MOTIVATION PERCEPTIONS OF CONSTRUCTION WORKERS AND THEIR SUPERVISORS IN INDONESIA

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ABSTRACT

Unarguably the role of worker motivation in improving productivity is very important in construction. It is therefore necessary for those supervisors to understand essential factors motivating or demotivating the workers. This paper attempts to identify factors influencing the motivation and then to compare the perceptions of workers and supervisors. For the purpose, a questionnaire survey was conducted to several construction sites in Surabaya, Indonesia. In general, 263 workers and 12 supervisors participated in the research. The research finds physiological needs as the most important factors perceived by the workers. Comparing perceptions of the workers and their supervisors, a significant correlation is discovered for the overall ranking of demotivators, but not for motivators. Further analyses were carried out to see factors that were significantly different in perception. The factors are discussed throughout the paper.

Keywords: Motivation, Productivity, Motivator, Demotivator, Survey, Indonesia

INTRODUCTION

The development of the construction industry in Indonesia is followed by the sufficient availability of manpower (workers) in every region. However, the number of skilled workers was limited, in which only 9% of the total formally joined training programs held by the government's institution. Ironically, though Indonesian contractors fully supported and realized the importance of such training programs in increasing workers' productivity, they felt unwilling to provide funds for the implementation [Arditi and Mochtar, (1996), Kaming et al., (1997)]. The construction workers normally acquired most of their skills from their forerunners, who lived in the same or nearby village.

The recruitment process is usually done by the supervisor based on their person-to-person relationship without considering necessary skill factor required. Since the construction workers are not totally skillful, there is the need to establish proper management technique in order to keep the workers productive. Understanding how the workers motivated with their work is one key to this end [Hazeltine, (1976)]. A worker that is motivated will give his best effort to accomplish the job, and subsequently will bring benefit to the company. Therefore, a manager is responsible to generate such an environment that is able to naturally motivate the workers.

The paper aims to investigate construction workers' motivation, based on their needs, and factors motivating and demotivating in Surabaya, Indonesia. The paper then compares the workers' and their supervisors' perceptions toward these needs and factors. Throughout the paper, differences in perceptions are discussed and solutions to increase workers' motivation are proposed.

DEFINITION OF MOTIVATION AND WORK MOTIVATION

Motivation is a concept used to explain the action on and in an organism to initiate and to direct the behavior [Petri, (1981)]. The motivation concept is also used in the distinctions of behavior intensity. Behavior with a greater intensity is considered as the result of a higher motivation. Such a motivation is realized in an action to gain a so-called satisfaction of needs [Maloney, (1981)].

Based on the general definition of motivation above, some approaches concerning the work motivation have been developed since early 1900. In its definition, work motivation theory has no much difference with other motivation theories in general. However, it is necessary to realize one basic distinction that work motivation has more specific focus on the behavior related to the 'work' in a certain institution or organization. Work motivation theories attempt to explain the things related to work problems [Asnawi, (2002)].

Theories of work motivation can be categorized into three, i.e. content theories, process theories and contemporary theories [Luthans, (1995)]. Most researches on work motivation concerning the construction workers to date used the content theories and just started to progress with the process theories. Within the content theories, Maslow's hierarchy of needs and Herzberg theories are the two most prominent ones used by construction researchers. Due to their comprehensiveness, this paper will also apply the two theories to accomplish its objectives. The following paragraphs will briefly describe the theories.

Maslow's Theory

The hierarchy of needs theory was pioneered by Abraham H. Maslow in 1954. According to this theory, in order to motivate a person there is a need to understand what level of condition the person has in the hierarchy of needs and to focus the attention on the satisfaction of the needs on that level or on the level above of it [Robbins, (2001)]. This theory stated that in each individual, there are five hierarchies of needs: *physiological needs*, *safety needs*, *social needs*, *the need for esteem*, and *self-actualization.* The five categories of needs in general can be grouped into two major categories: *lower-order needs*, covering *physiological* and *safety needs*; and *higher-order needs*, encompassing *social*, *esteem,* and *self-actualization needs*. This study utilized the theory to explain the needs of construction workers.

Herzberg's Theory

This theory, sometimes known as Two-Factors Theory or Motivation-Hygiene Theory, was stated by Frederick Herzberg and his colleagues in the Psychological Service of Pittsburgh. The basic idea of this theory is that one's relationship toward his work is absolutely fundamental and that one's behavior toward his work undoubtedly determines the work's success. Herzberg's study showed that people have two distinct categories of need, i.e. hygiene factor and motivator factor, in which the two are independent and influence behavior in different ways.

The first factor, called hygiene, defines the environment where people work and has the main objective to avoid job dissatisfaction. It is also defined as maintenance because the factors are never fully satisfied, and require maintenance. Manager needs to pay attention to this factor so that the workers keep working at their normal condition. Examples of hygiene factor are policies and administration, supervision, and working conditions [Hersey et al., (1996)]. On the other hand, Herzberg called the second factor as the motivator since it seems to be very effective in motivating a person to a better action. The factor is more related to the job itself and can include achievement, recognition for accomplishment and challenging work [Hersey et al., (1996)]. Herzberg had an idea that if a factor is a motivator, it surely leads to job satisfaction. This paper employed the Herzberg theory as the basis to investigate factors motivating and demotivating the workers' motivation.

RESEARCH METHODOLOGY

The research collected the required data from workers and supervisors through questionnaire survey. The questionnaire contained general questions of the respondents and a list of factors motivating and demotivating workers, i.e. motivator and demotivator, respectively. The factors were gathered from previous researches [Borcherding and Oglesby, (1974, 1975), Mansfield and Odeh, (1989), and [Ogunlana and Chang, (1998)]. The final questionnaire covered sixteen motivators and seventeen demotivators. To accommodate the Maslow's theory, the motivators were grouped into six categories, i.e. physiological needs, safety needs, social needs, the need for esteem, self-actualization, and other groups (managerial factors). Both respondents were asked to rate the same list of factors using a four-point scale, ranging from 1 (not important) to 4 (very important).

Ten construction projects were approached to distribute the questionnaires, but only six gave positive response. The project types were ranging from educational and office buildings to shop-houses construction. Considering the level of knowledge, the researcher had to explain and wait when the workers filled out the questionnaire. Misunderstanding and incorrect responses could therefore be avoided. A total of 263 questionnaires finally could be collected from the workers. Meanwhile, 12 supervisors of the projects answered the questionnaire.

Following the research by [Ogunlana and Chang, (1998)], the respondents' ratings to each factor were then transformed into relative index (RI), which was then used to rank the

factors. The RI was obtained by dividing total rating score from all respondents by four times sample size. In order to compare the workers' and supervisors' perceptions, the study employed spearman rank correlation and Mann-Whitney tests.

RESULTS AND DISCUSSIONS

Workers' Needs

Table 1 portrays the perceptions of workers and supervisors toward the ranking of workers' needs. Good pay was ranked first by the workers. During the survey, it was found that the average basic wage of the workers was 30,000 to 35,000 rupiahs per day (less than US$ 4). The workers expressed that their salary was often imbalance with their daily spending for basic needs. In the mean time, the supervisors placed this need only fourth in the list.

Instead of increasing the basic pay, it was, the supervisors considered, more effective to give additional bonuses and fringe benefits in order to motivate the workers. The need was ranked first by the supervisors and fifth by the workers.

Table 1. Ranking of Workers' Needs

Needs	Workers		Supervisors	
	RI	**Rank**	**RI**	**Rank**
Physiological Needs				
Good pay	0.96	1	0.81	4
Good accommodation	0.76	9	0.76	8
Bonuses and fringe benefits	0.85	5	0.88	1
Overtime	0.79	8	0.65	11
Safety Needs				
Good safety program	0.92	2	0.83	3
Good job	0.81	6	0.79	5
Belonging/Social Needs				
Good relationship with workmates	0.90	3	0.85	2
Good training program	0.80	7	0.67	10
Good orientation program	0.86	4	0.77	6
Good supervision	0.74	11	0.77	7
Needs for Esteem				
Recognition on the job	0.71	12	0.83	3
Needs for Self-Actualization				
Challenging task	0.51	13	0.58	12
Participation in decision making	0.76	10	0.71	9

The second most important need according to the workers was safety program. It seems that the supervisors fairly agreed, in which they ranked the need to be third. This finding is quite surprising and contradictory to the actual conditions found on site. It can be argued that workers in this country are in general not yet aware of safety culture. Not

wearing protective equipments (such as safety hat and shoes) and standing on high, dangerous area without safety belt are few examples for such unsafe culture. The contractors themselves rarely pay serious attention to safety on site either. For an example, in one recent visit to a prestigious construction project, the author observed that many safety signs were posted on site by the contractor. However, the author could gauge directly that such safety signs were merely 'slogan,' without concrete actions by either the contractor or the workers. The engineer manager of the foreign contractor mentioned that one possible reason for this was because the owner enforced no sanction for the contractors' unsafe conducts.

Having good relationship with workmates was regarded to be an essential need for motivation by the supervisors (second) and the workers (third). This is especially important as the workers working in a project usually come from the same place (village). Having the same local culture and tradition is one key point for the workers to work in a happy work environment.

The supervisors perceived recognition on the job (esteem related need) to be the third most important, meanwhile the workers ranked it low (twelfth). Supervisors considered that the workers would be more motivated by giving them more recognition. Conversely, the workers accepted the recognition as the supervisor's mean to give tighter control to them, thus reducing their free will in the work environment. This reasoning can further be strengthened by the position of good orientation program (social related need), in which the supervisors' rank (seventh) was fairly higher than that of the workers (eleventh).

Rather than receiving more supervision, the workers preferred to have more orientation for their works. The good orientation program before starting the work gave more certainty, and consequently reduced changes and rework during construction.

Workers' Motivators

The workers' and supervisors' perceptions toward the motivator are displayed in Figure 1. Five main influencing motivators according to the workers, as denoted in the figure, are good pay, good safety program, good relationship with workmates, good orientation program, and bonuses and fringe benefits. Meanwhile, the supervisors believed bonuses and fringe benefits, good relationship with workmates, recognition on the job, good safety program, and good pay as the five factors most motivating the workers. These most important factors have been explained above. The result of spearman rank correlation test signifies that there was no significant correlation between the workers' and the supervisors' rank, with a correlation coefficient, $\sigma_{s,}$ of 0.36 (*P*-value = 0.171).

To support the correlation result, a two-tailed mann-whitney statistical test was conducted. The null hypothesis (H_0) was that there was no significant difference between the workers' and supervisors' perceptions. If the *P-value* of any of the factors resulted from the test was less than or the same as 0.05 then the null hypothesis would be rejected. In other words, the perceptions between the two respondents were significantly different.

Table 2 demonstrates the results, in which five factors were found to be statistically different at α = 5%. They are: good pay, overtime, good training program, good safety program, adequate material supply, and recognition on the job. As shown, the workers possessed higher RI for the first four motivators, which were in general related to the lower order needs [Robbins, (2001)].

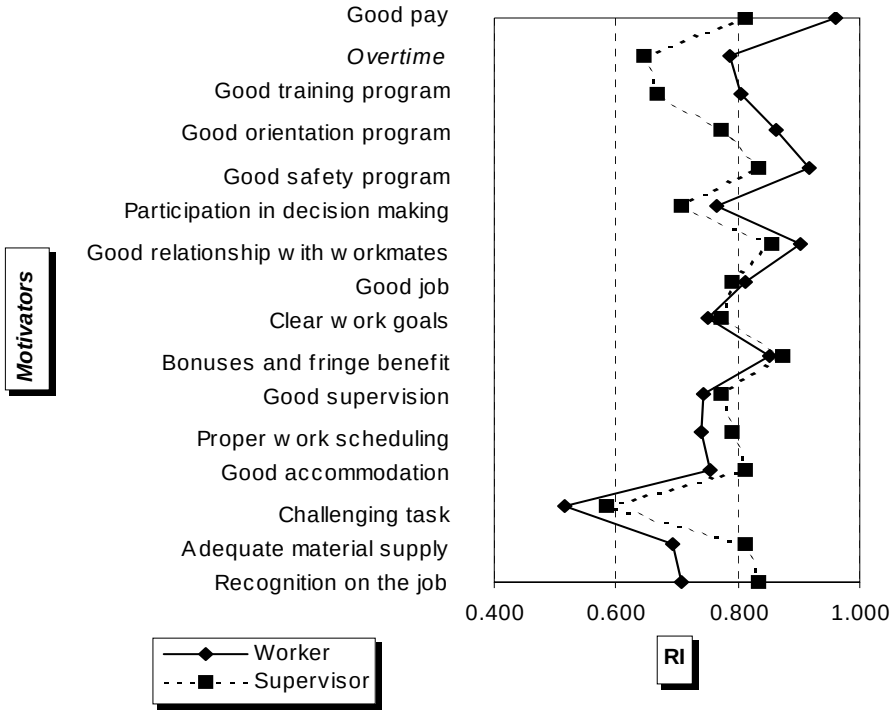

Figure 1. Workers' Motivators

Table 2. Mann-Whitney Test of Workers' Motivators

Motivators	*P*-value (2-tailed)	Remark*
Good pay	0.000	Reject H_0
Overtime	0.008	Reject H_0
Good training program	0.018	Reject H_0
Good safety program	0.024	Reject H_0
Adequate material supply	0.039	Reject H_0
Recognition on the job	0.049	Reject H_0
Good orientation program	0.212	Accept H_0
Good relationship with workmates	0.253	Accept H_0
Challenging task	0.253	Accept H_0
Proper work scheduling	0.340	Accept H_0
Good supervision	0.370	Accept H_0
Good accommodation	0.664	Accept H_0
Bonuses and fringe benefits	0.706	Accept H_0
Clear work goals	0.746	Accept H_0

Participation in decision making	0.807	Accept H_0
Good work	0.896	Accept H_0

*H_0 = there is no significant difference between the workers' and supervisors' perceptions

Workers' Demotivators

Similar to the above analyses, Figure 2 presents the respondents' perceptions toward the workers' demotivators. The workers perceived bad treatment by the supervisors, material unavailability, lack of communication, changing workmates, and rework to be five most important demotivators. Meanwhile, the most important demotivators the supervisors considered were bad treatment by the supervisors, unsafe work condition, lack of cooperation, unavailability of material, rework, and little accomplishment. A significant correlation was found between the two perceptions ($\sigma_s = 0.526$; *P*-value = 0.003).

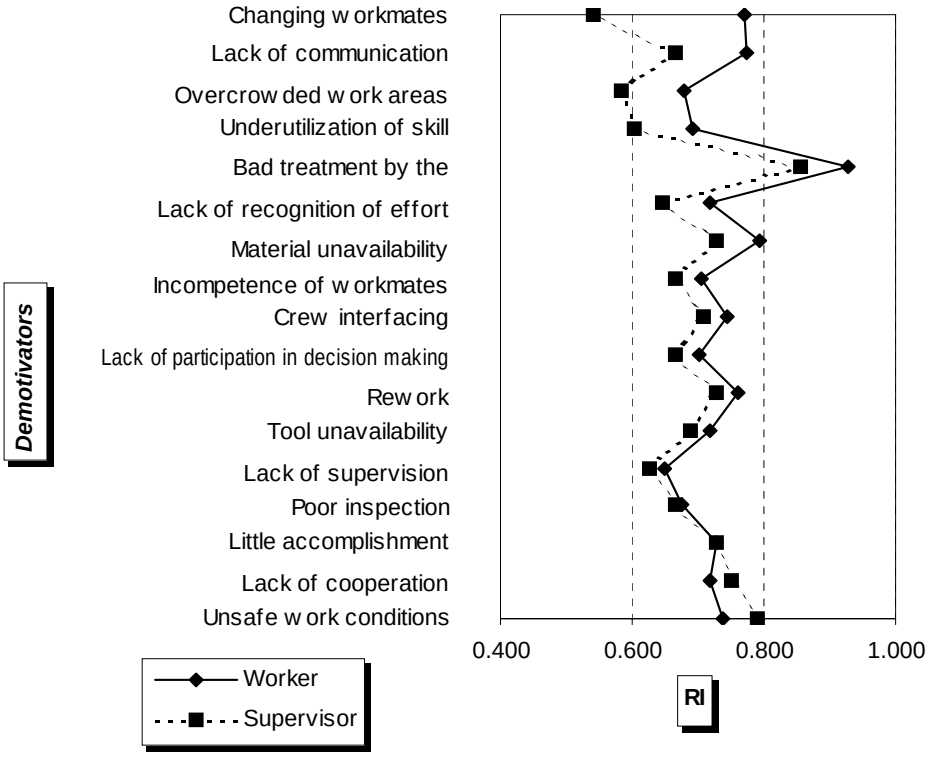

Figure 2. Workers' Demotivators

Table 3 offers the mann-whitney test result, in which only one demotivator was found to be statistically significant different, i.e. changing on workmates. Interestingly, as can be seen in Figure 2, the workers rated almost all demotivators higher than the supervisors did. This thus may indicate that supervisors pay less attention to the demotivators. Herzberg, however, has stated that paying attention to only the motivators is not sufficient. Such effort to increase workers' motivation has to be accompanied with the reduction of the demotivators.

Concurrent with the previous result, workmate is a key factor that can motivate or demotivate workers. The workers considered that it was not easy to change mates working in a project and such a change can greatly degrade their motivation (RI = 0.772). They needed more time to socialize, communicate, and adapt with the new workmates, especially those that did not come from the same place. On the other hand, the supervisors surprisingly placed this demotivator as the lowest important one, with RI of 0.542.

Table 3. Mann-Whitney Test of Workers' Demotivators

Demotivators	*P*-value (2-tailed)	Remark*
Changing on workmates	0.000	Reject H_0
Bad treatment by the supervisors	0.056	Accept H_0
Lack of communication	0.095	Accept H_0
Unavailability of material	0.140	Accept H_0
Overcrowded work areas	0.166	Accept H_0
Underutilization of skill	0.179	Accept H_0
Lack of recognition of efforts	0.334	Accept H_0
Lack of cooperation	0.395	Accept H_0
Tool unavailability	0.502	Accept H_0
Incompetence workmates	0.507	Accept H_0
Unsafe work conditions	0.522	Accept H_0
Crew interfacing	0.538	Accept H_0
Lack of supervision	0.577	Accept H_0
Rework	0.629	Accept H_0
Lack of participation in decision making	0.678	Accept H_0
Little accomplishment	0.691	Accept H_0
Poor inspection	0.898	Accept H_0

*H_0 = there is no significant difference between the workers' and supervisors' perceptions

As for the unavailability of material, a previous research [Andi et al., (2003)] has observed this factor as having significant influence to the time performance of shop-houses constructions. Waiting and idling are just two bad effects due to this factor, which ultimately will lower the workers' productivity and motivation.

Both respondents agreed that rework was bringing detrimental effect to workers' motivation. A further analysis conducted by the author reveals that the rework is mostly generated by design related problems (such as design errors, unconstructable design and uncoordinated designs) and unstable client requirements. It is not unexpected to have a client asking change of her/his design for more than five times, especially in private projects.

CONCLUSIONS

According to the workers, their most important needs were good pay, good safety program, good relationship with workmates, and good orientation program. The workers'

and supervisors' ranks of the needs were fairly similar, except that the supervisors ranked the need of recognition on the job much higher than the workers did. The author argues that the possible alternatives to improve the work motivation in the current condition should be emphasized on the lower order needs on the Maslow hierarchy, such as money and financial incentives.

There was no significant correlation between perceptions of workers and supervisors concerning the motivators. A further test indicated that there were five motivators significantly different in perceptions. This shows that the supervisors are lack of understanding the workers' motivators.

It was found that the rank perception of the workers and the supervisors toward the demotivator was significantly correlated. However, as shown in Figure 2, the supervisors' ratings of the demotivators were mostly lower compared to those of the workers. It could be said therefore that the supervisors pay less important to the demotivators.

Beside the financial incentives, in order to improve work motivation, contractors need to apply and improve a good safety program. In addition, they need to improve the management aspects of the construction project, such as giving proper work instruction to the workers, improving material supply, and making better communication flow between the workers and the foreman. In short, this all is done in an effort to introduce the motivators and at the same time to diminish the demotivators.

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