

Job Satisfaction, Job Characteristics, Job Organization, and Social Factors in Manufacturing Industries: A Case Study in Malaysia

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Abstract. The relationship between job satisfaction, job characteristics, job organization and social factors in two automotive industries in Malaysia were analyzed. Surveys were conducted to investigate the relationship and a set of multiple choice questionnaires was developed. Male subjects ($N = 170$) between the ages of 18 to 40 years with a mean age of 26.8 and standard deviation (SD) of 5.3 years and mean work experience of 6.5 and standard deviation (SD) of 4.9 years took part in the survey. Results show that job characteristics, job organization and social factors are significantly related to job satisfaction. Further, it also highlighted the most significant attributes from each main factor that influence the job satisfaction.

Keyword: job satisfaction, job characteristics, job organization, social factors, automotive industries

Abstrak. Telah dianalisis hubungan antara kepuasan kerja, ciri-ciri kerja, organisasi kerja, dan faktor sosial pada dua industri otomotif di Malaysia. Survei dilakukan untuk menyelidiki hubungan tersebut dan telah pula dikembangkan kuesioner pilihan ganda. Subjek pria ($N = 170$) berusia antara 18 – 40 tahun dengan rerata usia 26.8 dan simpangan baku 5.3 tahun dan rerata pengalaman kerja 6.5 tahun dan simpangan baku 4.9 tahun berpartisipasi dalam survei ini. Hasil menunjukkan bahwa ciri-ciri kerja, organisasi kerja, dan faktor sosial secara bermakna berhubungan dengan kepuasan kerja. Selanjutnya, juga disoroti atribut yang paling bermakna dari tiap faktor utama yang memengaruhi kejenuhan kerja.

Kata kunci: kepuasan kerja, ciri-ciri kerja, organisasi kerja, faktor sosial, industri otomotif

Many researchers have discussed factors affecting job satisfaction (Bowen, Radhakrishna, & Key-ser, 1994; DeSantis & Durst, 1996; Gaesser & Whitbourne, 1985). Although there have been numerous studies on the effect of job satisfaction in industries, findings were often specific to the particular investigation and to date mainly concern with the individual components of the physical environment (Clegg et al, 1997).

The most important evidence indicating a decline in the condition of an organization is the low level of job satisfaction (Kaya, 1995). Thus job satisfaction is one of the major criteria for establishing a healthy organizational environment. Furthermore, factors related to job satisfaction are relevant in the prevention of employee frustration and low level of job satisfaction since employees generally work harder and perform better when

they are satisfied with their jobs (Boltes, Lippke, & Gregory, 1995; Bowen et al., 1994; McCaslin & Mwangi, 1994).

Why do we need satisfied employees? The answer is survival. Satisfied employees help organizations to survive and be more productive. With regards to the problem this study aims to discover new insight into the important issues of job satisfaction in automotive manufacturing industries in Malaysia. The primary objective of this paper is to investigate the relationship between job satisfaction, job characteristics, job organization and social factors. The methodology developed to address the objective includes questionnaire design, observation, measurements, data collection and statistical analysis.

Method

The job diagnostic survey (JDS) developed by Hack-

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man and Oldham (1974) was used as a tool to diagnose the characteristics of job and job organization in the survey. The questionnaires used in the survey consist of a set of Likert-type scales multiple-choice items (Rodeghier, 1996). The relationship between job satisfaction and the tested factors were analyzed statistically using correlations.

The Survey

The questionnaires were distributed to the subjects individually. Two automotive manufacturing industries were involved in the survey, which will be called Auto1 and Auto 2 respectively. Hundred and seventy male subjects between the ages of 18 to 40 years took part in the survey.

The Questionnaires

The questionnaires consist of a set of Likert-type scales multiple-choice items (Rodeghier, 1996). Basically, the questionnaires were designed in three sequential sections covering: (a) General background data i.e. age, gender, years of employment, marital status and education levels; (b) Job characteristics factors i.e. skill variety, task identity, task significance, autonomy and feedback from the work; (c) Job organization i.e. job rotation, work method, training, problems solving and goal setting; (d) Social factors i.e. wages, reasonable working hours, shift, cooperate co-workers and supervision.

Job characteristics. The five job characteristics factors were tested and defined as the following according to Hackman and Oldham (1974) studies: (a) *Skill variety*, the degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talent of the employee; (b) *Task identity*, the degree to which a job requires completion of a "whole" and identifiable piece of work i.e. doing a job from beginning to end with a visible outcome; (c) *Task significance*, the degree to which a job has a substantial impact on the lives or work of other people whether in the immediate organization or in the external environment; (d) *Autonomy*, the degree to which the job provides substantial freedom, independence and discretion of the em-

ployee in scheduling the work and in determining the procedures to be used in carrying it out; (e) *Feedback from job*, the degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information about the effectiveness of his or her performance.

Job organization and social factors. The organization factors concerned with the industrial affect on functional group of job worker participation in job related decision self-regulation and worker autonomy (Das, 1999). Five job organization factors were tested in this study: job rotation, work method, training, problem solving and goal setting. In addition another five social factors were also tested in the study: wages, reasonable working hours, shift, cooperate co-workers and supervision. The questionnaire was based on respondents' perception on these factors that can affect job satisfaction. However, checklist and interview with the management have been done prior the questionnaire session as a reference for the analysis. The study intends to find out how the respondents felt about the organization of the task, method applied and work load that have relation with their work.

Definitions on Job Organization Factors Tested in the Study

Job rotation allows workers to rotate or change job to increase variety (De Jong, 1989). It is a technique that has been widely used to increase the competence of workers and to reduce monotony (Helander, 1995). The objective of job rotation is to broaden an employee's experience and to provide backup staffing for vacation, illness or increased production periods (The Ergonomics Group, 1986).

Work method or method of task performance can also be described as a way concerning on how tasks are organised (Rouse, Cody, & Boff, 1991). Methods include the procedures, instructions and documentation that define how the manufacturing steps or processes are carried out (Quirk, 1999). Training can be defined as the systematic development of the attitude. Knowledge or skill behaviour patterns are needed by an individual to perform adequately on a given task or job such as an assembly task (Stammers & Patrick, 1975).

Problem solving in this context is workers res-

pond to work related problems by giving them the resources and authority to do so (Ugboro, & Obeng, 2001). Goal setting is the process of developing, negotiating and formalising the targets or objectives that an employee is responsible for accomplishing (Umstod, Bell Jr, & Mitchell., 1976).

Definitions on Social Factors Tested in the Study:

Wage is concerned with the determination of how much the employees are to be paid based upon thorough analysis of all factors affecting such remuneration (Amrine, Ritchey, Moodie, & Kmec, (1993). Wages can be described in two types, either timed based or output based (Meredith, 1992). When workers are paid for their services, they are often considered to be either salaried or hourly. Salaried and most hourly workers are compensated on a time-based system, typically weekly, biweekly or monthly (Meredith). On the other hand, output-based system is a direct incentive regarding the output.

Reasonable working hour is considered as the time spent at work place. The traditional breakdown of a 24-hour day is eight hours of sleep, eight hours of work and eight hours of recreation (The Ergonomics Group, 1986).

Shift work is defined as working other than daytime hours (The Ergonomics Group, 1986). In manufacturing companies, the reason for using shift work instead of overtime is to satisfy seasonal production or service demands which are related to productivity levels (The Ergonomics Group).

Cooperation amongst workers in this context relates to cooperate partner in doing the task. Here, all the tasks are done with at least two or more workers. This is also considered under relationship with peers (Herzberg, Mausner, & Synderman ,1959). The lowest level of management in manufacturing is the supervisor, who is responsible for all operators and technicians in a department (Quirk, 1999). Supervision or direction involves the motivation and guidance of subordinates towards the organizational objectives (Amrine et al., 1993). The superior leader should have knowledge of more effective techniques of supervision and use them to improve the performance of his or her subordinates. In this

study the concern is more on workers' perception on their supervisors or immediate head.

Results

The results were divided into several sections covering general back ground data and correlations of job satisfaction with job characteristics, job organization and social factors.

General Background Data

Eighty percent of male respondents in both companies hold "Malaysian Certificate of Education" (SPM) equivalent to "O" levels while others hold SPM certificate with other skill certificates. Sixty nine percent of the respondents in Auto1 were married and 31% were single. On the other hand, 87% of the participants in Auto2 were single and 13% were married. The respondents from Auto 1 were between the ages of 23 to 40 years with the mean age of 31.3 and SD of 3.9 years and mean work experience of 10.6 and SD of 3.8 years. On the other hand, the respondents from Auto 2 were between the ages of 18 to 27 years with the mean age of 22.6 and SD of 2.1 years and mean work experience of 2.6 and SD of 1.8 years.

The age factor was normally distributed but work experience was not. Work experience for Auto1 was negatively skewed while work experience for Auto2 was positively skewed. The responses indicated that 83% of the respondents from Auto 1 were 26 years and above while 90% of the respondents from Auto 2 were below 26 years. Only 17% of the respondents from Auto 1 were 25 years and below while 10% of the respondents from Auto 2 were 25 years and above. This was because Auto 1 was established longer than Auto 2.

As for work experience, 90% of the respondents from Auto 1 had worked for more than 5 years. Another 10% had work experience of less than five years. Conversely, 90% of the respondents from Auto 2 had work experience of 4 years and below. Only 10% had work experience of between five to eight years. Respondents in Auto 2 were younger and less experienced than respondents in Auto 1.

The Correlation Coefficient

The correlations between job satisfaction with job characteristics, job organization and social factors are shown in Figure 1, Figure 2, and Figure 3. In summary, the results indicated that there are cant correlations between job satisfaction with job characteristics, job organization and social factors.

Almost all correlations show significant values. However, there were several factors strongly supporting the studies. Seven factors that have strong significant correlation in Auto 1 are skill variety, task identity, autonomy, job rotation, work method, training and goal setting. While three factors that have strong significant correlation in Auto 2 are skills variety, job rotation and work method.

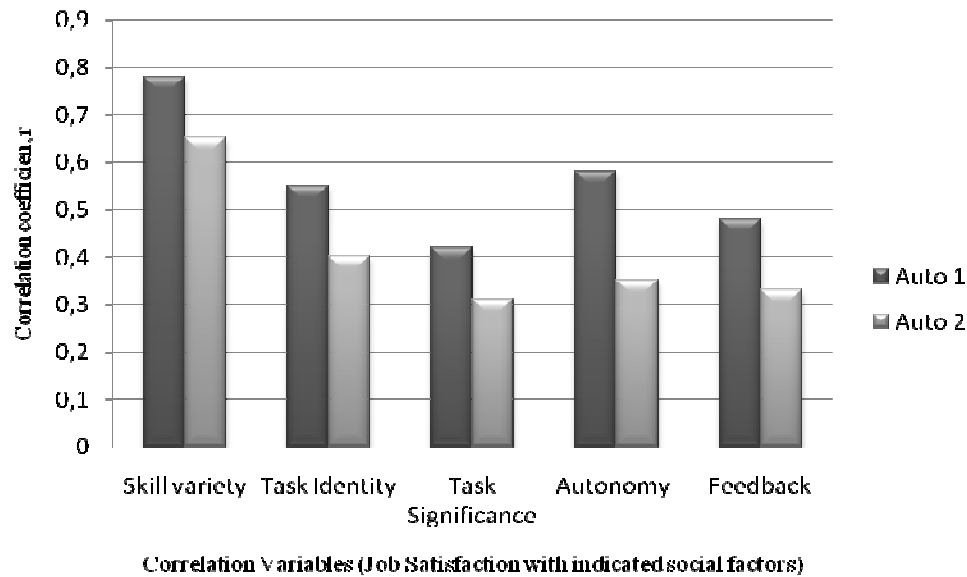


Figure 1. Correlations of job satisfaction with five job factors



Figure 2. Correlations of job satisfaction with job organization factors

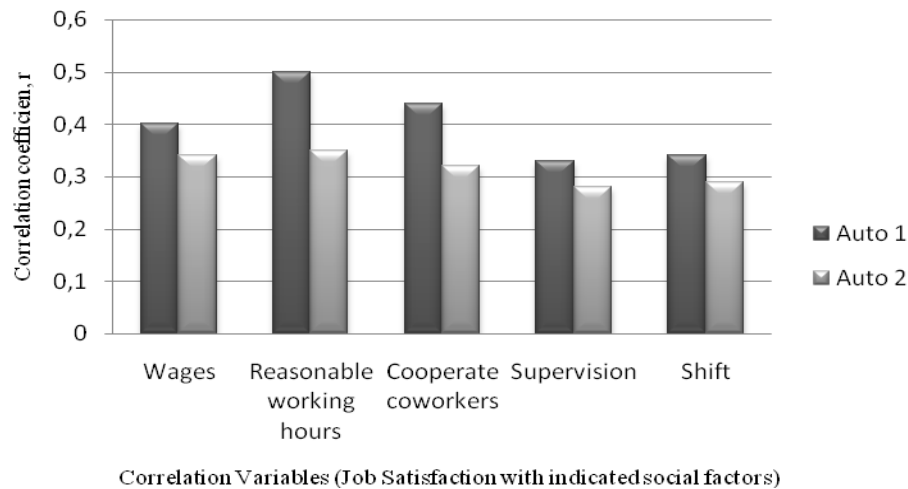


Figure 3. Correlations of job satisfaction with social factors

Discussion

Job Characteristics Has Significant Relation With Job Satisfaction

The results of the study indicated that there are significant positive correlation between job satisfaction and job characteristics factors. This was in agreement with empirical studies by Hackman and Oldham (1974) and Umstod, Bell Jr, and Mitchell (1976). It can be seen that the correlations of job satisfaction with job characteristics were stronger in Auto 1 and Auto 2 than as found by Hackman and Oldham (1974). This could be due to emphasis on one particular industry in the study e.g. automotive industries.

An outstanding factor revealed from the results is skill variety which appeared to be strongly correlated in both companies. Generally, more than 80% of respondents agreed that they utilize moderate to very much skill. Based on the finding, it seemed workers tend to find skill variety as an outstanding factor and has major impact on job satisfaction than other job factors. Hackman and Oldham, (1974, 1976) stated that skill, task identity and task significance are psychological factors contributing to workers experiencing meaningfulness to their work. However, results from this study suggest skill variety had greater impact on that matter compared to the others.

Das (1999), Hackman and Oldham (1974, 1976) and Umstod et al., (1976) stated that job satisfaction was one of the outputs in work design model that could be

determined by job factors. Results from the study supported the above statement, suggesting that job factors were predictors of job satisfaction in work design. Therefore the design of future work should emphasis on job enrichment to support those factors. In addition the emphasis on job enlargement is also important to support other job factors in order to obtain the level of job satisfaction needed.

Job Satisfaction Has Significant Relation With Job Organization

The results indicated that there were significant positive correlation between job satisfaction and job organization factors. Job rotation, work method, training and goal setting show strong correlations with job satisfaction while problem solving show intermediate correlations in Auto 1. On the other hand most job organization factors show intermediate correlation with job satisfaction in Auto 2 except training factor which show low correlation with job satisfaction. The correlations for all factors were higher in Auto 1 than in Auto 2.

The significance of job satisfaction on job rotation and work method are rarely discussed since many researches emphasized more on worker's performance and productivity (Vroom & Deci, 1970; The Ergonomics Group, 1986). In this study, it is found that there is significant positive correlation between job rotation and work method with job satisfaction. This is in agreement

with Amrine et al. (1993) who stated that reducing the boring and monotonous jobs could lead to improve job satisfaction. Therefore, job rotation and work method are significantly correlated to job satisfaction.

This is also consistent with the findings by Gaziolu and Tansel (2002) and Hamermesh (1997) who found that job satisfaction is significant and positively correlated to training opportunity. The results show that the correlation is high in Auto 1 compared to Auto 2. It was found from the survey that there are many trainings for respondents in Auto 2 because a majority of them were new based on their ages and experiences. Therefore, the results indicate that training opportunity will lead to higher job satisfaction as found by Gaziolu and Tansel (2002) and Hamermesh (1997).

The results indicate positive significant correlations between job satisfaction and goal setting in both companies. Results from the survey reveal that more than 90% of the workers were satisfied with their company's goal set. These findings indicate that it is important for the management to consider the characteristics of individual subordinates before setting up goals. This includes workers capability and limitation.

Fifty percent of the respondents in Auto 2 felt that the management were serious in encouraging them to be involved in problem solving. This increased their job satisfaction on par with other factors in Auto 2. On the other hand, only 40% respondents in Auto 1 felt the same way. This led to lower job satisfaction compared to other factors in Auto 1. The results supported the findings by Ugboro and Obeng (2001) that involving workers in problem solving will improve or increase job satisfaction.

The findings indicate that job rotation, work method, training, goal setting and problem solving have an effect on job satisfaction. More than 70% of the respondents in both companies were satisfied with the implementation of job rotation, work method, problem solving and goal setting. On the other hand more than 80% of the respondents in Auto 1 felt that they have moderate to adequate training and only 55% of the respondents in Auto 2 felt the same way. In addition about 30% of workers in Auto 2 felt that they have quite a number of training while only 5% respondents in Auto 1 felt the same way. Management therefore should emphasize on training opportunity as the result reflected a decrease in job satisfaction with too many training as shown in Auto 2. Moderate to adequate training will lead to higher job satisfaction (Gaziolu and Tansel,

2002).

Job Satisfaction Has Significant Relation With Social Factors

The results indicate that there were significant positive correlation between job satisfaction and social factors. The results indicate that wage factor show significant correlation in both companies. Generally the results supported Ahn, Moon, & Lee (2001) findings that wage has significant strong effect on satisfaction. Further, Ahn et al. and Gaziolu and Tansel (2002), also stated that the higher the level of earning the greater the job satisfaction. De Jong (1989) also agreed that the amount of pay is an important aspect contributing to job satisfaction. It shows an indication of status. This study found that wage has significant correlation with job satisfaction regardless of ages and experience.

Reasonable working hours and shift are interrelated in terms of how much time is spent with family or personal time. Therefore, the discussions will cover the three factors altogether. The "workaholic" who works more hours are significantly less satisfied with their jobs (Ahn et al., 2001). This implies that in general, reasonable working hours has significant effects on job satisfaction (Ahn et al.). Studies by Gaziolu and Tansel (2002), also found that longer hours of work are associated with lower level of satisfaction.

The social effects of shift work on the family are closely related to workers' feeling of satisfaction or dissatisfaction on a given schedule (The Ergonomics Group, 1986). In many cases the schedule that provides the most opportunity for family interaction especially on the weekends is likely to be the most acceptable. It is also noted by Wedderburn (1981) that 50% of shift workers do not find this interference problematic. Our study found that more than 80% of the respondents in both companies were satisfied with their shift schedule, working hours and personal or family time. The results indicated that there were significant positive correlation between job satisfaction and reasonable working hours, shift and sufficient personal or family time. Therefore, this study indicate that reasonable working hours, shift and sufficient personal or family time are related to job satisfaction.

Generally, the majority of workers (more than 75%) were satisfied with their relation amongst workers or partners. There is also significant correlation between

job satisfaction and relation amongst workers in both companies. The relation amongst workers in doing their task will develop a sense of friendship and teamwork. According to Syptak Marsland, & Ulmer (1999), part of the employee satisfaction is the social contact it brings that allows reasonable amount of time for socialization. Thus the results indicate that the more satisfied the workers with their partners the higher the job satisfaction.

More than 85% of the workers in both companies were satisfied with their supervisors. Most workers were happy with the relationship, participation in decision making and fairness of their supervisors. The result is in agreement with Syptak et al. (1999), who stated that what employees think about their supervisor's fairness is the real work motivator. Therefore, organizations should ensure work place integrity is implicit in work to excel in business. The role of supervisor is extremely difficult and it requires leadership skills and the ability to treat all employees fairly (Syptak et al.). Early studies of leadership found consideration leadership style with emphasis on friendly, trusting, respectful relationship with employee and employee participation in decision making to be associated with higher employee satisfaction and lower turnover rates (Tannenbaum & Schmidt, 1973).

The correlations of all social factors were very low compared to job characteristics and job organization factors. Job characteristics and job organization factors questionnaires are very clear reflecting on their task or environment and respondents can easily see the consequences of the factors to their work. On the other hand, the social factors questionnaire is very subjective in such that it does not only deal with quantity (in terms of wages or family time) but also taken into account the consequences that will affect their social life. Respondents' perception on social factors is influenced by other people who know about their personal or family life. Most respondents are (99% of the respondents are Malays) very sensitive on this issue according to Kadir (1993). This could be the reason on relatively low correlations obtained in the study. It is suggested that future studies on social factors should include more negative questions as its effect can be far reaching according to Joel (1996). Negative questions should be easily constructed such that the respondents may construe and denote choices of replies that more reflect on company's social agenda namely individuals and groups, status differences, communication and family matter (Da

vis & Wacker, 1987).

Conclusions

The results of the study indicate that there are significant correlations between job characteristics, job organization, social factors and job satisfaction. In summary the conclusions derived from this investigation are: (a) the results highlighted that skill variety was an outstanding factor in the study of job satisfaction for automotive manufacturing industries, and (b) that job rotation, work method, problem solving and goal setting are outstanding factors in the study of job satisfaction for automotive industries with almost equal dominance and training being the least dominant.

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