

THE EFFECT OF JOB ORGANIZATIONAL FACTORS ON JOB SATISFACTION IN TWO AUTOMOTIVE INDUSTRIES IN MALAYSIA

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A methodology is developed in diagnosing the effect of job organizational factors on job satisfaction in two automotive industries in Malaysia. One hundred and seventy male subjects of age 18-40 years with the mean age of 26.8 and standard deviation (SD) of 5.3 years and the mean work experience of 6.5 years and SD of 4.9 years took part in the study. Five job organizational factors were tested in the study including job rotation, work method, training, problem solving and goal setting. A job organization questionnaire was designed and was based on respondents' perception in relation to job satisfaction. The results showed that job organization factors were significantly related to job satisfaction. Job rotation, work method, training and goal setting showed strong correlation with job satisfaction while problem solving had intermediate correlation in the first automotive industry. On the other hand, most job organization factors showed intermediate correlation with job satisfaction in the second automotive industry except the training factor which had low correlation with job satisfaction. These results highlight that job rotation, work methods, problem solving and goal setting are outstanding factors in the study of job satisfaction for automotive industries.

Key words: job satisfaction; job organization; automotive industries; Malaysia; work design.

INTRODUCTION

The most important evidence indicating the condition of an organization getting worse is the low rate of job satisfaction (Kaya, 1995). Thus job satisfaction is one of the major criteria for establishing a healthy organizational environment in an organization. Nonetheless, factors related to job satisfaction are relevant in the prevention of employee frustration and low job satisfaction because employees work harder and perform better provided they are satisfied with their jobs (Boltes et al., 1995; Bowen et al., 1994; Manthe, 1976).

Researchers have suggested a number of work design strategies in order to enhance the quality of work (Nadin et al., 2001). However, little attention is given to the actual process of work design (Oldham, 1996). There is a need for the development of tools to assist this process (Clegg, 1995). This indicates the need for a more thorough understanding of the various factors that are affecting industrial work design and in turn human operation performance and productivity (Das, 1999). Furthermore, work design research can make progress by applying what is already known and adopting a holistic approach by asking a more comprehensive set of research questions (Holman et al., 2002). What is badly needed is an approach to the design of human-centered work systems that adequately address critical dimensions of various factors affecting the work design process.

Why do we need satisfied employees? The answer is survival. Satisfied employees help organizations survive and increase productivity in return (Lindner, 1998). The fundamental objective of this research is to investigate the relationship between job satisfaction and job organization factors that

affect work design. The methodology developed to address this objective includes questionnaire design, data collection and statistical analysis.

METHODS

The job diagnostic survey (JDS) developed by Hackman and Oldham (1974) was used as a tool to diagnose the characteristics of the job organization and job satisfaction factors in the survey. The questionnaire used in the survey consisted of a set of Likert-type scales for multiple-choice items (Rodeghier, 1996). To identify the relationship between job satisfaction and the tested factors, the data were analyzed by means of statistical methods to determine the correlations and regression analysis.

The survey: A questionnaire was distributed to the subjects individually. Two automotive manufacturing industries were involved in the survey, which were called Auto 1 and Auto 2, respectively. Hundred and seventy male subjects between the ages of 18 and 40 years took part in the survey.

The questionnaire: The questionnaire consisted of a set of Likert-type scales for multiple-choice items (Rodeghier, 1996). Basically, the questionnaire items were designed in three sequential sections covering:

- a) General background data, i.e. age, gender, years of employment, marital status and education levels.
- b) Workers satisfaction toward their job.
- c) Job organization, i.e. job rotation, work method, training, problems solving and goal setting.

Job satisfaction: Job satisfaction is a measure of a degree to which the employee is satisfied and happy with the job. Job satisfaction is higher when a person feels that he or she has control over the way a given task is accomplished. The major instrument for measuring job satisfaction was JDS developed by Hackman and Oldham (1974). Initially, JDS is a diagnostic tool designed to measure the characteristics of jobs in organization, the reaction of employees to their jobs, the readiness of the workers on challenging and motivating work.

Job organization: The organizational factors concerned with the industrial effects on functional groups of workers participating in job-related decisions, self-regulation and worker autonomy (Das, 1999). Five job organizational factors were tested in this study; job rotation, work method, training, problem solving and goal setting. The questionnaire was based on respondents' perception of these factors that could affect job satisfaction. However, checklist application and the interview with the management were conducted prior to the questionnaire session as a reference for the analysis. The study intended to find out how the respondents felt about the organization of their tasks, methods applied and work load related to their work.

FINDINGS

(a) General background data

Of the 170 male participants interviewed, 80% held SPM certificates (equivalent to "O" levels) in both the companies while others held SPM certificates concerning other skill certificates. In Auto 1, 69% of participants were married and 31% were single. On the other hand, 87% of the participants in Auto 2 were single and 13% were married. The subjects were between the ages of 18 to 40 years with the mean age of 26.8 and SD of 5.3 years and the mean work experience of 6.5 and SD of 4.9 years.

The age factor was normally distributed but work experiences were not. The distribution of work experiences for Auto 1 was negatively skewed while that for Auto 2 was positively skewed. The responses indicated that 85% of the workers in Auto 1 were of age 26 years or more while 90% of the workers in Auto 2 were of age below 26 years. Only 15% of workers in Auto 1 were of age 25 years or less while 10% of the workers in Auto 2 were of age 26 years or more.

As for work experiences, 85% of the workers in Auto 1 had worked for more than five years. The rest 15% had work experiences of less than five years. Conversely, 90% of the workers in Auto 2 had work experiences of 4 years and below. Only 10% had the work experiences between five and eight years. Respondents in Auto 2 were younger and less experienced than respondents in Auto 1.

(b) Job satisfaction

Five-point Likert-type scales ranging from 1 (very little) through 3 (moderate) to 5 (very much) were used in the survey.

The responses indicated that about 50% of the respondents from Auto 1 and 2 chose Likert-scale 3 for job satisfaction. The second highest in percentage is Likert-scale 4 that was dominant in Auto 2 with 40% responses and Auto 1 with 30% responses. The rest of the scales accounted for responses of about 5% to 12%. This indicates that in general more than 90% were moderately satisfied with their jobs in both companies.

(c) Job organization factors

The responses for job organization in the two companies were also analyzed. The five-point Likert-type scales ranged from 1 (very dissatisfied or disagree strongly or very little) through 3 (moderately) satisfied to 5 (very satisfied or agree strongly or very much). The results indicate that about 50% respondents from both companies chose Likert-scale 3 or 4 for job rotation, work method, problem solving and goal setting. As for training, about 50% of the respondents from Auto 1 chose Likert-scale 3 while about 50% of the respondents from Auto 2 chose Likert-scale 4 or 5. To summarize, the majority of the workers were satisfied with job organization factors surveyed in the study.

(d) Reliability measures

Questionnaire reliability was tested using Cronbach's alpha (α) as shown in Table 1. Cronbach's alpha is derived from the average correlations of all the items on the scale (Rodeghier, 1996). Out of twelve reliability measures in both companies, ten had reliability measures above 0.7. One item had reliability measures around 0.6 and one item had reliability measures of at least 0.5. The results indicate that the reliability measure was high for job factors in both companies especially for job rotation, work method, problem solving and goal setting with values from 0.69 to 0.88. Reliability measures for job satisfaction in both companies were high with 0.82 and 0.89 in Auto 2 and Auto 1, respectively.

Table 1. Reliability measures using Cronbach's α for tested factors.

Job organization factors	Auto 1	Auto 2
Job rotation	0.83	0.83
Work method	0.89	0.88
Training	0.83	0.50
Problem solving	0.69	0.79
Goal setting	0.90	0.82
Job satisfaction	0.89	0.82

(e) The correlation coefficients

In summary, the results indicate that there are significant correlations between job satisfaction and job organization as shown in Table 2. There were several factors significantly correlated between

them. Four factors that had highly significant correlation in Auto 1 were job rotation, work method, training and goal setting. While two factors that had distinctive significant correlation in Auto 2 were job rotations and work method. The results are further discussed in the next section. Since the reliability for the factor of training of Auto 2 was very low (0.5), the factor was not considered in the subsequent analysis.

Table 2. The correlations of job satisfaction with job organization factors.

Job organization factors	Auto 1	Auto 2
Job rotation	0.647	0.504
Work method	0.782	0.502
Training	0.697	0.280
Problem solving	0.340	0.394
Goal setting	0.826	0.406

DISCUSSION

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

The significance of job satisfaction for job rotation and work method is rarely discussed since many studies emphasize relatively more worker's performance and productivity (Vroom and Deci, 1970; The ergonomics group, 1986). In this study, it was found that there was significant positive correlation between job rotation and work method with respect to job satisfaction. This is in agreement with Amrine et al. (1993) who stated that reducing the boring and monotonous jobs could lead to improved job satisfaction. This corresponds with the results of the study with more than 80% of the workers in both companies satisfied with their job rotation and work method. Further, there were significant correlations between those factors with job satisfaction. Therefore, it is suggested that job rotation and work method are significantly correlated with job satisfaction.

These results were also consistent with the findings by Gazioglu and Tansel (2002) and Hamermesh (1997) who found that job satisfaction was significantly and positively correlated with training opportunity. It was shown that the correlation was high in Auto 1 compared to Auto 2. This was because 85% respondents in Auto 2 felt that they had had much training while only about 50% respondents in Auto 1 felt the same way. This was because the majority of respondents in Auto 2 were based on their ages and experiences. Therefore, the results indicate that training opportunity may lead to higher job satisfaction as found by Gaziolu and Tansel (2002) and Hamermesh (1997). However, if too much training is given lower job satisfaction is expected. Therefore, there should be a limit in the opportunities of training provided.

The results revealed positive significant correlations between job satisfaction and goal setting in both companies. This was different from the results of other studies such as those of Umstot et al. (1976). The survey indicates that more than 90% of the workers were satisfied with their companies' goal set. Even though the results were different from those in literature, these findings indicate that it is important for the management to consider the characteristics of individual subordinates before setting up the goal. This may relate to the capabilities and limitations of the workers.

Fifty percent of the respondents in Auto 2 felt that the management was serious in encouraging

them to be involved in problem solving. This increases 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 may have led to lower job satisfaction compared with other factors in Auto 1. The results support the findings by Ugboro and Obeng (2001) that involving workers in problem solving would 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 had 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 had much training while only 5% respondents in Auto 1 felt the same way. Management therefore should emphasize training opportunities as they may relate to a decrease in job satisfaction with too much training as indicated in Auto 2. Moderate to adequate training tends to lead to higher job satisfaction (Gazioglu and Tansel, 2002).

CONCLUSIONS

The results of the study indicate that there is significant correlation between job organization factors and job satisfaction. In conclusion, the results highlight that job rotation, work method, problem solving and goal setting are outstanding factors associated with job satisfaction in automotive industries.

The above conclusion supports our proposed study of work design particularly for the automotive industries. Further studies will be conducted in order to determine the validity of the model in other industries as well as taking into consideration other factors.

REFERENCES

- Amrine, HT, Ritchey, JA, Moodie, CL, and Kmec, JF (1993) *Manufacturing Organization and Management*, Prentice Hall, Upper Saddle River.
- Boltes, BV, Lippke, LA, and Gregory, E (1995) Employee satisfaction in Extension: a Texas study. *Journal of Extension* [online], **33** (5).
- Bowen, CF, Radhakrishna, R, and Keyser, R (1994) Job satisfaction and commitment of 4-H agents. *Journal of Extension* [online], **32** (1).
- Clegg, CW (1995) Sociotechnical theory. In: *Encyclopaedic Dictionary of Organizational Behaviour*, ed. By Nicholson N, Blackwell, Oxford.
- Das, B (1999) Comprehensive Industrial Work Design Model. *Hum. Factor. Ergon. Man.*, **9**: 393-411.
- Gazioglu, S, and Tansel, A (2002) Job satisfaction in Britain: Individual and job related Factors. ERC Working paper in Economics. assess on 1.6.04 : <http://www.erc.Metu.edu.tr>
- Hackman, JR, and Oldham, GR (1974) The job diagnostic Survey. Technical Report No. 4, Department of administrative Science, Yale University.
- Hamermesh, D (1977) Economic aspects of job satisfaction. In: *Essays in Labor Market Analysis*, ed. By Ashenfelter O, and Oates W, John Wiley & Sons Inc., New York.
- Holman, D, Clegg, C, and Waterson, P (2002) Navigating the territory of job design. *Appl. Ergon.* **33**: 197-205.
- Kaya, Ebru (1995) Job Satisfaction of the Librarians in the Developing Countries. 61st IFLA General Conference.
- Lindner, JR (1998) Understanding employee motivation. *Journal of Extension* [online], **36**(3).
- Manthe, RD (1976) A job satisfaction and dissatisfaction study of the West Virginia University Extension Service. Unpublished doctoral dissertation, University of Wisconsin, Madison.
- Nadin, SJ, Waterson, PE, Parker, SK (2001) Participation in job redesign: an evaluation of the use of a socio technical tool and its impact. *Hum. Factor. Ergon. Man.*, **11**: 53-69.
- Oldham, GR (1996) Job Design. In: *International Review of Industrial and Organizational Psychology*, **11**, ed. By Cooper CL and Robertson IT, John Wiley & Sons Inc., New York: pp.33-60.
- Rodeghier, M (1996) *Survey with Confidence: A Practical Guide to Survey Research Using SPSS*. SPSS Inc., Chicago.
- The Ergonomics Group (1986) Health and Environment Laboratories Eastman Kodak Company, "Ergonomics Design For

People At Work", Eastman Kodak Co.

Ugboro, and Obeng (2001) *Managing the Aftermaths of Contracting in Public Transit Organizations: Employee Perception of Job Security, Organizational Commitment and Trust*, North Carolina A&T State University, Greenboro, USA.

Umstot, DD, Bell, CH, Jr, and Mitchell, TR (1976) Effect of job enrichment and task goals on satisfaction and productivity. *J. Appl. Psychol.*, **61**: 379-394.

Vroom, VH, and Deci, EL (1970) *Management and Motivation*, Penguin Books Ltd., UK.