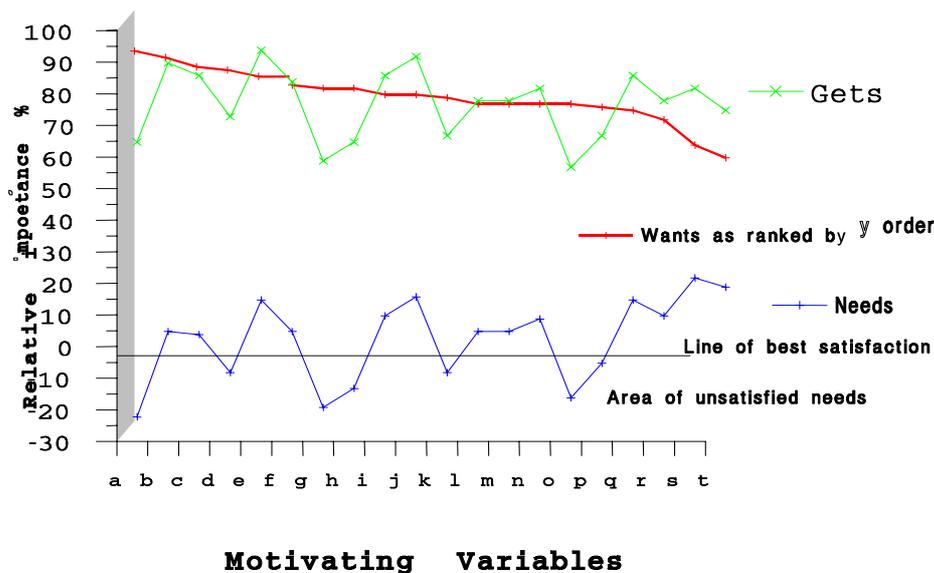


Figure 1: Management's Wants, Gets and Needs

On the discontent scale, as shown on Table 4, *poor safety on site* was ranked the highest, followed by *more request with less attention to details*. *Irregularity in payment* is the third highest de-motivator on the discontent scale. It affects not only lower level employees, but also senior managers. This is not exclusive to construction. It is also common to the workforce of other industries. The problem originates from the particular situation of Iran after the war, and the overall inefficiency in government to cope with the prevailing economic crisis. *Disrespectful attitude of superiors* which was ranked the most important de-motivator was ranked 15th on the discontent scale, while lack of co-operation ranked 5th on the discontent level.

Table 4: Ranking of Site Managers De-motivation Factors

De-motivating Factors	Ranking of Importance of Factors to the Site Managers	Ranking of Gratification Level of Factors on Present Site
Disrespect	1	15
Lack of co-operation	2	5
Incompetence colleagues	3	10
Poor supervision	4	11
Lack of recognition	4	14
Poor safety	6	1
Irregularity in payments	6	3
Under utilisation of skill	8	9
Too much work with no break	8	5
Remoteness of	8	5
More request with less attention detail.	11	2
Little accomplishment		
Short project duration	12	11
Cold weather	13	11
Hot weather	14	5
	15	5

CONCLUSION

Management studies on productivity improvement are based on how to exploit operatives fairly and justifiably. Generally speaking, what makes operatives more productive are: their skill levels, personal motivation, availability of materials tools and equipment, and proper supervision. In particular, motivation plays an important role in workers' inclination to work productively. In this research, Iranian site managers and their effectiveness on construction productivity were investigated from various personal and managerial points of view.

The most direct problematic impediments to Iranian site managers' motivation were perceived by them to be *fair pay*, *participation in decision making*, and *recognition*. In the case of de-motivation variables, the first five highly de-motivating variables are *disrespectful behaviour from top management*, *lack of co-operation at work*, *incompetence colleagues*, *poor safety and health*, and *irregularity in payment* respectively.

Clearly, those motivators identified should be placated by construction employers, whilst demotivators should be simultaneously removed; in striving to maximise productivity within the Iranian construction industry. To improve productivity in the system, it is essential to rectify the management shortcoming especially in matters relating to decision making process and the site manager's level of authority and freedom to make decision with minimum delays.

REFERENCES

- Aghasadeh (1995) Iranian Oil Minister's speech at the Annual meeting of the heads of the Petroleum, Gas and Petrochemical National Company. *Ettela'at International Daily News*, **372**, Nov. 7, 1995.
- Borcherding, J. D. (1976) Improving Productivity in industrial Construction. *Journal of the Construction Division*, ASCE, **102**(4): 599-614.

- Borcherding, J. D. and Garner, D. F. (1981) Workforce Motivation and Productivity on Large jobs. *Journal of Construction Division*, **107**(3): 443-453.
- Chan, A., and Tam, C. M. (1995) Impact of Management Style on Project Cronbach, L. (1990). *Essentials of Psychological Testing (5th Ed)*. Harper and Row Publishers, Inc., New York.
- Dinsmore, P. C. (1984) *Human Factors in Project Management*. New York: American Management Association, 13.
- Economics yearbook (1995).
- Enshassi, A. and Burgess, R. (1991) Managerial Effectiveness and Style of management in the Middle East: An Empirical Analysis. *Construction Management and Economics*, **9**(1): 79-92.
- Holt, G. D. (1997) Construction research questionnaires and attitude measurement: Relative index or mean? *Journal of Construction procurement*, **3**(2): 88-96. Special Edition: Methodological issues in construction management research. The University of Glamorgan: International procurement research group. ISSN:1358-9180
- Hundal, P. S. (1971) A Study of Entrepreneurial Motivation: Comparison of Fast and Slow Processing Small Scale Industrial Entrepreneurial in Punjab, India. *Journal of Applied Psychology*, **55**(4): 317-323.
- Iran Census (1991) Manpower survey in construction. *Iranian census management Division of Statistics in Building and Residence*, Iranian Census centre (September 1991), Latest population census, Report No. 331/1192/B4.
- Iranian Statistical Year book*, (1992) Iran in the mirror of Statistics, **12**: 175.
- Locke, E. A., 1976. The nature and Causes of Job Satisfaction. *Handbook of industrial Organisation Psychology* (ed. Dnette, M). Rand McNally.
- Maloney, W. F. (1982) Supervisory Problems in International Construction, *Journal of the Construction Division*, Proceedings of the American Society of Civil Engineers, ASCE, **108**(3): 406 -418.
- Murphy, D. C., Baker, B. N., and Fisher, D. (1995) Determinants of Project Performance. *Proceedings of the First International Conference Construction Project Management, January, 1995*, Singapore.
- Price, A. D. F. (1992) Construction Operatives Motivation and Productivity. *Building Research and Information*, **20**(3): 182-189.
- Robinson, J. P., Shaver, P. R., and Whrightsmann, L. S. (1991) Criteria for Scale Selection and Evaluation” in *Measures of Personality and Social Psychological Attitudes*, J.P. Robinson, P.R. Shaver and L.S. Whrightsmann (eds.), San Diego, CA: The Academic Press, 1-15.
- Samuelson, N. M., and Borcherding, J. D. (1980) Motivating Foreman on Large Construction Projects. *Journal of the Construction Division*, ASCE, **106**(1): 29-36.
- The Industrial Society Publication (1993) *Management Skill: A practical Handbook*. London.
- Walker, A., 1989. *Project management in Construction (2nd. Ed.)*. Professional Books.
- Zakeri, M., Olomolaiye, P. O., Holt, G. D., and Harris, F. C. (1996) A survey of constraints on Iranian construction operatives’ productivity. *Construction Management and Economics*, **14**: 417-426
- Zakeri, M., Olomolaiye, P. O., Holt, G. D., and Harris, F. C. (1997) actors Affecting the Motivation of Iranian Construction Operatives. *Building and Environment*, **32**(2): 161–166.

Supply Chain Management. Factors Affecting Human Resource Planning. Human Resource Planning (HRP) is influenced by several considerations. It can decide to have an informal plan that lies mostly in the minds of the managers and personnel staff. Alternatively, the organization can have a formalized plan which is clearly spelled out in writing, backed by documentation and data. Finally, the organization must make a decision on flexibility- the ability of the HR plan to anticipate and deal with contingencies. Yet another major factor affecting personnel planning is the time horizon. A plan cannot be for too long on a time horizon as the operating environment itself may undergo changes. On one hand, there are short-term plans spanning six months to one year. Managerial experience and financial management team are vital in determining the success or failure of a firm; a survey studying the causes of firm bankruptcy in Canada found that almost half of the firms in Canada go bankrupt due to internal problems caused by managerial inexperience and lack of knowledge and vision (Baldwin et al. [2000]). Management's motivation, qualities, and skills have an impact on the way a company is (mis)managed. Managers and entrepreneurs are obliged to anticipate and adjust their decisions to the changes and opportunities in the environment. Optimism and risk behavior are other possible causes of declining performance. Another study on individual factors influencing business failure in Iranian context demonstrates