Job Satisfaction and Conflict Among Technical Employees in Selected Malaysian Engineering Firms

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ABSTRACT

In view of the crucial role of technical workers in the Malaysian workforce, research on their job satisfaction and conflict provides an insight into their distinct sets of norms and values that differ from employees engaged in other professions. The objective of this paper is to identify the factors that affect the job satisfaction of this group of employees through a survey. The results of the survey show that employees in the design department are least satisfied towards each facet of the job while those in the quality control department have the least overall job satisfaction. Similar results are also obtained when the sample is stratified by the various demographic factors. Moreover, intergroup conflict may be negatively related to overall job satisfaction. Engineers in the companies surveyed experienced the lowest level of job satisfaction as compared to the managers and supervisors.

ABSTRAK

Memandangkan peranan pekerja teknikal yang semakin meningkat dalam tenagakerja Malaysia, penyelidikan tentang kepuasan dan konflik kerja dapat memberi gambaran terhadap berbagai norma dan nilai mereka. Tujuan kertas ini ialah mengesankan faktor-faktor yang mempengaruhi kepuasan kerja di kalangan kumpulan pekerja yang tersebut melalui suatu kajiselidik. Keputusan kajiselidik menunjukkan bahawa pekerja dalam jabatan rekabentuk mempunyai kepuasan yang paling rendah terhadap setiap aspek kerja mereka sedangkan pekerja dalam jabatan kawalan kualiti mempunyai kepuasan kerja keseluruhan yang paling rendah. Keputusan yang sama telah didapati apabila sampel itu dibahagikan secara faktor demografi. Tambahan pula, konflik antara kumpulan dan kepuasan kerja keseluruhan mungkin mempunyai perhubungan yang negatif. Jurutera dalam syarikat yang dikaji mempunyai tingkat kepuasan kerja yang paling rendah jika dibandingkan dengan pengurus dan penyelia.

JOB SATISFACTION AND CONFLICT

CONCEPTS OF JOB SATISFACTION AND CONFLICT

Job satisfaction refers to a pleasurable or positive emotional state that results from an appraisal of one's job or experiences (Locke 1964). It is a collection of related job attitudes that could be divided into a variety of job aspects, namely pay, promotion, supervision, work, and co-workers (Price et al. 1986). Indeed job satisfaction of employees in an organization bear important implications on their turnover, absenteeism, productivity, and the occurrence of physical and mental health problems.

The rising concern for job satisfaction could be explained by three reasons. First, workers who experience low levels of job satisfaction tend to display higher turnover rates (Price 1977, Mobley et al. 1979). Such workers are also likely to be absent from their job (McShane et al. 1984; Hackett and Guion 1985; Scott and Taylor 1985).

Although several studies could not find any consistent relationship between satisfaction and productivity, the vague causal relationship is that higher productivity leads to higher level of job satisfaction (Brayfield and Crockett 1955, Herzberg et al. 1957; Vroom 1964; Fournet et al. 1966). More satisfied workers also enjoy better health and live longer than less satisfied workers. Therefore an environment which promotes higher job satisfaction will help the organization to reduce its medical costs.

Conflict, on the other hand, refers to a situation in which there are incompatible goals, cognition, or emotions between or within individuals or groups that can lead to opposition or antagonistic interaction (Hellriegal et al. 1976). A more complete definition states that conflict is a process in which one party perceives that another party has taken some action, or is about to take action, that will exert negative effects on its major interests.

Three different views of conflict have been put forward (Robbins 1974). The traditional view of conflict assumes that all conflict is harmful and is to be eliminated at all cost. The human relations view is that conflict is a natural and inevitable outcome in any group, and sometimes it is even desired for enhancing group performance. The interactionist view encourages conflict on the grounds that a harmonious, peaceful, tranquil, and cooperative group is prone to becoming static, apathetic, and non-responsive to needs for change and innovation. Both the human relations and interactionist views concurred that too much conflict will jeopardize the operations of an organization and it is, therefore, the manager's role to ensure a minimum level of conflict so that the group is viable, self-critical, and creative.

Two types of conflict could be present in an organization: the functional and the dysfunctional. In recent research, it has been found that functional conflict could be constructive and help support the goals of the group and improve its performance (Baron 1991). It motivates people in different work

groups to know and understand each other's positions more fully (Tjosvold 1985). Conflict also encourages new ideas and approaches. Increasing evidence suggests that conflict leads to better decision by providing different views (Schwenk and Cosier 1980). When opposing views are brought out into the open and fully discussed, it can enhance organizational commitment (Cosier and Dalton 1990). Job satisfaction may be reduced when the discussion between conflicting groups is blocked, thus not permitting free exchange of opposing views.

Dysfunctional conflicts instead are destructive and hinder group performance. There is no clear demarcation between functional and dysfunctional conflict. A level of conflict which creates healthy and positive involvement toward one group's goal may be dysfunctional to other groups.

PAST RESEARCH ON JOB SATISFACTION
AND INTERGROUP CONFLICT

An early study in 1957 by Herzberg et al. found a U-shaped relationship between age and job satisfaction. The level of satisfaction of the worker started off high and declined to the lowest point in the late twenties and finally accelerated again in the later part of his career path. The same relationship was also found for police officers in the Republic of Singapore (Singh 1984). On the other hand, some researchers found a positive linear relationship between job satisfaction and age (Hulin and Smith 1965; Ronen 1978).

Another study found that when male management employees reached pre-retirement age, they experienced a drop in overall satisfaction (Saleh and Otis 1964). The explanation given was that the decline could be due to blockage or anticipated blockage of various channels of self-actualization, psychological growth or even declining health. For employees in the Malaysian Ministry of Defence, Tam (1986) found that age and occupational levels have a positive effect on job facets such as nature of work, pay, co-workers and organizational climate. Hanifudin (1986) also found that for middle-level managers in RISDA age has a significant relationship with the facet of supervision.

Generally, the higher the occupational level of an employee, the more satisfied he is with his job (Andriasani 1978; Srivatsava and Singh 1975; Lichtman 1970; Miller 1966; Markandan 1984; Tam 1986). This was because a number of job facets in the job satisfaction questionnaires are implied by higher occupational level, for example, nature of the work, responsibilities, pay, prestige, and more intrinsically rewarding work, therefore satisfying the needs of those in the higher levels of the organizational hierachy. Locke and Whiting (1974) conducted a study of 911 solid-waste

management employees and also found that white-collar employees were more satisfied with their job than blue-collar employees.

Chan (1992) and McDonald and Gunderson (1974) found a positive linear relationship between job satisfaction and salary. A high discrepancy in pay between the blue collar and white collar workers could have contributed to the higher job satisfaction as income increases. Moreover, as income increases, the employees' satisfaction level with the nature of work also 1increases (Tam 1986).

One of the factors tested by Chan (1992) was the department in which the respondents were attached to. Employees in the administration, production, engineering and account departments were satisfied with job facets of company, supervision, work, co-workers and fringe benefits and wages. Relationships between departments can be characterized by the amount of responsiveness of a department to the needs of another department, the accuracy of information exchange, and the attitudes of department members toward the other department or its members. Interdepartmental conflict means there is interference rather than considerateness, information is distorted or withheld, and attitudes of annoyance and distrust exist between departments (Dutton et al. 1969).

Walton and Dutton (1969) studied interdepartmental conflict in a large telephone corporation in the United States to identify contextual factors that led to such conflict. They found that jurisdictional ambiguity, communication barriers, ignorance of other departments and ratio of workload to rewards strongly explain variation in conflict across departments.

In a study of high school teachers (Corwin 1969) reported that organizational characteristics such as size of organization, level of authority, organizational complexity, standardization of work, staff additions, and social contact outside work were positively correlated with conflict. However, role conflict was negatively correlated with job satisfaction, supervision and co-workers (Rizzo et al. 1970; Fisher and Gitelson 1983).

Three factors could be identified that promoted effective resolution of interdepartmental conflict in plastic firms, namely, the degree of structure and the goal, time and interpersonal orientation of a coordinating unit, high influence of personnel in the coordinating unit based on perceived expertise, and open confrontation of managers of different units.

Brooker (1975) suggested three phases of interdepartmental problem solving. First, the members of a group should be brought together by a change agent to encourage communication among group members. Then the change agent prepares a situation model, together with the group member which spell out clearly problems between departments. Finally, the two antagonistic groups are brought together in an intergroup meeting to discuss agenda on the situation models, and by doing so help to reduce problems between the two groups.

FACETS OF JOB SATISFACTION

According to Locke (1964), a job comprises a complex inter-relationship of tasks, roles, responsibilities, interactions, incentives and rewards. The important facets or aspects of a job are as follows:

Work	:	Intrinsic interest, variety, opportunity for learning, level of difficulty, amount of work,
Pay	:	Amount of pay, fairness or equity, method of payment
Promotion	:	Opportunities for promotion, fairness, basis for promotion
Recognition	:	Praise for accomplishment, recognition for work done
Benefits	:	Retirement benefits including pension, medical benefits annual leave, paid vacations
Working Conditions	:	Hours, rest breaks, equipment, temperature, ventilation, humidity, location, physical layout
Supervision	:	Supervisory style and influence, technical supervision, human relations, administrative skills
Co-workers	:	Competence, helpfulness, friendliness
Company and management	:	Concern for employees, pay, policies

OBJECTIVES

The aim of this exploratory study is to provide an insight into the job satisfaction and conflict of a sample of technical employees in engineering firms in Malaysia based on a research study conducted by Chan for his MBA degree. This is achieved by examining the level of job satisfaction in each technical department of the sample of firms selected, the level of conflict in each of these departments, the job facets that employees are most satisfied with and the major demographic factors that affect the level of job satisfaction.

RESEARCH METHOD

RESEARCH INSTRUMENT

A structured questionnaire was designed to gather data for the study. It was divided into four sections.

Section I was designed to gauge the perceptions of employees towards the five important facets of their job, namely, work, supervision, co-workers, pay, and promotion. The measuring instrument used for these facets is the Job Descriptive Index (JDI), as developed by Smith et al, which consists of a list of items that are adjectives describing each aspect of a job. The items

reflect both the positive and negative aspects of the job. Studies that have applied the JDI include those of Hulin and Smith (1965), Iris and Barrett (1972), Adams et al. (1977), Nicholson et al. (1975), Mobley (1977), and Jacobs and Solomon (1977).

Section II of the questionnaire focussed on the overall job satisfaction of the employees, which represents a generalized affective orientation to all aspects of the job. It is measured by the Overall Job Satisfaction (OJS) index as developed by Brayfield and Rothe (1951). The scale devised by Brayfield and Rothe consists of 18 statements relating to attitudes of respondents toward their job. Respondents are required to rate each statement on a Likert scale ranging from "strongly agree" to "strongly disagree". The total scores range between 18 and 90 with the neutral point at 54. The lower the total scores for an individual, the more satisfied he is and conversely, the higher the score, the less satisfied he is.

To measure intergroup conflict, the Rahim Organizational Conflict Inventory-I (ROCI-I) scale (Rahim 1983) is incorporated in Section III of the questionnaire. Respondents are required to rate seven statements on a five-point Likert scale and the summation across statements is obtained to assess the level of conflict. Higher total scores indicate that the level of conflict is high while lower scores indicate low levels of conflict.

Section IV comprises questions on the demographic characteristics of employees.

SAMPLING PROCEDURE

The sample comprises technical employees in pressure vessels manufacturing companies in the Kuala Lumpur-Shah Alam area.

The products of pressure-vessel manufacturing firms are pressure vessels which are steel containers usually of cylindrical shape that are used for storage and transportation of pressurized liquid. The pressure vessel industry plays a complementary role in the chemical and processing sector. They supply a significant portion of the demand for intermediate goods and services in this sector, thus enabling many big corporations like Petronas, Shell, Esso, and many edible oil processors to expand without incurring unduly high capital for importing the processing equipment.

Only companies that have distinct departments in each of the job functions, namely design, production, project and quality control are surveyed. Based on the list of licensed companies in Peninsular Malaysia obtained from the Factory and Machinery Department of the Ministry of Human Resources, Malaysia, only nine companies meet the required characteristics. Of these five are willing to cooperate by allowing their employees to participate in the survey. By distributing sets of questionnaires to the manager of each department of these companies a response rate of 75 percent was obtained.

THE FIRMS AND DEPARTMENTS

The size of the companies covered in the study is medium with the staff strength varying between 20 and 50 employees. Most of the companies subcontract the fabrication and installation works to subcontractors to maintain a low overhead. The staff are mainly involved in engineering and management works.

The customers of these companies are mainly chemical plants and food-processing factories where pressure vessels are used for the storage of processing fluids, which are pressurized to change their physical form. As the economy is expanding rapidly, customers could be found fairly easily locally.

The capital involvement in this industry is in the medium range, with most of the capital being employed in financing raw material purchasing. Thus it is not surprising to find that most of the companies are public listed, with paid-up capital of between RM2 million and RM5 million.

Technical personnel are assigned to different engineering departments to carry out specific jobs. These departments are design, production, quality control and project. Workers of different level of skills are employed, such as fitters and welders. Supervisory positions are usually held by graduates from engineering colleges and universities. This study is confined to employees who have a minimum of an Engineering Certificate. Figure 1 shows a typical organizational structure of an engineering firm.
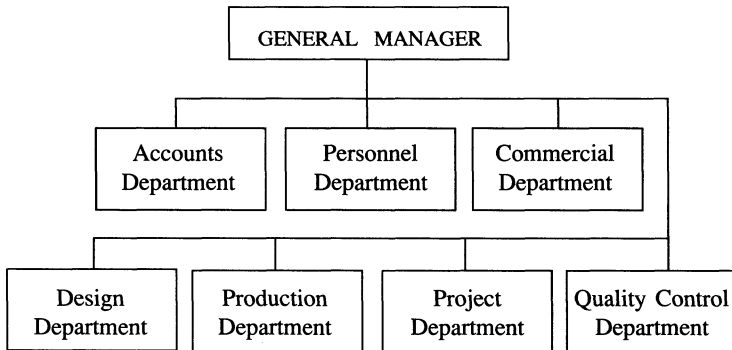

FIGURE 1. Organizational Structure of An Engineering Firm

The organizational structure is rather flat and lines of communication and power are relatively simple. Each department is headed by a manager who is assisted by a few engineers and supervisors. Managers and engineers must possess at least a diploma but they usually hold degrees in the relevant

engineering disciplines. Supervisors have a certificate while graduate entrants are usually provided on-the-job training for a period of six months before they are assigned to the relevant department.

The design department is responsible for all design calculation checks and issues of construction drawings to the shop floor. The main task of design engineers is to check the strength calculations of the product. The design calculation is usually done in accordance to some recognized design codes from the United States and Great Britain. Design engineers also have to check with the client's specifications which will state some extra requirements over and above the design codes. It is the responsibility of the design engineer to liaise with the design department to clarify any ambiguity between their requirements and code requirements. In addition, the design department has to coordinate with the production, project and quality control departments for relevant information to be incorporated in the design drawings. Once design calculations are completed and drawings are approved by customers, drawings are issued to the production department for fabrication and purchasing of materials.

The production department is responsible for the fabrication of the product. The tasks of this department start when they receive approved construction drawings from the design department. They will request materials in accordance to the drawing and at the same time check the store for any available material. The production manager has to prepare schedules for all works in order to meet targeted delivery dates. The production supervisor will monitor the work progress so that it is in accordance to the schedule. The production department ensures that all machinery and equipment are in excellent condition and recommends additional purchases to the management, if necessary. It also constantly seeks to improve production methods in order to increase efficiency and productivity. The department also has to liaise with the quality control department for quality inspection at various stages of fabrication. During the course of inspection, production schedules may be delayed.

The project department implements the projects of the firm. It starts by examining the contract requirements on construction codes, the materials and date of delivery. It organizes meetings among all the departments to inform them of the customers requirements. During the fabrication stage, they liaise with the production department to arrange for the testing of test pieces and visits by customers. Since they have to deliver the product on a date stipulated in the contract, they will usually push for the completion of the design, production and inspection works. Therefore, high levels of conflict usually arise between this department and other departments.

The function of the quality control department is to ensure that the factory produces products of high quality. It is the quality control personnel's duty to ascertain the level of quality and implement the quality control

program. The quality control personnel will communicate with the production department about any substandard work and devise ways to improve them.

Staff in all the departments strive for the best in carrying out their duties. However, each department has different targets and hence various types of conflicts could arise. For example, the design department would try to minimize cost by using different thicknesses and sizes but this would make production work more difficult as different components have to be produced. Similarly the production department would try to follow the schedule as closely as possible and save production costs. However, quality may have to be compromised when production is pushing for early completion. This could cause conflict with the quality control department. Conflict may also arise when the project department tries to minimize cost by purchasing the minimum amount of materials and push for early completion of the project. This is in conflict with the production department which would have to be cautious in order to minimize wastage, and the quality control department which intends to maintain a better quality.

RESEARCH RESULTS

JOB SATISFACTION AND INTER GROUP CONFLICT THE DEPARTMENTS

Table 1 shows the level of job facet satisfaction of respondents in each of the four departments. The relationship between satisfaction level and departments could not be established very clearly as the differences in all the facets and the overall JDI Indices are not significant at the 5 percent confidence level. Nevertheless, the mean scores provide some indication that respondents tend to be more satisfied with the following facets of their job: work, supervision,

TABLE 1. Comparison of Job Description Indices Among Departments

Job facet	Mean Scores				F-ratio
	Quality Control	Production	Project	Design	
Work	2.20	2.21	2.10	1.93	1.38
Supervision	2.10	2.15	1.93	1.85	0.97
Co-workers	2.16	2.09	1.84	2.14	0.98
Pay	1.14	1.19	1.31	1.09	0.71
Promotion	1.67	1.67	1.73	1.29	1.11

Notes: 1) Significant at the 5 percent level
        2) Degrees of freedom between groups = 3
            Degrees of freedom within groups = 71

and co-workers, but they are less satisfied with the facets of pay and promotion. In fact pay is the facet that the four departments are the least satisfied with. As salary should commensurate with qualifications, skills and experience, a failure to provide a consistent and satisfactory salary structure throughout all departments will eventually be a crucial factor in determining job satisfaction. A review of the salary structure is indeed inevitable for the long-term survival of the industry in the face of the crucial role of technical workers.

Except for co-workers, respondents in the design department exhibit the lowest satisfaction level with every facet of their job. This has serious implications for work performance, productivity as well as morale for staff in this department. In view of the important task of the design department as it is involved in the preparation of design calculations and drawings that trigger off the entire production process, concerted efforts should be taken to enhance these facets as perceived.

TABLE 2. Comparison of Overall Job Satisfaction and Intergroup
Conflict Among Departments

Measure	Mean Scores				F-ratio
	Quality Control	Production	Project	Design	
Overall Job Satisfaction	47.90	44.31	44.20	46.70	1.26
Intergroup Conflict	19.58	18.39	18.55	18.70	0.36

With regard to Overall Job Satisfaction, Table 2 shows that respondents in the production (44.31) and project (44.2) departments enjoy a higher level of satisfaction, while those in the quality control department (47.90) are the least satisfied. When these indices are compared to the neutral point of 54 in the Brayfield-Rothe Scale, it could be said that employees in all the departments enjoy a reasonably high level of job satisfaction. As expected respondents in the quality control department have the highest level of intergroup conflict, that is, 19.58. This could be due to the manner in which the operations of this department are carried out in order to achieve its goal, that is, high quality products. However, no significant diffences in the levels of Overall Job Satisfaction and intergroup conflict are shown by employees in the four different departments.

OCCUPATIONAL LEVEL

With respect to respondents' position in the organization, that is, whether they occupy the managerial, executive/engineer or supervisory levels, Table 3 shows that there are significant differences in the level of job satisfaction among the three occupational categories for the facets of co-workers and pay.

TABLE 3. Comparison of Job Description Indices Among Occupational Levels

| Job facet | Mean Scores | | | F-ratio |
	Managerial	Executive	Supervisor	
Work	2.30	1.97	2.11	2.41
Supervision	2.19	1.83	2.09	2.24
Co-workers	2.21	1.75	2.36	8.45
Pay	1.47	1.02	1.25	3.87
Promotion	1.82	1.44	1.63	0.85

Moreover, except for the facet of co-workers, those at the managerial level experience the highest level of satisfaction with each facet of their job. This is expected as they are heads of the relevant departments and thus form the middle-level management team in the organizational hierarchy. Thus they do exert some degree of authority and control over their subordinates, yet their responsibilities shouldered are not too heavy. Indeed it could be argued that they enjoy both the intrinsic and extrinsic aspects of their job.

The results in Table 4 show that employees in the managerial level experience a higher level of Overall Job Satisfaction compared to those at the other two levels. These findings are consistent with those of Miller (1966), Lichtman (1970), Srivatsava and Singh (1975) and Andriasani (1978), who also found that the higher the employees are at the organizational hierarchy, the more satisfied they are.

TABLE 4. Comparison of Overall Job Satisfaction and Intergroup Conflict Among Occupational Levels

| Measure | Mean Scores | | | F-ratio |
	Managerial	Executive	Supervisor	
Overall Job Satisfaction	42.64	47.12	45.77	1.76
Intergroup Conflict	17.18	19.44	18.73	1.58

The higher the occupational level, the higher the level of job satisfaction and the lower the level of intergroup conflict. This could be explained by two factors.

First, those in the higher ranks of the organization are likely to be older in terms of age, and hence they would be paid salaries that are closer to their expectations. Second, they would have developed good working relationships with their co-workers and have understood well the norms and culture of the industry.

LENGTH OF SERVICE

With respect to the respondent's length of service, no significant differences are found in the means of the various groups when tested against all the facets of the job as shown in Table 5. However, those with longer periods of service experience a higher level of satisfaction with the job facets studied than those with shorter periods of service. Moreover, irrespective of how long they have served with their organization, pay appears to be the least likely factor contributing to any job satisfaction. The nature of the work and opportunities to interact with co-workers and achieve their goals together as a team appear to be the most likely facets yielding to job satisfaction. These have important implications for management policies concerned with retention of staff as both intrinsic as well as monetary rewards have to be dealt with.

TABLE 5. Comparison of Job Description Indices Among
Various Lengths of Service

Job facet	Mean Scores					F-ratio
	More than 5 years	2-5 years	1-2 years	6-12 months	Less than 6 months	
Work	2.16	2.10	2.15	1.90	2.07	0.70
Supervision	1.99	1.99	2.12	1.97	1.89	0.26
Co-workers	2.12	2.11	2.18	1.91	1.98	0.37
Pay	1.30	1.18	1.14	1.23	1.08	0.36
Promotion	1.68	1.62	1.69	1.52	1.39	0.29

Table 6 shows no significant differences in the Overall Job Satisfaction and intergroup conflict among the various groups.

However, it is interesting to note that those who have been employed for a shorter period, for example, between one and two years, are also more satisfied overall with their job than those who have been been employed for a longer period, for example, between two and five years. Furthermore, those

TABLE 6. Comparison of Overall Job Satisfaction and Intergroup
Conflict Among Various Lengths of Service

	Mean Scores					
Measure	More than 5 years	2-5 years	1-2 years	6-12 months	Less than 6 months	F-ratio
Overall Job Satisfaction	44.83	45.20	44.69	47.62	47.18	0.55
Intergroup Conflict	17.92	19.25	19.39	18.85	18.53	0.33

with a length of service between one and two years have the highest level of
intergroup conflict. This is probably because they are attempting to adjust
and fit into the new workplace in terms of duties and responsibilities,
working environment, including co-workers, and working conditions. For
those with a length of service of less than a year, their intergroup conflict
level is the lowest. This is expected since they are relatively new compared
to existing staff in the organization and are adjusting to the organizational
norms and culture.

INCOME LEVEL

Table 7 shows that there is a significant difference in job satisfaction in the
facet of promotion among the various income groups. For this job facet,
those with an income level of between RM2001 and RM3000 are the most
satisfied. This is probably because they view prospects for promotion are
bright in their organization. Those in the highest income range are the most
satisfied with their job (mean score of 2.40).

TABLE 7. Comparison of Job Description Indices Among Income Groups

	Mean Scores					
Job facet	More than RM4000	RM3001-4000	RM2001-3000	RM1001-2000	Less than RM1000	F-ratio
Work	2.40	1.77	2.11	2.09	1.87	2.11
Supervision	2.03	1.52	2.16	1.97	1.83	1.69
Co-workers	2.12	1.80	1.91	2.13	2.57	1.37
Pay	1.59	1.37	1.21	1.02	1.29	2.18
Promotion	1.37	1.27	2.17	1.30	1.18	4.74

However, they are also the least satisfied with their pay (mean score of 1.59). Respondents in the lowest income range are the least satisfied with the promotion aspect of their job and the most satisfied with their colleagues. Thus career planning should be initiated or emphasized in these organizations in order to help those in the lower salary groups chart their future career path as well as to improve their perceptions of available current and future promotion opportunities. Nevertheless, those with an income level of between RM2001 and RM3000 are the most satisfied with the promotion aspect probably because they are most likely to view prospects for promotion as bright in their organizations given the experience and skills that they have already acquired.

For Overall Job Satisfaction, as shown in Table 8, the results are not statistically significant. Nevertheless, the scores suggest that the higher the income level of an employee, the higher his level of job satisfaction. This concurs with the findings of Chan (1992). The lowest Overall Job Satisfaction is found among those earning between RM3001 and RM4000 probably because they feel rather stagnant at their current position in the organization.

TABLE 8. Comparison of Overall Job Satisfaction (OJS) and Intergroup
Conflict Among Income Groups

Measure	Mean Scores					F-ratio
	Morethan RM4000	RM3001- 4000	RM2001- 3000	RM1001- 2000	Less than RM1000	
OJS	42.00	50.43	45.00	46.21	46.80	1.38
Intergroup Conflict	14.33	20.71	19.00	18.94	20.00	3.11'

With regard to intergroup conflict, there are significant differences in the level of intergroup conflict among employees of different income levels. Those in the lower income groups, such as RM3001-4000 and less than RM1000, encounter the highest level of intergroup conflict. Since they are either in the middle of the chain of command in the organization or are new entrants, they are more likely to face the problem of role ambiguities than those in the highest income group.

SUMMARY AND IMPLICATIONS

Although the statistical significance of the study is limited by the small sample size which in turn arises from the small industry selected, some

conclusions could be derived from the findings. The various level of job satisfaction among technical employees in the pressure vessel industry is only moderate, with an average of 45.78 compared to the neutral point of 54. Among the four departments, employees in the design department are least satisfied towards each facet of the job while those in the quality control department have the lowest level of overall job satisfaction. Similar results are also obtained when the sample is stratified by the various demographic factors. Engineers in the companies surveyed experienced the lowest level of job satisfaction as compared to the managers and supervisors.

The findings of this study have important implications for the management of organizations in the pressure-vessel industry. Employees in the quality control department generally enjoy less overall job satisfaction compared with those in other departments. This department frequently bears the burden for delaying project delivery, and as a result the morale of its members is relatively low. Organizations could rectify this situation by providing the quality control department greater authority in line with its responsibilities so as to enable it to carry out its duties and tasks effectively. Moreover, organizations should instil a sense of the importance of quality control in all the departments so that errors and wastage could be reduced, thus leading to a speedier deliveries.

The low level of overall job satisfaction among engineers or executives in the companies studied is a cause of serious concern to management. In the move to enhance the level of professionalism in all types of work, engineers should not be discouraged and demoralized in performing their job well. Hence a definite policy should be adopted in promoting job satisfaction among engineers, who form a substantial part of technical employees in the industry both in terms of quantity and their contribution of skills and knowledge.

Engineers are the least satisfied with their pay as compared to the managerial and supervisory groups. Since rising salaries could bring adverse effects on the variable production costs, project incentive plans could be introduced, where employees involved in certain projects are paid additional rewards for the extra time and effort they spend in completing the project on time.

Job satisfaction and conflict have a direct impact on the performance level of employees and consequently their turnover and absenteeism rates. The costs involved in turnover are obvious; they include those of hiring, training and losss of production. Furthermore, dissatisfied workers may be contributing way below their full potential, thus hindering the maximization of productivity levels and the minimization of production costs. The implication for management of the sample of companies surveyed is that to retain employees and enhance their effective utilization, a conducive environment that helps to promote job satisfaction should be provided.

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