

## Antecedents and Outcomes of Organisational Commitment among Malaysian Engineers

<sup>1</sup>Rajendran Muthuveloo and <sup>2</sup>Raduan Che Rose

<sup>1</sup>Flat 3, 15 Breakspears Road, Brockley, London SE4 1XW, United Kingdom

<sup>2</sup>Graduate School of Management, University Putra Malaysia, 43400 UPM  
Serdang, Selangor Darulehsan, Malaysia

**Abstract:** This study explores the major factors contributing to organizational commitment among engineers in Malaysia. It identifies the effects of certain antecedents on organizational commitment and evaluates the impact of organizational commitment to organizational outcomes. From the literature review, a theoretical foundation for the study was compiled and two hypotheses were established. Firstly, positive employee perception leads to higher organizational commitment. Secondly, higher organizational commitment brings positive organizational outcomes. A questionnaire survey of Malaysian engineers established that employee perception and attitudinal characteristics have a significant influence on organizational commitment, while organizational commitment and behavioral characteristics directly affect organizational outcomes. The research demonstrates that positive employee perception enhances organizational commitment, which, in turn, leads to positive organizational outcomes.

**Key words:** Employee perception, organizational commitment, organizational outcomes

### INTRODUCTION

Vision 2020-Malaysia's aspiration, has led to tremendous changes in the strategic directions of many organizations in Malaysia. The future suggests flexibility, boundary-less communities and changes to work habits and methods, as we know them today. As work changes from a worker-intensive industrial society towards an automated information society, the retention of technological advantages and knowledge capital by an organization, is no longer assured.

High technology industries operate in a volatile market and experience accelerated growth and rates of change. Skilled employees, such as engineers, environmental management, aerospace and research specialists, are well educated, have a strong preference for independence and hold a large part of an organization's intellectual capital. Skilled employees are more committed to their career/profession than to their organization<sup>[1-3]</sup>.

Surveys by the Malaysia Employee Federation<sup>[4]</sup> and National Productivity Centre<sup>[5]</sup>, indicates that many organizations face skilled employee shortages, due to the willingness of employees to change employers, resulting from low organizational commitment. Another survey by the Ministry of Human Resources<sup>[6]</sup>, identifies salary, geographic location of the company and new opportunities as leading to employee turnover.

From a macro viewpoint, skilled employee shortages are due either to insufficient availability of skilled employees or to high employee turnover (Fig. 1).



Fig. 1: Problem concept<sup>[6]</sup>

Employee turnover leads to skilled employee shortages and affects organizational outcomes. As organizational outcomes are directly proportional to organizational commitment, organizational outcomes can be improved by increasing employees' organizational commitment<sup>[7-9]</sup>.

This research project focuses on engineers, a key workforce for any country similar to Malaysia—a nation embarking on a knowledge-based economy, with industries driven by high technology as the key to propelling future growth<sup>[1,10-11]</sup>. Engineers are considered an essential service and are important for the development of Malaysia<sup>[6]</sup>. True to the adage that

'prevention is better than cure', instead of just considering how to reduce turnover among engineers, the authors' interest lies in improving organizational commitment, which, in turn, reduces engineer turnover and enhances positive organizational outcomes.

This research aims to identify the elements of employee perception and personal characteristics which have a significant influence on organizational commitment amongst engineers in Malaysia. The study evaluates which elements of organizational commitment and personal characteristics, have implications for organizational outcomes, comprising loyalty, intention to leave, work stress and job performance. The theoretical framework of this research is based on two hypotheses (Fig. 2):

- I- Positive employee perceptions lead to higher organizational commitment
- II- Higher organizational commitment brings positive organizational outcomes

Engineers' perceptions, as antecedents of organizational commitment, are measured through perceived job characteristic, perceived job satisfaction, perceived organizational characteristics and role perception. The authors combine organizational characteristics and group/leader relationships into one element called perceived organizational characteristics, while motivation and job satisfaction are combined into perceived job satisfaction. The authors classify all four elements into one dimension, called employee perception, as it is the employees' feeling about their role, job and organization, based on their perceptions<sup>[12-14]</sup>.

Organisational commitment is measured through affective, continuance and normative commitment, based on the three-component model of organizational commitment by Meyer and Allen<sup>[15]</sup>.

Organisational outcomes are measured in terms of loyalty, intention to leave, work stress and self-performance. These four elements are sufficient to include all elements considered by Steers<sup>[16]</sup> as organizational outcomes. As previous research shows organizational commitment can also lead to negative effects on organizational outcomes, work stress has been included as an additional element to consider the negative effect of organizational commitment to organizational outcomes<sup>[17-21]</sup>.

As per Evans<sup>[22]</sup> and Tjosvold *et al.*<sup>[23]</sup>, the influence of personal characteristics on organizational commitment and organizational outcomes, are examined via age, gender, position, length of service, job tenure, religion, race, academic background and country of graduation.

The concept of organizational commitment is a popular research topic and has received much empirical study, both as consequences and antecedents, of other work-related variables of interest. Meyer and Allen<sup>[15]</sup> present these three approaches as in Fig. 3 and

define their three-dimensional constructs as affective, continuance and normative commitment.

Affective commitment refers to the employee's emotional attachment to, identification with and involvement in, the organization [based on positive feelings, or emotions, toward the organization]. The antecedents for affective commitment include perceived job characteristics [task autonomy, task significance, task identity, skill variety and supervisory feedback], organizational dependability [extent to which employees feel the organization can be counted on to look after their interests] and perceived participatory management [extent to which employees feel they can influence decisions on the work environment and other issues of concern to them].

The use of these antecedents is consistent with findings by other researchers, such as Meyer *et al.*<sup>[11]</sup>, Steers<sup>[16]</sup>, Mottaz<sup>[24]</sup> and Mowday<sup>[25]</sup> that these factors all create rewarding situations, intrinsically conducive to the development of affective commitment.

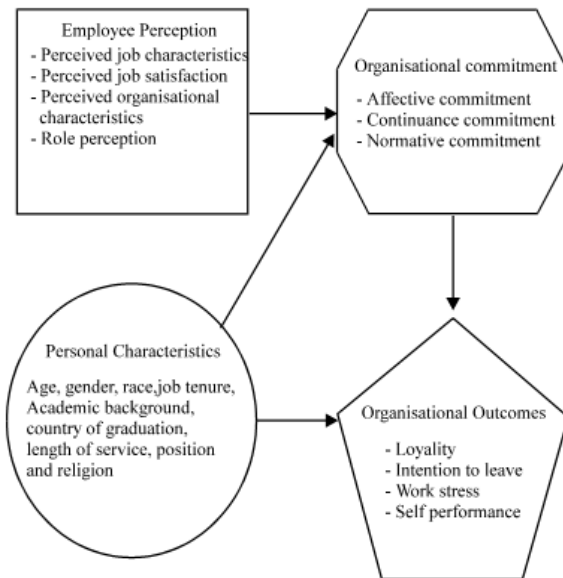


Fig. 2: Theoretical framework of the research project



Fig. 3: Typology of organizational commitment<sup>[15]</sup>

Age and organizational tenure are positively associated with affective commitment. It is hypothesized that employees with low affective commitment will choose to leave an organization, while employees with a high affective commitment will stay for longer periods, as they believe in the organization and its mission.

Continuance commitment refers to commitments based on the costs the employee associates with leaving the organization [committed due to the high cost of living]. Potential antecedents of continuance commitment include age, tenure, career satisfaction and intent to leave. Age and tenure can function as predictors of continuance commitment, primarily because of their roles as surrogate measures of investment in the organization<sup>[15]</sup>.

Tenure can be indicative of non-transferable investments [close working relationship with co-workers, retirement investments, career investments and skills unique to that organization]. Age can also be negatively related to the number of alternative job opportunities available. Career satisfaction provides a more direct measure of career-related investments, which would be at risk if the individual leaves the organization. In general, whatever employees perceive as a sunk cost, as a result of leaving the organization, are the antecedents of continuance commitment.

Normative commitment refers to an employee's feeling of obligation to remain with the organization [based on the employee having internalized the values and goals of the organization]. The potential antecedents of normative commitment include co-worker commitment [including affective and normative dimensions, as well as commitment behaviors], organizational dependability and participatory management. Co-workers' commitment is expected to provide normative signals that influence the development of normative commitment<sup>[26,27]</sup>. Organisational dependability and perceived participatory management are expected to instill a sense of moral obligation to reciprocate to the organization.

## **MATERIALS AND METHODS**

As the researcher was interested in collecting original data from a population, which too was large to observe, or interview, a survey via a questionnaire was deemed the most suitable method for measuring the perceptions of the engineers. A systematic pilot test was carried out and later re-tested, to ascertain the reliability and validity of the instrument used. Recommendations found to be valid were incorporated into the survey design prior to the actual study.

The questionnaire contained four sections, all using five-point Likert scales to measure a) organizational commitment, b) to measure employees' perceptions, c) to evaluate engineer's behavior, arising from their

organizational commitment and d) to gather information on personal characteristics of the respondents.

The population and unit of analysis chosen for this research are individual engineers and those registered with the Malaysian Board of Engineers. The population of this study is estimated to be 40,000 engineers<sup>[28]</sup>, with a sample size of 380 calculated for this study.

A systematic random sampling procedure was employed, with information on a possible sample of 1,000 engineers randomly selected from lists provided by Human Resource Managers. The research was conducted among engineers working throughout Malaysia, focusing on main industrial areas where most organizations face acute shortages of engineers due to high employee turnover<sup>[6]</sup>.

The engineers were classified into six major disciplines, namely Mechanical, Chemical, Electrical and Electronics, Civil, Production and Others. The respondents from these disciplines were then targeted, based on the proportions listed by the Board of Engineers, Malaysia<sup>[28]</sup>. Targeted respondents were further narrowed down, based on a fair distribution of their race, from information provided in the Survey of Labor Shortage and Manpower Requirement, Manpower Department, Ministry of Human Resources<sup>[6]</sup>. The researcher sent out 600 questionnaires by hand and 400 by post, with a final effective sample size of 381 engineers.

The engineers in the sample comprised various races, academic qualifications, countries of graduation, job tenure, length of service and positions, allowing for heterogeneity of assigned tasks, goals and values. This provides for a good understanding of the organizational commitment level as a whole in any organization, which usually comprises staff with various levels of these factors. The respondents comprised almost equal proportions of local and foreign graduates. This helped minimize possible bias in the research findings in relation to the impact of a foreign or the local culture.

The significance between the dependent variable [i.e. 1st section: organizational commitment and 2nd section: organizational outcomes] and independent variables [1st section: employee perception and 2nd section: organizational commitment] was determined by using multiple regression analyses. The significance of personal characteristics on organizational commitment and organizational outcome is determined by an Analysis of Variance (ANOVA) method, to examine significant mean differences among more than two groups, measured on a nominal scale. Where significant differences among the groups were found, post-hoc analyses using Bonferroni tests were performed, to explain differences between means of various groups.

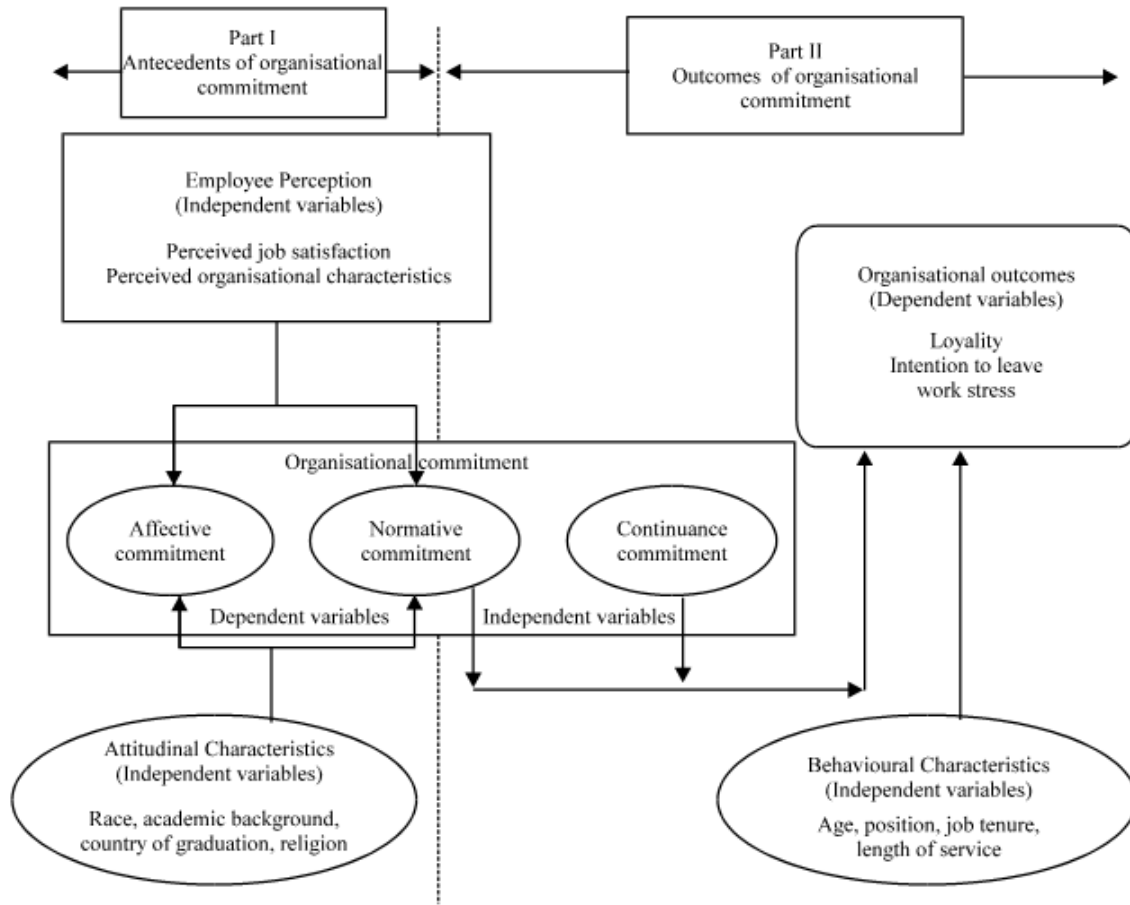


Fig. 4: Relationship framework

## DISCUSSION

The research provides evidence that employee perception and personal characteristics are antecedents of organizational commitment. Perceived job satisfaction and perceived organizational characteristics have a significant influence on affective and normative commitment. Only four elements [race, academic background, country of graduation and religion], of the nine personality characteristics, have a strong influence on organizational commitment. As these four elements are related to the values and beliefs, of respondents, they are classified as attitudinal characteristics<sup>[29-31]</sup>.

Positive employee perception leads to higher organizational commitment, as affective commitment, based on positive feelings, or emotions, towards the organization<sup>[32,33]</sup>, is significantly influenced by perceived job satisfaction and the perceived organizational characteristic elements of employee perception. Personal attitudinal characteristics, the foundation of employee's values and goals, also have a significant influence on affective commitment.

Normative commitment, based on an employee having internalized the values and goals of the organization<sup>[14,32]</sup>, is significantly influenced by

perceived job satisfaction and perceived organizational characteristic elements of employee perception. Attitudinal characteristics also have a significant influence on normative commitment.

Engineers' perceptions do not significantly influence continuance commitment, which is based on the costs an employee associates with leaving the organization. Personal characteristics do not have a strong influence on continuance commitment<sup>[34]</sup>.

The findings show that organizational commitment and personal characteristics have a significant influence on organizational outcomes. Higher organizational commitment leads to higher loyalty, reduced work stress and a lower intention to leave, but has little influence on self-performance.

Continuance commitment and normative commitment, as elements of organizational commitment, have a significant influence on organizational outcomes [i.e. Loyalty, intention to live and work stress]. Only four of nine personal characteristics have a strong influence on organizational outcomes. These four elements are more behavioral in nature and are classified as behavioral characteristics<sup>[29-31]</sup>.

Affective commitment, an employee's emotional attachment to, identification with and involvement in, the organization, based on positive feelings, or emotions, towards the organization<sup>[14,32]</sup> have no significant influence on organizational outcomes.

Normative commitment, based on an employee having internalized the values and goals of the organization<sup>[14,32]</sup> significantly influences loyalty, intention to live and work stress; all elements of organizational outcomes.

Continuance commitment, based on the costs an employee associates with leaving an organization, has a significant influence over loyalty, intention to live and work stress, elements that are the outcomes of organizational commitment. Behavioral personal characteristics, [age, position, job tenure and length of service], the foundation of an employee's behavior<sup>[29-31]</sup>, also have a significant influence on organizational outcomes.

From these findings, the authors hold that perceived job satisfaction, perceived organizational characteristics and attitudinal characteristics, only have a positive significant influence on affective commitment and normative commitment. Continuance and normative commitment and behavioral characteristics have a significant influence on loyalty, intention to live and work stress. Higher normative commitment leads to higher loyalty, lower intention to leave and lower work stress. On the other hand the higher continuance commitment leads to higher loyalty, but also to higher work stress.

A concept of the relationship framework, based on the findings of this research, is given in Fig. 4, which shows.

Engineers' perceptions and personal characteristics are antecedents of organizational commitment, made up of affective and normative commitment. Engineers' perceptions comprise of perceived job satisfaction and perceived organizational characteristics [psychological participation in decision-making, authority and interpersonal trust at work], while personal characteristics are attitudinal characteristics [race, academic background, country of graduation and religion]. For the first part of the research, affective and normative commitment is the dependent variables, while perceived job satisfaction, perceived organizational characteristics and attitudinal characteristics are the independent variables.

Organisational commitment and personal characteristics have a significant influence on organizational outcomes. Only continuance and normative commitment aspects of organizational commitment and personal behavioral characteristics [age, position, job tenure and length of service] have a significant influence on organizational outcomes [loyalty, intention to live and work stress]. For the second part of the research, loyalties, intention to live and work stress are the dependent variables, while

continuance and normative commitment and behavioral characteristics are the independent variables.

## CONCLUSION

This study shows the importance of personal characteristics and perceptions of the role, job and organization and how these influence organizational commitment, which, in turn, determines organizational outcomes. The study allows researchers and practitioners, to consider if the antecedents and outcomes of organizational commitment amongst engineers are unique, or different from other professions.

**Findings of interest include:** The research highlights the impact of employee perception and personal characteristics of organizational commitment.

The dynamism of organizational commitment, due to its continued commitment element, is strongly influenced by macro-economics.

The impact of organizational commitment and personal characteristics on organizational outcome is emphasized.

Not all personal characteristics influence organizational commitment and its outcomes. Attitudinal characteristics and behavioral characteristics influence, respectively, organizational commitment and organizational outcomes.

The study alerts to the fact that higher organizational commitment could also lead to lower organizational outcomes by increasing work stress.

Higher organizational commitment increases loyalty, reduces intention to live and work stress but does not necessarily improve self-performance. This research confirms that organizational commitment has little influence on self-performance.

## REFERENCES

1. Meyer, J.P. and H. Lynne, 2001. Commitment in the workplace-towards a general model. *Human Resource Management Review*.
2. Periasamy, P., 2002. Teachers job commitment- its antecedents and outcomes. Published MBA Thesis, Graduate School of Management, Universiti Putra Malaysia.
3. Adler, R. and D. Corson, 2003. Organisational commitment, employees and performance. *Chartered Accountants J. New Zealand*, 82: 31-33.
4. Malaysia Employee Federation, 2002. Survey of Labor shortage and manpower requirement. Ministry of Human Resources Malaysia.
5. National Productivity Centre, 2001. Upgradation of employee skills. Ministry of Human Resources, Malaysia.
6. Ministry of Human Resources, 2002. Labor market trends in Malaysia.

7. Mathieu, J.E. and D. Zajac, 1990. A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment. *Psychological Bull.*, 108: 171-194.
8. Mellor, S., J.E. Mathieu, J.L. Farrell and S.G. Rogelberg, 2001. Employee's non-work obligations and organizational commitments: A new way to look at the relationships. *Human Resources Management*, 40: 171-184.
9. Coleman, D., 2002. *The New Leaders* (1st. edn.) London: Little Brown.
10. Singh, V. and S. Vinnicombe, 2000. What does commitment really mean? Views of UK and Swedish engineering managers. *Personnel Rev.*, Vol. 29.
11. Govindaraju, R., 2003. Employers perception on fresh engineering graduates. Unpublished MBA Thesis, Graduate School of Management, Universiti Putra Malaysia.
12. McNeese-Smith, R.N., 1996. Increasing employee productivity, job satisfaction and organizational commitment. *Hospital and Health Services Administration*, 41: 160-175.
13. Kinnear, L. and M. Sutherland, 2000. Organisational commitment; specialist attitude; employee attitude. *South African J. Business Management*, 31: 106-123
14. Herscovitch, L. and J.P. Meyer, 2002. Commitment to organizational change: Extension of a three-component model. *J. Applied Psych.*, 87: 474-487.
15. Meyer, J.P. and J.N. Allen, 1991. A three-component concept of organizational commitment. *Human Resources Management Rev.*, 1: 61-89.
16. Steers, R.M., 1974. Antecedents and outcomes of organizational commitment. *Administrative Sci. Quarterly*, 22: 46-56.
17. Koopman, P.L., 1991. Between control and commitment: Management and change as the art of balancing. *Leadership and OD Journal*, 12: 3-7.
18. Price, J., 1997. Handbook of Organisational Measurement. *Intl. J. Manpower*, 18: 303-558.
19. Smith, C.H., 2001. Ethical climate's relationship to job satisfaction, organizational commitment and turnover intention in the sales force. *J. Business Res.*, 54: 39-52.
20. Cacioppe, R., 2000a. Creating spirit at work: Re-visioning organization development and leadership-part 1. *The Leadership and Organisational Development J.*, 21: 48-54.
21. Cacioppe, R., 2000b. Creating spirit at work: Re-visioning organization development and leadership-part II. *The Leadership and Organisational Development J.*, 21: 110-119.
22. Evans, M.G., 1991. Differences in antecedents of organizational commitment between managers and blue-collar workers. *Organizational Behavior and Human Performance*.
23. Tjosvold, D., S. Sasaki and J.W. Moy, 1998. Developing commitment in Japanese organizations in Hong Kong: Interdependence, interaction, relationship and productivity. *Small Group Res.*, 29: 560-582
24. Mottaz, C.J., 1988. Determinants of organizational commitment. *Human Relations*, 41: 467-482.
25. Mowday, R.T., 1998. Reflection on the study and relevance of organizational commitment. New York, NY: Academic Press.
26. Dodd-McCue, D. and G.B. Wright, 1996. Men, women and attitudinal commitment: The effects of workplace experiences and socialization. *Human Relations*, 49: 1065-1091.
27. Hagen, A. and A. Nelson, 2001. Approaches for creating employees' commitment in organizations: A cross-sectional study. *Global Competitiveness*, 9: 672.
28. Board of Engineers Malaysia, 2002. Codes and ethics for practicing Engineers in Malaysia. Annual Bulletin.
29. Cohen, A., 1995. Some antecedents of employee commitment and their influence on job performance: A multi-foci study. *South African J. Business Management*, 26: 45-135.
30. Varona, F., 1996. Relationship between communication satisfaction and organizational commitment in three Guatemalan
31. Wilson, M.A., 2001. Understanding organizational culture and the implications for corporate marketing. *European J. Marketing*, 35: 353-367.
32. Meyer, J.P. and J.N. Allen, 1997. *Commitment in the workplace*. Thousand Oaks, CA: Sage Publications.
33. Saros, J.C. and J.C. Santora, 2001. The transformational-transactional leadership model in practice. *Leadership and Organisational Development J.*, 22:383-394.
34. Angle, H.L. and M.B. Lawson, 1993. Changes in affective and continuance commitment in times of relocation. *J. New Zealand*, 26: 3-15.