View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Universiti Utara Malaysia: UUM eTheses

PERCEIVED LEADERSHIP PRACTICES AND ORGANIZATIONAL COMMITMENT OF CONSULTING ENGINEERS AT THEIR WORKING PLACE

By

TAN OOI KUAN

Dissertation Submitted to
Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Doctor of Business Administration

PERMISSION TO USE

In presenting this dissertation in partial fulfillment of the requirements for a Post Graduate degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this dissertation in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor(s) or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my dissertation. It is understood that any copying or publication or use of this dissertation parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation.

Request for permission to copy or to make other use of materials in this dissertation in whole or in part should be addressed to:

Dean of Othman Yeop Abdullah Graduate School of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRAK

Objektif kajian ini adalah untuk meneliti isu-isu yang dihadapi oleh perunding jurutera. Isu-isu ini ialah (a) hubungan antara amalan kepimpinan dan komitmen organisasi perunding jurutera di tempat kerja, dan (b) perbezaan komitmen organisasi perunding jurutera berdasarkan jantina, umur dan tahun pengalaman bekerja. Kajian ini memanfaatkan (a) lima amalan kepimpinan oleh Kouzes dan Posner (1987) dan (b) komitmen organisasi oleh Mowday, Porter dan Steers (1979). Secara khususnya, kajian ini ditujukan kepada 387 responden yang bekerja dengan firma perundingan yang telah berdaftar di bawah Association of Consulting Engineers, Malaysia (ACEM). Teknik persampelan rawak telah digunakan dan kaji selidik urus sendiri dilakukan untuk kajian ini yang terdiri daripada bahagian maklumat peribadi, bahagian indeks amalan kepimpinan (LPI), dan bahagian komitmen organisasi (OCQ). Kaedah penyelidikan kuantitatif telah digunakan untuk menganalisis data. Pertama, Analisis Spearman-rho correlation digunakan untuk menentukan hubungan antara amalan kepimpinan perunding jurutera dengan komitmen sesebuah organisasi di tempat kerja mereka. Kedua, Ujian Kruskal-Wallis pula dilakukan untuk mengkaji perbezaan antara komitmen organisasi perunding jurutera berdasarkan umur dan tempoh pengalaman bekerja. Ketiga, Ujian Wilcoxon Signed Rank digunakan untuk mengkaji perbezaan antara amalan kepimpinan dan komitmen organisasi perunding jurutera berdasarkan jantina. Hasil kajian mendapati bahawa lima amalan kepimpinan mempunyai hubungan yang signifikan antara amalan kepimpinan dan komitmen organisasi perunding jurutera di tempat kerja mereka. Selain itu, hasil kajian juga menunjukkan bahawa terdapat perbezaan yang signifikan antara komitmen organisasi perunding jurutera berdasarkan jantina, umur dan tahun pengalaman bekerja. Hasil kajian yang dijalankan juga menyumbang kepada pengetahuan yang menyeluruh bahawa komitmen organisasi perunding jurutera adalah berkaitan secara positif kepada kemahiran kepimpinan kejurulatihan pihak atasan, memimpin dan membimbing perunding jurutera untuk mencapai matlamat yang sama.

Kata kunci: perunding kejuruteraan; amalan kepimpinan; komitmen organisasi

ABSTRACT

The objectives of this study are to examine the issues confronting consulting engineers. The issues are: (a) the relationship between perceived leadership practices and consulting engineer's organizational commitment in their working place and, (b) the differences of consulting engineers' organizational commitment based on gender, age and years of working experience. This study leverages on (a) Kouzes and Posner's five perceived leadership practices (1987), and (b) Mowday, Porter and Steers' organizational commitment (1979). This study was specifically addressed to 387 respondents who worked with consulting firms registered under the Association of Consulting Engineers, Malaysia (ACEM). The random sampling technique was used and a self-administered survey was performed for this research which included a set of questionnaires consisting of sections on personal information, leadership practices index (LPI) and organizational commitment (OCQ). The quantitative research method was used for data analysis. Firstly, it involved using the Spearman-rho correlation analysis to examine the relationship between the consulting engineers' perceived leadership practices and organizational commitment at their work place. Secondly, the Kruskal Wallis test was used to investigate the differences between the consulting engineers' organizational commitment based on age and years of experience. Thirdly, the Wilcoxon Signed Rank test was used to investigate the differences between the consulting engineers' organizational commitment based on gender. The findings revealed that the five perceived leadership practices have significant relationships between perceived leadership practices and the consulting engineers' organizational commitment at their work place. Another finding revealed that there is a significant difference between the consulting engineers' organizational commitment based on gender, and age, and years of working experience. The findings contribute to the knowledge that consulting engineers' organizational commitment is positively related to the engineering superior's leadership skills of coaching, leading and guiding consulting engineers to achieve the same goal.

Keywords: consulting engineering; perceived leadership practices; organizational commitment

ACKNOWLEDGEMENTS

Thanks to my supervisors, Dr. Fais Bin Ahmad and Dr. Jasmani Mohd. Yunuf. They always encourage me throughout the process of completing my DBA study.

I also give a special thanks to Assoc. Prof. Dr. Kwek C. L. for his SPSS guidance and dedication to my success.

Last and the most important, I acknowledge and gratitude to my family, including my mother Wong Ah Mooi, Brother Tan Ooi Choon, Sister In-Law Yew Ai Theng, nephew Tan Jing Yang and niece Tan Jing Suan. I love all of you. Nonetheless, my late father Tan Ming Thong and late brother Tan Ooi Keat. Although you are not here, you will always in my heart forever. I do believe you can see the success of me.

TABLE OF CONTENTS

TITLE PAGE			**Page**
CERTIFICATION OF THESIS WORK			
PERMISSION TO USE			iv
ABSTRAK			v
ABSTRACT			vi
ACKNOWLEDGMENT			vii
TABLE OF CONTENTS			viii
LIST OF TABLES			xii
LIST OF FIGURES			xvii
1.0	**CHAPTER ONE - INTRODUCTION**		
	1.1	Introduction	1
	1.2	Background of the Study	2
	1.3	Problems Statements	8
	1.4	Objectives of the Study	14
	1.5	Research Questions	15
	1.6	Significant of the Study	16
	1.7	Scope of Study	18
	1.8	Limitations of the Study	18
	1.9	Term Definitions	19
	1.10	Summary of Chapter 1	21
2.0	**CHAPTER TWO - LITERATURE REVIEW**		
	2.1	Introduction	22
	2.2	Engineering	23
		2.2.1 Perception of Engineers' Competencies	23
	2.3	Organizational Commitment	25
		2.3.1 Defining Organizational Commitment	27
		2.3.2 Historical Perspectives on Organizational Commitment	29
		2.3.3 Consequences of a Low Organizational Commitment	41

2.3.4 Demographic Variables Affect Organizational Commitment 42
2.4 Leadership 45
2.4.1 Defining Leadership 45
2.4.2 Leadership Styles 48
2.4.3 The Leadership Grid 62
2.5 Relationship between Leadership Practices and Organizational Commitment 66
2.6 Hypotheses of Leadership Practices and Organizational Commitments 70
2.7 Summary of Chapter 2 76

3.0 CHAPTER THREE - METHODOLOGY

3.1 Introduction 77
3.2 Theoretical Framework 77
3.3 Hypotheses 79
3.4 Research Design 80
3.5 Population and Sampling 81
3.5.1 Population 81
3.5.2 Sampling 82
3.6 Quantitative Methods 83
3.6.1 Research Instrumentation 83
3.6.2 Pilot Study 87
3.6.3 Data Analysis 88
3.6.4 Reliability Test 91
3.6.5 Validity Test 92
3.6.6 Data Processing Analysis 93
3.6.6.1 Normality Test Assumption 93
3.6.6.2 Multicolinearity 94
3.6.6.3 Descriptive Statistics 95
3.6.6.4 Inferential Statistics 95
3.7 Data Collection Method 97
3.7.1 Data Collection Procedures 97

3.8 Summary of Chapter 3 99

4.0 CHAPTER FOUR - RESULTS AND DATA ANALYSIS

4.1 Introduction 100
4.2 Statistical Assumption 102
4.2.1 Normality Statistical Assumption 102
4.2.2 Linearity Statistical Assumption 103
4.2.3 Test of Multicolinearity 104
4.3 Descriptive Statistics 105
4.3.1 Frequency Distributions for Demographic Variables 105
4.3.2 Frequency Distributions for Dependent Variables & Independent Variables 110
4.3.2.1 Frequency Distribution for LPI 110
4.3.2.2 Frequency Distribution for OCQ 130
4.4 Scale Measurement 139
4.4.1 Reliability Test for LPI 139
4.4.1.1 Reliability Statistics – Modelling the Way 140
4.4.1.2 Reliability Statistics – Inspiring a Shared Vision 141
4.4.1.3 Reliability Statistics – Challenging the Process 142
4.4.1.4 Reliability Statistics – Enabling Other to Act 143
4.4.1.5 Reliability Statistics – Encouraging the Heart 144
4.4.2 Reliability Test for OCQ 145
4.4.3 Validity Test 150
4.5 Inferential Analysis 153
4.5.1 Spearman-Rho Correlation Analysis 155
4.5.2 Test of Difference 160
4.5.2.1 Test of Significance for Difference 160
4.6 Summary of Chapter 4 165

5.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction 167
5.2 Study Participation, Data Collection and Research Questions 168
5.3 Interpretations of Hypotheses Findings 170

5.4 The Contributions of Research 174
5.5 Implications of the Study 177
5.6 Research Result Limitations 180
5.7 Recommendations for Future Research 181
5.8 Summary of Chapter 5 182

REFERENCES

APPENDICES

LIST OF TABLES

Table		Page
Table 2.1	– Organizational commitment research	39
Table 2.2	– The differences between transactional and transformational leadership	61
Table 3.1	– Research design components	81
Table 3.2	– Variables and item numbers in LPI	84
Table 3.3	– Likert scale use in LPI	85
Table 3.4	– Phrases in OCQ	86
Table 3.5	– Likert Scale Use in OCQ	86
Table 3.6	– Pilot test reliability statistics for LPI	88
Table 3.7	– Pilot test reliability statistics for OCQ	88
Table 4.1	– Survey response summary	102
Table 4.2	– Test of normality	103
Table 4.3	– Multicolinearity analysis	105
Table 4.4	– Frequency distribution for gender	106
Table 4.5	– Consulting engineers organizational commitment statistics for gender	106
Table 4.6	– Frequency distribution for age	107
Table 4.7	– Frequency distribution for years of working experience	109
Table 4.8	– Sets a personal example of what he/she expects of others (m1)	110
Table 4.9	– Spends time and energy making certain that the people he/she works with adhere to principles and standards that we have agreed on (m2)	111
Table 4.10	– Follows through on promises and commitments he/she makes (m3)	111

Table 4.11 – Asks for feedback on how his/her actions affect other people's performance (m4) 112

Table 4.12 – Builds consensus around a common set of values for running our organization (m5) 113

Table 4.13 – Is clear about his/her philosophy of leadership (m6) 113

Table 4.14 – Talks about future trends that will influence how our work gets done (i1) 114

Table 4.15 – Describes a compelling image of what our future could be like (i2) 115

Table 4.16 – Appeals to others to share an exciting dream of the future (i3) 115

Table 4.17 – Shows others how their long-term interests can be realized by enlisting in a common vision (i4) 116

Table 4.18 – Paints the "Big Picture" of what we aspire to accomplish (i5) 117

Table 4.19 – Speaks with genuine conviction about the higher meaning and purpose of our work (i6) 117

Table 4.20 – Seeks out challenging opportunities that test his/her own skills and abilities (c1) 118

Table 4.21 – Challenges people to try out new and innovative ways to do their work (c2) 119

Table 4.22 – Searches outside the formal boundaries of his/her organization for innovative ways to improve what we do (c3) 119

Table 4.23 – Asks "What can we learn?" when things don't go as expected (c4) 120

Table 4.24 – Makes certain that we set achievable goals, make concrete plans, and establish measurable milestones for the projects and programs that we work on (c5) 121

Table 4.25 – Experiments and takes risks, even when there is a chance of failure (c6) 121

Table 4.26 – Develops cooperative relationships among the people he/she works with (e1) 122

Table 4.27 – Actively listens to diverse points of view (e2) 123

Table 4.28 – Treats others with dignity and respect (e3) 123

Table 4.29 – Supports the decisions that people make on their own (e4) 124

Table 4.30 – Gives people a great deal of freedom and choice in deciding how to do their work (e5) 125

Table 4.31 – Ensures that people grow in their jobs by learning new skills and developing themselves (e6) 125

Table 4.32 – Praises people for a job well done (enc1) 126

Table 4.33 – Makes it a point to let people know about his/her confidence in their abilities (enc2) 127

Table 4.34 – Makes sure that people are creatively rewarded for their contributions to the success of projects (enc3) 127

Table 4.35 – Publicly recognizes people who exemplify commitment to shared values (enc4) 128

Table 4.36 – Finds ways to celebrate accomplishments (enc5) 129

Table 4.37 – Gives the members of the team lots of appreciation and support for their contributions (enc6) 129

Table 4.38 – I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful (oc1) 130

Table 4.39 – I talk up this organization to my friends as a great organization to work for (oc2) 131

Table 4.40 – I feel very loyalty to this organization (oc3) 131

Table 4.41 – I would accept almost any type of job assignment in order to keep working for this organization (oc4) 132

Table 4.42 – I find that my values and the organization's values are very similar (oc5) 133

Table 4.43 – I am proud to tell others that I am part of this organization (oc6) 133

Table 4.44 – I could just as well be working for a different organization as long as the type of work were similar (oc7) 134

Table 4.45 – This organization really inspires the very best in me in the way of job performance (oc8) 135

Table 4.46 – It would take very little change in my present circumstances to cause me to leave this organization (oc9) 135

Table 4.47 – I am extremely glad that I chose this organization to work for over others I was considering at the time I joined (oc10) 136

Table 4.48 – There's much to be gained by sticking with this organization indefinitely (oc11) 137

Table 4.49 – Often, I agree with this organization's policies on important matters relating to its employees (oc12) 137

Table 4.50 – I really care about the fate of this organization (oc13) 138

Table 4.51 – Reliability statistics – Modelling the way 140

Table 4.52 – Item-total statistics – Modelling the way 140

Table 4.53 – Reliability statistics – Inspiring a shared vision 141

Table 4.54 – Item-total statistics – Inspiring a shared vision 141

Table 4.55 – Reliability statistics – Challenging the process 142

Table 4.56 – Item-total statistics – Challenging the process 142

Table 4.57 – Reliability statistics – Enabling others to act 143

Table 4.58 – Item-total statistics – Enabling others to act 143

Table 4.59 – Reliability statistics – Encouraging the heart 144

Table 4.60 – Item-total statistics – Encouraging the heart 144

Table 4.61 – Original reliability statistics – OCQ 145

Table 4.62 – Original item-total statistics – OCQ 146

Table 4.63 – Adjusted reliability statistics – OCQ to 14 items 147

Table 4.64 – Adjusted Item-total statistics – OCQ to 14 items 147

Table 4.65 – Adjusted reliability statistics – OCQ to 13 items 148

Table 4.66 – Adjusted item-total statistics – OCQ to 13 items 149

Table 4.67 – KMO and Bartlett’s test 150

Table 4.68 – Factor analysis - rotated component matrix 151

Table 4.69 – Various adopted statistical techniques in this research 154

Table 4.70 – Spearman-rho correlation analysis 156

Table 4.71 – Gender Wilcoxon signed rank 161

Table 4.72 – Gender and consulting engineer's organizational commitment - Wilcoxon signed rank 161

Table 4.73 – Age ranks 162

Table 4.74 – Age and consulting engineer's organizational commitment – Kruskal wallis 162

Table 4.75 – Years of working experience ranks 164

Table 4.76 – Years of working experience and consulting engineer's organizational commitment – Kruskal wallis 164

Table 4.77 – Summary of the results of hypotheses testing 166

Table 5.1 – Research gaps, research problems, research questions and contributions for this research 176

LIST OF FIGURES

Figure		Page
Figure 1.1	– Registered job seekers in Malaysia	10
Figure 1.2	– Registered job seekers in Malaysia based on vacancies by industry	11
Figure 2.1	– The managerial grid	63
Figure 3.1	– Theoretical framework model	78
Figure 4.1	– Normal P-P plot for OCQ	104
Figure 4.2	– Frequency distribution for age	108
Figure 4.3	– Frequency distribution for years of working experience	109

LIST OF APPENDICES

a. Appendix A – Request Permission to Obtain Survey Data Letter

b. Appendix B – Informed Consent Form

c. Appendix C – Welcome Communiqué

d. Appendix D – Personal Information Questionnaire

e. Appendix E – Leadership Practices Index (LPI) Observer Questionnaire

f. Appendix F – Organizational Commitment Questionnaire (OCQ)

g. Appendix G – List of ACEM Panel Member Firms and Their Specialization

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Engineering is the discipline, art and profession of acquiring and applying technical, scientific and mathematical knowledge to design and implement materials, structures, machines, devices, systems, and processes that safely realize a desired objective or inventions. It is the creation, maintenance, and development of things that have not existed in the natural world and that satisfy some human desire or need. It is also the creation of human ingenuity that first fulfilled a fantasy of a human need and then went on to change the very society that created it (Vest, 2013).

In recent years, construction engineering industry is growing rapidly in Malaysia. Malaysia's Vision 2020 is stimulating and the demand for engineers who are well prepared to provide innovative solutions in important areas becomes a new challenge. The engineering consulting industry has to make tremendous changes in its strategic direction (Nor, Rajab, & Ismail, 2010). The changes include moving from a worker-intensive industrial society into an automated information society that emphasizes on the importance of technology advantages and knowledge capital by an organization (Muthuveloo & Raduan, 2007).

Unlike other industries, this group of personnel – Engineers, enjoys a secured job and many perceived them as unable to adapt into the new working culture. This leads them to feel dissatisfied with their current organization (Yousaf, Riaz, Ahmad,

The contents of the thesis is for internal user only

REFERENCES

Abramson, N. R. (2007). The leadership archetype: A jungian analysis of similarities between modern leadership theory and the Abraham myth in the Judaic Christian tradition. *Journal of Business Ethics*, *72*, 115-129.

ACEM Directory. 30th ed. (2011). *Association of Consulting Engineers Malaysia*.

Ali, N., & Baloch, Q. B., (2009). Predictors of organizational commitment and turnover intention of medical representatives: An empirical evidence of Pakistani companies. *Journal of Managerial Sciences, 3* (2).

Amadei, B. and Wallace, W.A. (2009). Engineering for Humanitarian Development: A Socio-Technical Approach. *IEEE Technology and Society Magazine*.

Andrew, K., & Nada, K. (1999). *The essence of leadership*. International Thomson Business Press, 467.

Atmojo, M. (2012). The influence of transformational leadership on job satisfaction, organizational commitment, and employee performance. *International Research Journal of Business Studies, 5* (2).

Aucoin, B. M. (2002). *From engineer to manager: Mastering the transition.* Norwood. Artech House.

Backus, E. C. (2008). Field force and facility engineer training. *Washington, 38* (2), 40.

Bagdadli, S., Roberson, Q., & Paoletti, F. (2006). The mediating role of procedural justice in responses to promotion decisions. *Journal of Business and Psychology, 21*, 83-102.

Bakhshi, A., Sharma, A. D., & Kumar, K. (2011). Organizational Commitment as predictor of Organizational Citizenship Behavior. *European Journal of Business and Management, 3* (4).

Bales, R. F. & Cohen, S. P. (1979). *SYMLOG: A system for the multiple observation of groups.* New York: Free Press.

Bales, R. F. & Isenberg, D. (1980). *SYMLOG and leadership theory.* Carbondale, IL: Southern Illinois University Press.

Bass, B. M. (1973). *Stogdill's handbook of leadership.* New York: The free press. Central library.

Bass, B. M. (1985). *Leadership and performance beyond expectation.* New York: Free Press.

Bass, B. M. (1990). From transformational to transactional leadership: learning to share the vision. *Organizational Dynamics, 18,* 19-31.

Bass, B. M. & Avolio, B. J. (1990). The implications of transactional and transformational leadership for individual, team, and organizational development. *Research in Organizational Change and Development, 4*, 231-272.

Baugh, J. M., Davis, G. A., Covacs, P. J., Scarpino, J., & David, W. (2009). Employers and educators want information systems graduates to be able to communicate. *Issues in Information Systems. 10* (1).

Becker, H.S. (1960). Notes on the concept of commitment. *American Journal of Sociology, 66,* 32-42.

Beckman, M. J. (2003). Dispositional antecedents to post-acquisition employee commitment. *Dissertation Abstracts International, 64* (2).

Bennis, W., & Nanus, B. (1985). *Leaders: The strategies for taking charge*. New York. Harper & Row.

Bernard, L. L. (1926). *An introduction to social psychology*, New York: Holt.

Bert, W. (2010). The effect of rating scale format on response styles: The number of response categories and response category labels. *International Journal of Research in Marketing, 27* (3), 236-247.

Blake, R. R., & McCanse, A. A. (1991). *Leadership dilemmas-grid solutions*. Houston, TX: Gulf.

Blake, R. R., & Mouton, J. S. (1978). *The new managerial grid*. Houston, TX: Gulf.

Board of Engineers Malaysia (2012). Registered members. Retrieved from http://www.bem.org.my/v3/index.html.

Boerner, S., & Von Streit, C. F. (2005). Transformational leadership and group climate empirical results for symphony orchestras. *Journal of Leadership & Organizational Studies, 12* (2), 31-41.

Brassi, L., & McMurrer, D. (2007). Maximizing your return on people. *Harvard Business Review*, *85* (3), 115-123.

Bridges, S., & Harrison, J. K. (2003). Employee perceptions of stackholder focus and commitment to the organization. *Journal of Managerial*, *15* (4), 498-509.

Brown, B. B. (2003). *Employees' organizational commitment and their perception of supervisors' relations-oriented and task-oriented leadership behaviors.* Ph.D. Dissertation, Virginia Polytechnic Institute and State University.

Brown, J. D. (2011). Likert items and scales of measurement? SHIKEN: JALT. *Testing & Evaluation SIG Newsletter*. *15* (1) 10-14.

Buchanan, B. (1974). Building organizational commitment: The socialization of managers in work organizations. *Administrative Science Quarterly*. *19,* 533-546.

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Carless, S. A. (2001). Assessing the discriminant validity of the leadership practices inventory. *Journal of Occupational and Organizational Psychology*, *74,* 233 –239.

Chang, J. Y., & Choi, J. N. (2007). The dynamic relationship between organizational and professional commitment of highly educated research and development professionals. *Journal of Social Psychology*, *147*, 299-316.

Chen, Y. H. (2007). *Pricipals' distributed leadership behaviors and their impact on student achievement in selected elementary schools in Texas*. Ph. D. Dissertation. Texas A&M University.

Choong, Y. O., Wong, K. L., & Lau, T. C. (2011). Psychological empowerment and organizational commitment in the Malaysia private higher institutions: A review and research agenda. *Academic Research International, 1* (3), November 2011.

Coakes, S. J., & Steed, L. (2007). *SPSS version 14.0 for windows: Analysis without anguish*. John Wiley & Sons Australia, Ltd. Pg. 118.

Cohen, A. (2007). Dynamic between occupational and organizational commitment in the context of flexible labor markets: A review of the literature and suggestion for a future research agenda. *Bremen: Institute technology and education*, Universitat Bremen.

Cook, A. (2010). *The Experience of Work: A compendium and review of 249 measures and their use*. London: Academic Press Inc.

Cooper, D. R., & Schindler, P. S. (2010). *Business research methods (10th ed.).* Boston: McGraw-Hill Irwin.

Craig, E., Thomas, R. J., Hou, C., & Mathur, S. (2011). No shortage of talent: How the global market is producing the STEM skills needed for growth. Research Report. Institute of High Performance, Accenture.

Dadgar, H., Barahouei, F., Mohammadi, M., Ebrahimi, M., & Ganjali, A. (2013). The relationship between organizational culture, job satisfaction, organizational commitment and intention to stay of health personnel's of Zahedan University of medical sciences. *World Applied Sciences Journal, 21* (8), 1220-1228.

De Veaux, R.D., Velleman, P.F. and Bock, D.E. (2005). *Management research: an introduction, 2nd ed*, California: SAGE publications.

Dravid, R. & Duncan, A. (2010). Engineering soft skills development to avoid hard knocks. 2011 IEEE Global Engineering Education Conference (EDUCON) – Learning Environments and Ecosystems in Engineering Education, 354-357.

Eker, M. (2008). The effects of demographic characteristics on organizational commitment and job satisfaction: An empirical study on Turkish health care staff. *The Journal of Industrial Relations and Human Resources, 10* (2).

Epstein, W. G. (2005). *A study of transformational and transactional leadership and the effect on project manager turnover intentions*. D. Ed, Graduate School of Education and Psychology, Pepperdine University.

Eslami, J., & Gharakhani, D. (2012). Organizational commitment and job satisfaction. *ARPN Journal of Science and Technology, 2* (2).

Evans, M. G. (1970). The effects of supervisory behavior on the path-goal relationship. *Organizational Behavior and Human Performance, 5*, 277-298.

Fah, C. Y. (2010). An exploratory study on turnover intention among private sector employees . *International Journal of Business and Management, 5* (8).

Fiedler, K.D., Grover, V., & Teng, T. C. (1996). An empirically derived taxonomy of information technology structure and its relationship to organizational structure. *Journal of Management Information Systems, 13* (1), 9-34.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics. 4th ed*. London, SAGE Publications.

Fox, E. M. (1968). Mary Parker Follett: The enduring contribution. *Public Administration Review, 28*, 520-529.

Frankel, E. G. (1993). *In pursuit of technological excellent: Engineering leadership, technological change, and economic development.* Westport, CT: Praeger.

Fuller, J. B., Barnett, T. Hester, K., Frey, L., & Relyea, C. (2009). Perceived organizational support and perceived external prestige: Predicting organizational attachment for university faculty, staff, and administrators. *Journal of Social Psychology, 146*, 327-347.

Galloway, P. D. (2007). The 21st century engineer: A proposal for engineering education reform. Civil Engineering, Nov 2007 Article.

Gautam, T., Van Dick, R., Wagner, U., Upadhyay, N., & Davis, A. J. (2005). Organizational citizenship behavior and organizational commitment in Nepal. *Asian Journal of Social Psychology, 8,* 305-314.

Gibb, C.A. (1954) 'Leadership', in G. Lindzey (ed.) *Handbook of Social Psychology*. *2*, 877–917. Reading, MA: Addison-Wesley.

Gilder, D. D. (2003). Commitment, trust and work behaviour: The case of contingent workers. *Personnel Review, 32* (5), 588 - 604

Goh, S., Coaker, W., & Thorpe, D. (2008). How engineers become CEOs:

Implications for education and training. *Journal of Achievements in Materials and Manufacturing Engineering, 31* (2).

Gordon, B. M. (2011). MIT Engineering Leadership Program Capabilities of Effective Engineering Leaders. Retrieved from http://web.mit.edu/gordonelp/leadershipcapabilities.pdf.

Grafton, K. S. (2009). *Presidential transformational leadership practices: Analysis of self-perception and observers at community colleges in Oklahoma.* Ph. D Dissertation. University of Phoenix.

Grand challenge for engineering (2008). Retrived from http://www.baylor.edu/content/services/document.php/189701.pdf.

Grusky, O. (1966). Career mobility and organizational commitment. *Administrative Science Quarterly, 10*, 468-473.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2008). *Multivariate data analysis. 6th ed*. Pearson Education International.

Hawking, R. R., & Pendleton, O. J. (1983). The regression dilemma, *Commun. Stat.-Theo, Meth, 12*, 497-527.

Hee, C. H., & Ling, Y. Y. (2011). Strategies for reducing employee turnover and increasing retention rates of quantity surveyors. *Construction Management and Economics, 29* (10), 1059-1072.

Hersey, P., & Blanchard, K. (1982). *Management of organizational behavior: Utilizing human resources.* 4th ed. Englewood Cliffs, NJ: Prentice Hall.

Hibert, M., & Klatt, B. (2001). *The Encyclopedia of Leadership: A practical guide to popular leadership theories and techniques.* New York: McGraw-Hill.

Hoffman, B. J., Bynum, B. H., Piccolo, R. F., & Sutton, A. W. (2011). Person-organization value congruence: How transformational leaders influence work group effectiveness. *Academy of Management Journal, 54* (4), 779-796.

Hogan, D. B. (2005) *"Leadership: Toward an integration of classical and current theories."* SYMLOG research and applications. University Press of America, Inc.

Hollander, E. P. (1979). The impact of Ralph M. Stogdill and the Ohio State leadership studies on a transactional approach to leadership. *Journal of Management, 5*, 157- 165.

Horner, M. (1997). *Leadership theory: past, present and future*. *3* (4), 270-287.

Hossein K., Gholamreza J., & Sameraeh S. (2010). Organizational consideration between spirituality and professional commitment. *European Journal of Social Sciences*, *12* (4).

House, R. J. (1971). A path-goal theory of leader effectiveness." *Administrative Science Quarterly*, *16*, 321-338.

House, R. J., and Dessler, G. (1974). *The Path-Goal theory of leadership: Some post hoc and a priori tests.* Carbondale, Ill.: Southern Illinois University Press.

House, R. J., & Mitchell, T. R. (1974). Path-goal theory of leadership. *Journal of Contemporary Business, 3* (3), 81-98.

Hrebiniak, L. G., & Alluto, J. A. (1972). Personal and role-related factors in the development of organizational commitment. *Administrative Science Quarterly*, *17*, 555-573.

Hsiu, P. Y. (2013). Engineering students' perceptions of and reflections on portfolio practice in leadership development. *International Journal of Engineering Education, 29* (1), 99-106.

Huang, T. C., Lawler, J., & Lee, C. Y. (2007). The effects of quality of work life on commitment and turnover intention. *Social Behavior and Personality, 35*, 735-750.

Hutcheson, G., & Sofroniou, N. (1999). The multivariate social scientist. *London: Sage.*

Ivana S., (1998) "Transformational Leadership – The key to successful management of transformational organizational changes", *The Scientific Journal FACTA UNIVERSITATIS, 1* (6), 49-55.

Isaac, S., & Michael, W. B. (1997). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences. 3rd ed*. San Diego, CA: EdITS.

Jens R. & Wolff S. (2009). Transformational and transactional leadership and followers. Chronic Stress," Kravis Leadership Institute, *Leadership Review*, *9*, 35-48.

Jeremy T. Fox. (2010). Estimating the employer switching costs and wager: Responses of forward-looking engineers. *Chicago*: *28* (2), 357.

Johari, M. M., Abdullah, Osman, M. R., Sapuan, M. S., Mariun, N., Jaafar, M. S., Ghazali, A. H., Omar, H., and Rosnah, M. Y. (2002). A new engineering education model for Malaysia. International. *Journal of Engineering Education, 18* (1), 8-16.

John, M. Ivancevich & James, H. D. (1975). Relation of organizational structure to job satisfaction, anxiety-ptress, and Performance. Johnson Graduate School of Management, Cornell University. *Administrative Science Quarterly*, *20* (2), 272-280.

Jones, H. B. (1999). Principled – centered leadership: Empirical fact or wishful thinking? *Journal of Social Behavior & Personality, 14* (3), 367-383.

Judge, T. A., and Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology, 89* (5), 755-768.

Kaiser, H. F. (1970). A second-generation little jiffy. Psychometrika, 35, 556-574.

Kanchana, P.N & Panchanatham,N (2012). The Influence of Demographic Factors on Organizational Commitment. *International Journal of Exclusive Management Research, 2* (5), 1-13.

Kang, D. S., Stewart, J., & Kim, H. Y. (2011). The effects of perceived external prestige, ethical organizational climate, and leader-member exchange (LMX) quality on employees' commitments and their subsequent attitudes. *Personnel Review, 40* (6), 761-784.

Kanter, R. M. (1968). Commitment and social organization: A study of commitment mechanisms in utopian communities. *American Sociological Review, 33,* 499-517.

Karl W. K., & Philip L. (1987). Transactional and transformational leadership: A constructive / developmental analysis. *Academy of Management Review, 12* (4), 648-657.

Kerr, S. & Jermier, J.M. (1978). Substitutes for leadership: Their meaning and measurement. *Organizational Behavior and Human Performance, 22,* 375-403.

Khan, M. R., Ziauddin, Jam, F. A., & Ramay, M. I. (2010). The impact of organizatinal commitment on employee job performance. *European Journal of Social Sciences, 15* (3).

Kirkpatrick, S. A., & Locke, E. A. (1991). Leadership: Do traits matter? *The Executive, 5,* 48-60.

Kishimoto & McGuire (2010). *Engineering leadership review*. *1* (1).

Kumari, G., Bahuguna, V., & Pandey, K. M. (2012). Studies on Some Aspects of Job Satisfaction in Engineers India Limited. *Global Journal of Management and Business Research,* 12 (7), 66-74.

Kouzes, J. M., & Posner, B. Z. (1987). *The Leadership Challenge: How to get extraordinary things done in organizations.* 1st ed. San Francisco: Jossey-Bass.

Kouzes, J. M., & Posner, B. Z. (2003a). *The leadership practices inventory – Leadership development planner*. 3rd ed. San Francisco: Pfeiffer.

Kouzes, J. M., & Posner, B. Z. (2003b). *The leadership challenge workbook.* 3rd ed. San Francisco: Jossey-Bass.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational & Psychological Measurement, 30,* 607-610.

Kuhnert, K. W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive / developmental analysis. *Academy of Management Review, 12* (4), 648-657.

Landry, G. & Vandenberghe, C. (2012). Relational commitments in employee–supervisor dyads and employee job performance. *The Leadership Quarterly, 23,* 293-308.

Leroy A. S. (2005). *A Comparison of Ohio University's College student personnel classes using Kouzes and Posner's leadership practices inventory*. Ph. D Thesis, The College of Education of Ohio University.

Lee, J. (2005). Effects of leadership and leader-member exchange on commitment. *Leadership & Organization Development Journal, 26* (8), 655-672.

Lew, T. Y. (2009). The relationships between perceived organizational support, felt obligation, affective organizational commitment and turnover intention of academics working with private higher educational institutions in Malaysia. *European Journal of Social Sciences, 9* (1), 72-87.

Lingard, H. (2002). The impact of individual and job characteristics on "burnout" among civil engineers in Australia and the implications for employee turnover. *Construction Management and Economics, 21*, 69-80.

Lo, M. C., Ramayah, T., & Min, H. W. (2009). Leadership styles and organizational commitment: a test on Malaysia manufacturing industry. *African Journal of Marketing Management, 1* (6), 133-139.

Loke, J. C. F. (2001). Leadership behaviors: Effect on job satisfaction, productivity and organizational commitment. *Journal of Nursing Management, 9,* 191-204.

Malhorta, N., Hall, J., Shaw, M., & Oppenheim, P. (2009). *Marketing Research: An applied orientation*. 3rd ed. New South Wales: Prentice Hall.

Malik, M. E., Danish, R. Q., & Munir, Y. (2011). Employee's turnover intentions: Is this HR failure or employee's better employment opportunity? *International Conference on Innovation, Management and Service*, IPEDR, 14, IACSIT Press, Singapore.

Mann, R. D. (1959). A review of the relationship between personality and performance in small groups. *Psychological Bulletin, 56*, 241-270.

Martin, R., Maytham, B., Case, J., & Fraser, D. (2010). Engineering graduates' perceptions of how well they were prepared for work in industry. *European Journal of Engineering Education, 30* (2), 167–180.

Mathieu, J. & Zajec E. (1990). A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment. *Psychology bulletin, 108,* 171-194.

McGuire, J. B., Palus, C. J., Pasmore, W., & Rhodes, G. B. (2009). Transforming your organization: Global organizational development white paper series. *Center for Creative Leadership.*

McNeese, Smith, & Donna (1996). "Increasing Employee Productivity, Job Satisfaction, and Organizational Commitment" *Hospital & Health Services Administration, 41* (2), 160-175.

Mehboob, M., Arif, I., & Jalal, M. (2011). Analysis of Effect of Supervisors' Behavior on Subordinates' Job Satisfaction. *Australian Journal of Basic and Applied Sciences, 5* (12), 2984-2993.

Meyer, J. P., & Allen, N. J. (1984). Testing the side-bet theory of organizational commitment: Some methodological considerations. *Journal of Applied Psychology, 69,* 372-378.

Meyer, J. P., & Allen, N. J. (1991). A three component conceptualization of organizational commitment. *Human Resource Management Review, 1,* 61-89.

Meyer. J. P., Bobocel D. R., & Allen N. J. (1991). Development of organization commitment during the first year of employment: A longitudinal study of pre-and post-entry influences. *Journal of Management, 17* (4), 717-733.

Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application.* Thousand Oaks, CA: Sage.

Meyer, J.P. and Herscovitch, L. (2001). Commitment in the workplace-toward a general model. *Human Resource Management Review, 11* (3), 299-326.

Meyer, J. P., Stanley, D. J., Hersovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior, 61,* 20-52.

Ministry of Treasury, Malaysia (2012). Economic Planning Unit and Ministry of Human Resources, Malaysia. Retrieved from http://www.treasury.gov.my/pdf/economi/le/1112/jp6_2.pdf [Retrieved 14/8/ 2012].

Mohammed, F., Taylor, G. S., & Hassan, A. (2006). Affective commitment and intent to quit: The impact of work and non-work related issues. *Journal of Managerial, 18*, 512-519.

Mohamed, M. S., Abdul Kader, M. M., & Anisa, H. (2012). Relationship among organizational commitment, trust and job satisfaction: An empirical study in banking industry. *Research Journal of Management Sciences, 1* (2), 1-7.

Moretti. G., (2002). Engineers find surprises as they move into management. *EDN*, *47* (19), 67.

Mowday, R., Steers, R.M., & Porter, L. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior, 14*, 224-247.

Mowday, R. T., Steers, R. M., and Porter, L. W. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York: Academic Press.

Mowday, R. T., Steers, R. M., and Porter, L. W., & Boulian, P. V. (1984). Organizational commitment, jobsatisfaction, and urnover among psychiatric technicians. *Journal of Applied Psychology, 59* (5), 603-609.

Muthuveloo, R. & Raduan, C. R. (2007). Antecedents and Outcomes of Organizational Commitment Among Malaysian Engineers. *American Journal of Applied Sciences.*

Nadler, A., Ellis, S., & Rabin, A. (1996) *"Political leaders in the SYMLOG space: Perceptions of right- and left-wing leaders by right- and left-wing constituencies."* Westport CT: Praeger.

Nasurdin, A. M., & Ramayah, T. (2003). The link between satisfaction and commitment: is it different for old and young workers? *The National Human Resource Development Conference*, Kuching, Sarawak.

Northouse, P. G. (2004). *Leadership: Theory and practice.* 3rd ed. Thousand Oaks: CA : Sage.

Nor, N. M., Rajab, N., & Ismail, K. M. (2010). *Educating the engineer of 2020: Malaysia Scenario*. University Technology Malaysia, Unpublished.

Obiwuru, T. C., Okwu, A. T., Akpa, V. O., & Nwankwere, I. A. (2011). Effects of leadership of leadership style on organizational performance: A survey of selected small scale enterprises in Ikosi-Ketu Council development area of Lagos State, Nigeria. *Australian Journal of Business and Management Research*. *1* (7), 100-111.

Orsak, G. C. (2006). Engineers: The New Leadership Class – Rethinking and rejiggering the stereotypes. *Electronic Business, 32*, 26.

Porter, L. W., Steers, R.M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology, 59,* 603-609.

Prieto, B. (2009). The Engineering & Construction Industry Innovation Deficit: Is the E&C Industry Model Broken? Collaboratory for Research on Global Projects. Working Paper #50. Retrieved from http://crgp.stanford.edu/publications/working_papers/Prieto_Bob_engineeering_construction_industry_innovation_deficit_WP0050.pdf.

Purvanova, R. K. and Bono, J. E. (2009). Transformational leadership in context: Face-to-face and virtual teams. *The Leadership Quarterly, 20,* 343-357.

Ramanathan, C., Narayanan, S., and Idrus, A. (2012). Construction delays causing risks on time and cost: a critical review. *Australasian Journal of Construction Economics and Building*, 12 (1), 37-57.

Reichers, A. E. (1985). A review and re-conceptualization of organizational commitment. *Academy of Management Review, 10,* 465-476.

Rengpian, R. (2007). An investigation of perceived leadership practices, organizational commitment, and satisfaction with supervisors in Thai Stock Brokerage Firms. *RU International Journal, 1* (1).

Rhodes, S. R., & Steers, R. (1981). Conventional versus work-owned organizations. *Human Relations, 34,* 1013-1035.

Rost, J. C. (1993). Leadership for the twenty-first century. Westport, *CT: Praeger*. Retrieved from *http://www Books24x7.com/book/id_7399.*

Salami, S. O. (2008). Demographic and psychological factors predicting organizational commitment among industrial workers. Department of

Guidance and Counseling, University of Ibadan, Nigeria. *Anthropologist, 10* (1): 31-38.

Salleh, R., Nair, M. S., & Harun, H. (2012). Job satisfaction, organizational commitment, and turnover intention: A case study on employees of a retail company in Malaysia. *World Academy of Science, Engineering and Technology, 72*.

Sanjeevkumar, V. (2012). A study on employee's intention to stay in public companies, Kedah, Malaysia. *ZENITH International Journal of Business Economics &Management Research*. *2* (4).

Sang, K. J., Ison, S. G., Dainty, A. R. (2009). The job satisfaction of UK architects and relationships with work life balance and turnover intentions. *Engineering Construction & Architectural Management, 16* (3), 288-300.

Schresheim, Chester A., and Neider L. L. (1979). Contributions of the Ohio State studies to the field of leadership. *Journal of Management, 5*, 135-145.

Schriesheim, Chester A., and Neider L. L. (2006). Least Preferred Coworker Theory. *Encyclopedia of Industrial and Organizational Psychology*. Ed. Thousand Oaks, CA: SAGE, 451-53.

Sekaran, U. & Bougie, R. (2013). Research *methods for business: A skill building approach*. 4th ed. John Wiley & Sons, Inc.

Shapira, Z. and Griffith, T. L. (1990). Comparing the works values of engineers with managers, production, and clerical workers: A multivariate analysis. *Journal of orgaizational behavior, 11*, 281-292.

Sheldon, M. E. (1971). Investments and involvement as mechanisms producing commitment to the organization. *Administrative Science Quarterly, 16*, 143-150.

Shiva, P. (2011). Engineering student's perception of professor role as a leader: An empirical study. *Proceedings of the World Congress on Engineering 2011*, *1*, ISBN: 978-988-18210-6-5.

Sial, M. A., Jilani, S. M. A., Imran, R., & Zaheer, A. (2011). Effect of human resource practices on organizational commitment in pakistani universities. *World Applied Sciences Journal, 15* (6), 793 - 798.

Sims, H. P., Faraj, S., & Yun, S. W. (2009). When should a leader be directive or empowering? How to develop your own situational theory of leadership. *Business Horizons*, *52*, 149-158.

Sinclair, R. R., Tucker, J. S., Cullen, J. C., & Wright, C. (2005). Performance differences among four organizational commitment profiles. *Journal of Applied Psychology, 90,* 1280-1287.

Steer, R. M. (1977). Antecedents and outcome of organizational commitment. *Administrative Science Quarterly, 22*, 46-56.

Stepanov, R., Yeoh, K., & Hart, D. (2007). *Historical Development of Leadership Theory.* Unpublished manuscript, Newcastle Business School, University of Newcastle, Newcastle, Australia.

Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. *Journal of Psychology, 25*, 35-71.

Stogdill, R. M. (1974). *Handbook of leadership: A survey of theory and research.* New York: Free Press.

Stonestreet, S. P. (2002). Perceived leadership practices and organizational commitment in the North American automobile industry. *Dissertation Abstracts International*, *62* (12), 4249.

Swailes, S. (2002). Organizational commitment: A critique of the construct and measures. *International Journal of Management Reviews, 4*, 155-178.

Tang, Y. T., & and Chang, C. H. (2010). Impact of role ambiguity and role conflict on employee creativity. *African Journal of Business Management, 4* (6), 869-881.

Timothy E. (2010). Knowledge management and organizational effectiveness: Considering applications for leadership. 2010 IABR & ITLC Conference Proceedings, Orlando, FL, USA.

Tolbize, A. (2008). Generational differences in the workplace. Research and Training Center on Community Living. University of Minnesota. Retrieved from http://rtc.umn.edu/docs/2_18_Gen_diff_workplace.pdf.

The Treasury of Malaysia: Labor force in Malaysia (2012). Retrieved from http://www.treasury.gov.mypdfeconomyer0809jp6_2.pdf.

Tumwesigye, G. (2010). The relationship between perceived organizational support and turnover intentions in a developing country: The mediating role of organizational commitment. *African Journal of Business Management, 4* (6), 942-952.

Vandeveer, R. C. (2009). *Gap Management: Balancing engineering education & leadership skills development.* Retrieved from http://www.vantechtraining.com/publications/ASEM%20Gap%20Management%20 Revised.doc.

Vangel, K. (2011). *Employee Responses to Job Dissatisfaction.* Schmidt Labor Research Center Seminar Series. University of Rhode Island. Retrieved from http://www.rhodeisland.edu/research/lrc/research/papers/Vangel-Commitment.pdf.

Veblen, T. (1917). *The engineers and the price system*. New York: Harcourt, Brace & World.

Vest, M. C. (2013). Educating engineers for 2020 and beyond. *National Academy of Engineering*. Retrieved from http://www.engineeringchallenges.org/cms/7126/7639.aspx?printThis=1.

Vroom, V. H., & Jago, A. G. (2007). The role of the situation in leadership. *American Psychologist*, *62,* 17-24.

Weng & McElroy (2012). Organizational career growth, affective occupational commitment and turnover intentions. *Journal of Vocational Behavior*, *80* (2012) 256-265.

Weiner, Y., & Gechman, A. G. (1979). Commitment: A behavioral approach to job involvement. *Journal of Vocational Behavior*, 10, 47-52.

Weingardt, R. G. (2003). Show up to lead. Ascent, Fall 1999 Guess Essay, 6-12.

Weissenberg, P., & Kavanagh, M. J. (1972). The independence of initiating structure and consideration: A review of the evidence. *Personnel Psychology*, *25*, 119-130.

William, M. N. (2009). *Leadership practices, organizational commitment, and turnover intention: A correlational study in a call center.* Ph. D thesis, University of Pheonix.

Woods, W. G. (2007). *The effect of leadership practices on organizational commitment: An analysis of MBA's graduate in their individual workplace settings.* Ph. D. Thesis, Capella University.

Wren, D. A. (2005). *The history of management thought.* 5th ed. Danvers, MA: Wiley.

Xu, Y. Q., Wang, D. D., & Liu, C. L. (2013). Factors Affecting Commitment and Satisfaction of Project Managers in the Construction Industry. *International Conference on Management Science & Engineering, (20),* 2072-2077.

Yahaya, N., Yahaya, A., Halimah Ma'alip, H., Shahrin Hashim, S., & Alwee, S. N. A. (2012). The Predictor of external environment, occupational stress, job satisfaction and intent to leave towards organizational commitment. *Archives Des Sciences*, *65*, (3).

Yousaf, I., Riaz, A. W., Ahmad, A., Ehsan, N., & Mirza E. (2011). *Study of Organizational Commitment in Public Sector Technical Organization.* Engineering Management Department, Centre for Advanced Studies in Engineering, Islamabad, Pakistan.

Yukl, G. (1998). *Leadership in organizations*. 4th ed. Englewood Cliffs, NJ: Prentice Hall.

Yukl, G. (2006). *Leadership in organizations*. 6th ed. Upper Saddle River, NJ: Pearson Prentice Hall.

Zaccaro, S. J. (2007). Trait-based perspectives of leadership. *American Psychologist*, *62*, 6-16.

Zeynep, T., Huckman, S. R. (2008). Managing the impact of employee turnover on performance: The role of process conformance. *Organization Science*, *19* (1), 56-68.

Zikmund, W. G. (2010). *Business research method*. 8th ed. Ohio: Thomson / South Western.

Zhu, W. C., Sosik, J. J., Riggio, R. E., & Yang, B. Y. (2012). Relationships between transformational and active transactional leadership and followers'

organizational identification: The role of psychological empowerment. Unpublished manuscript, *Institute of Behavioral and Applied Management*.