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# The Effects of Personality and Transformational Leadership on Expatriate Adjustment and Expatriate Performance

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#### ABSTRACT

An inability of person to adapt into new culture is the key cause of failure on foreign assignments. There should consider not only the psychological well-being matter when staying in a foreign country because the significant international assignment successful antecedent is the adjustment. Moreover, double burden has to be faced by expatriates as they expect to transfer knowledge as well as required to adjust with new culture. It is expected for them to teach and learn at the same time and this can be the extremely stress factor. Measuring the expatriates' job performance will offer the organization not only the immediate feedback on the possible assignment success or failure, but also to enhance the further training development and the methods selection in order to steer away from the future repetitive mistakes. There are so many aspects to incorporate for the understanding, measuring and nurturing on a possible competitive advantage where the crucial part is the criteria of measurement.

The researcher of this study thus interests on the variances of personality and transformational leadership on the expatriates employees' adaptation and performance in the International Schools Association of Thailand. This is to check on the significance of personality and transformational leadership as the studied variances on the expatriates employees performance. This study aims to investigate the effect of personality and transformational leadership on expatriate adjustment and expatriate performance. The researcher uses surveys as the method for data collection with 400 employees from 113 schools under International Schools Association of Thailand as the subjects. The confirmatory factor analysis and the structural equation modeling are applied for the analysis with the statistical significant level of 0.05. It is indicated from the finding that the extraversion, openness, and transformational leadership show the positive effects with the adjustment of expatriates. Extraversion, transformational leadership, and expatriate adjustment are presented with the positive effects to task performance

whereas there are the positive effects of openness, extraversion, and expatriate adjustment with the contextual performance.

This research could enhance the expatriate adjustment factors and management understanding in a company and other companies as well, and it is not only importance for the issue of human resource, but also is one for the competition in international market.

Keywords: Expatriate performance, expatriate adjustment, personality, transformational leadership.

## 1. INTRODUCTION

The expatriates study is not similar with the common or domestic employees since in particular expatriates are the crucial personnel to venture out for the international assignments and they normally face with the unique set of challenges unlike the domestic context prevalent. In this area, we must continue evolve in the research since the crucial and role of expatriates keep going with higher changes in globalization. The unique challenges are facing by the expatriates including the adjusting with new language, culture, people and environment. The problem of cultural adaptation may be experienced by the expatriates and it could have negative impact on their performance and lead to the unsuccessful international careers. It is found to increase their intention of turnover. Specifically, the cross-cultural environments adjustment issues among expatriates in jobs performance has gained more interests.

The common failure reasons of expatriate assignments are the "culture shock, isolation, differences of work-related norms, homesickness, and differences in language, customs, housing, schooling, food, cuisine, transportation, healthcare, gender roles, costs of living and new friends. More underlying organizational factors will influence on the success of assignment. In the criteria selection, training, organization supports, the typical factor and poor compensation packages are not sufficient. The experiencing of new problems by expatriate may come from the ongoing attempt to comprehend and speak the foreign language. At this stage, the normal symptoms are hostility and frustration towards the people in host nation. The adjustment stage is started when individual progressively adjusted to new norms and values of the host country and can appropriately act in the new culture. Finally, they go to the mastery stage as individual can effectively function to new culture.

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### 2. RESEARCH FRAMEWORK AND HYPOTHESIS

The research's conceptual framework is shown in figure The relationship between individual differences (e.g., needs or abilities) and the outcomes from both individual and organizational is contingent upon job or organizational characteristics as a whole (Kristof 1996). Thus, individual and contextual variables are considered in goodness-of-fit models at the same time then, the researcher sets for the following hypotheses:

H1: There is a positive effect of extraversion on task performance.

H2: There is a positive effect of extraversion on contextual performance.

H3: There is a positive effect of openness on task performance.

H4: There is a positive effect of openness on contextual performance.

H5: There is a positive effect of transformational leadership on task performance.

H6: There is a positive effect of transformational leadership on contextual performance.

H7: There is a positive effect of extraversion on expatriate adjustment.

H8: There is a positive effect of openness on expatriate adjustment.

H9: There is a positive effect of transformational leadership on expatriate adjustment.

H10: There is a positive effect of expatriate adjustment on task performance.

H11: There is a positive effect of expatriate adjustment on conceptual performance.

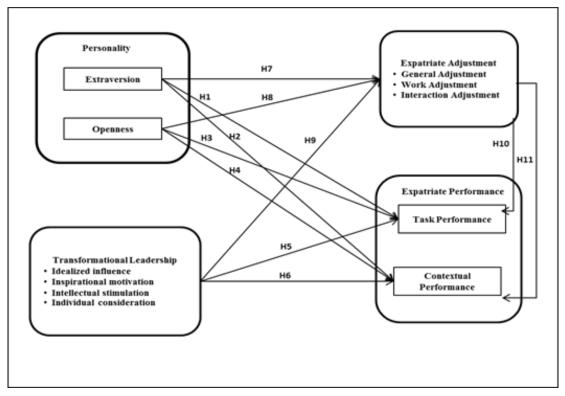


Figure 1: Conceptual framework

### **3. LITERATRUE REVIEW**

### **Expatriate Performance**

The expatriated' experiences and qualifies can lead to their failure in the overseas assignments. These failures surprisingly resulted from the cultural differences in overseas. It was simply proved from this finding that the good performance records expatriates in the domestic operations could not guarantee for their foreign operation success (Hays, 1972). Major of failures caused from the culture differences plus the new environment and the host country's language (Rehfuss, 1986). The current researches that begun to

explore on the performance of the expatriate and the degree they could meet with the expectations from their positions, contextual standards and job performance.

The concept of expatriate performance means the functions in direct knowledge, abilities, skills and role-prescribed behavioral motivation such as the formal job responsibilities (Campbell, 1999). Moreover, the behavior and actions solely related to the organization goals are considered as the job performance of individual (Campbell, McCloy, Oppler, & Sager, 1993). It is indicated from the theory of job performance about the multidimensional of job performance construct that consisted on task dimension (normally the production deadline driven that so called as "in-role" for sometimes and contextual dimension in which can be considered as discretionary and normally so called "extra role") (Borman & Motowidlo, 1993).

### **Expatriate Adjustment**

According to the literature, the conventional wisdom derived that the when the firms sought for the expatriates from the technical skills basis, it also depended on the ability to adjust on the performance (or considered from the more accuracy, keep up with the assignment on the time period as agreed). Traditionally, adjustment focusing as the major outcome of expatriates research interest seemed ongoing in the explosion on the topic of research during the late 1980s to 1990s and some continues the extent until recent.

The term "expatriate adjustment" referred to the psychological comfort of a person to several of work aspects for instance, their job responsibility and supervisory (Black, 1988; Black and Stephens, 1989). More or less, the expatriates had to adjust from their former assignment with the new work role. The work adjustment theoretical was emanated from Dawis and Lofquist (1984) and Nicholson (1984) in which suggested that the new role adjustment was fundamental for the upcoming in role outcomes.

Therefore, the three relevant expatriate adjustment facets were defined by Black and Stephens (1989) as work, general and interaction. Work adjustment meant the psychological comfort of expatriate regarding of their foreign assignment job tasks. General adjustment was the conditions of living in general and the foreign nation culture. Interaction adjustment was about the host-country nationals' interaction.

### Personality (Extraversion, Openness)

Traits' taxonomy was represented by "Big Five" where it was purposed by the personality psychologists to capture the essence of personality difference of individual. Though, with diverse characteristics of personalities, the factors found in "Big Five" offer the useful typology or taxonomy for their classification (Digman, 1990; Goldberg, 1992; Costa & McCrae, 1992; McCrae & John, 1992). The confirmation was made on these factors to be valid across cultures, time, and context; thus they are globally applicable with people in universal (Caligiuri, 2000b; Rust, 1999).

The five broad traits were delineated in five factor model; neuroticism, extraversion, agreeableness, openness and conscientiousness in order to experience on the most of personality differences encapsulate in individuals. Sometimes, these traits were designated as domains that originally derived from adjectives categorization that generally used for individuals explaining then verified and refined through the analyses on factors which is a statistical technique formed for the correlated dimensions se identifying.

Extraversion Six facets were identified by Costa and McCrae (1992) in response to each domain and trait for instance, the extraversion individuals are warm, positive, assertive, gregarious, and active, while

seeking for excitement. Openness to experience was the final trait that associates to the extent to which individuals were open to aesthetics, feelings, fantasies, and the values, ideas and novel actions (Costa & McCrae, 1992). Open individuals seemed to love in new things, diversity, intensity, and complex experiences (McCrae & Costa, 1996). On the contrary, closed individuals love to work on familiar tasks and routines as standardized (McCrae & Costa, 1996).

#### **Transformational Leadership**

In the few past decades, an increasingly famous perspective transformational leadership label had been suggested from Burns (1978) and Bass (1985) where Bass' (1985) suggested the extension theory from Burns' (1978) on the qualitative transactional classification versus transformational political leaders. Whereas they described the transactional leadership as the exchanges and bargaining series between leaders and followers, but transformational leadership had gone above the exchanging inducements on the desired performance through the intellectually stimulating, and inspiring followers developing to transcend the self-interest of their own for the higher collective goal. As noted in Bass and Avolio (1990) unfortunately most of experimental research focuses were on the transactional leadership while the world real movers and shakers interested on transformational"

The styles and leadership were seen as the act of individual influencing by the organization to make the eagerly efforts on such of goals, compete towards the group goals achievement, and talent search programs. Many reports from the past decades had published on this subject however; the focuses of most were on the business and administrative in industrial areas (Mohsen Hallajy, Hamid Janani & Zynalabedin Fallah, 2011). The intention and succeed in subordinates, followers, colleagues, clients or constituencies rising toward the greater awareness about the consequence from issues. This awareness heightening required for the vision, inner-strength, and self-confidence of the leader to successfully argue on good and correctness not for the popularly acceptable in establishing the wisdom of time.

#### 4. RESEARCH METHODOLOGY

#### Population and Sample

This study focuses on the expatriate employees where its target population is the expatriate teachers from 113 member schools of International Schools Association of Thailand. Group of schools are in the Central part provinces (86 schools) area, Northern part provinces (8 schools) area, Eastern part provinces (6 schools) area, and Southern part provinces (13 schools) area. It is difficult to find the exact total amount of the overall employees. The population size is estimated by the researcher via assuming that each school has 10 employees targeted to be surveyed. There are approximately 860 of school employees in the Central part provinces area, 80 school employees in the Northern part provinces area, 60 school employees from the Eastern part provinces area, and 130 school employees from the Southern part provinces area, respectively. This study population size is thus totally of 1,130 employees.

Since the 400 samples estimation from schools of International Schools Association of Thailand, the quota sampling is selected from the author as a sampling method and proportional quota is used to generate the number of availability school ratio. Then, the obtained ratio was applied for amount of employees computing from each school location. It is shown from the results that approximately of 305 samples were gathered from school employees in the Central part provinces area, 28 of school employees the Northern

part provinces area, 21 school employees from the Eastern part provinces area, and 46school employee samples from the Southern part provinces area, respectively.

### **Research Tools**

The tool for data collection is the questionnaire where it is constructed from the literature review. It is designed to meet with the research objective and comprises of five parts: personality, transformational leadership, perceived organizational support, expatriate adjustment and expatriate performance. Likert 5 scale is adopted by this research to quantify the attitude via the survey.

## Validity and Reliability

- *Content Validity Testing:* The questionnaire was formed via the content validity method. Mover, it has requested on the five academicians to examine then comment on the questionnaire items related to content validity during stage of questionnaire development. After each item's content revising according to the suggestions and comments, the questionnaire is ready to be distributed to seek for its reliability and Index of Item-Objective Congruency (IOC) calculation. The consensus index value is between 0.6-1.0. The assessment result is applied to improve and adjust for more accurate question. For construct validity, the tests are done via confirmatory factor analysis (CFA) including *p*-value, factor loading, average variance extracted (AVE), and discriminant validity.
- *Reliability Testing:* Reliability analysis allows the author to examine on the reliability properties of the measurement scales and the items providing information about the relationships between the scale individual items. It is recommended from Garver and Mentzer (1999) to compute the Cronbach's alpha coefficients for scale reliability determination. If the alpha value is more or equal to 0.70, it implies for sufficient reliability.

## 5. RESEARCH RESULT

### **Multicollinearity Test**

Based on the regression analysis, the study used Structural Equation Model in multicollinearity testing. It is indicated from Lauridsen and Mur (2006) that the multicollinearity is an intriguing and common data property where the multicollinearity results effect on the declining of estimated coefficient efficiency. The Tolerance and Variance Inflation Factor (VIF) measurement is applied in the testing with the Tolerance of more than 0.1 or VIF at less than 10 (VIF = 1/Tolerance) for the acceptance on none of multicollinearity problems (Hair, Balck, Babin, & Anderson, 2009).

Table 1   Collinearity Statistics				
	Collinearity statistics			
Variables	Tolerance	VIF		
Extraversion	0.321	2.455		
Openness	0.295	3.282		
Transformational leadership	0.233	4.256		
Expatriate adjustment	0.314	3.124		

*Note:* Dependent variable is expatriate performance

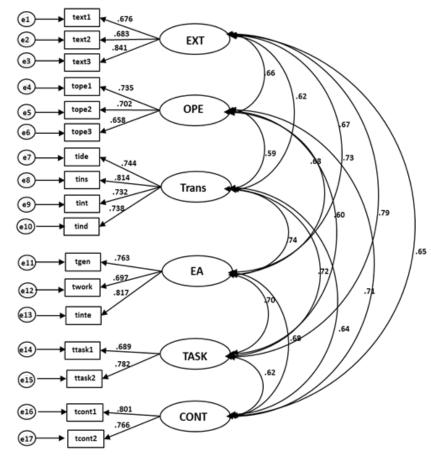
Table 2     Correlation Matrix of summary variables				
	Ext	Ope	TRANS	EA
Ext	1			
Ope	.523**	1		
TRANS	.512**	.627**	1	
EA	.441**	.635**	.638**	1

*Note: p* < 0.01

The author also observes on the correlation among independent variables where correlation that exceeded the value of 0.80 can be a problem indicative (Hair et. al., 1998). Table 2 presents the correlation of variables that is lesser than 0.80: thus, none of multicollinearity problems found.

#### **Construct Validity**

The construct validity is tested to verify the representative of indicators as the latent variable. The reflective model of CFA is used as the construct where the researcher observes on seven constructs: extraversion (Ext), openness (Ope), transformational leadership (Trans), expatriate adjustment (EA), task performance (Task), and contextual performance (Cont). The total variable testing result is shown in Figure 2.





			Factor Loading	S.E.	<i>C</i> .R.	P
text1	<	Ext	.676			
text2	<	Ext	.683	.044	13.763	***
text3	<	ext	.841	.036	13.530	***
tope1	<	ope	.735			
tope2	<	ope	.702	.043	24.242	***
tope3	<	ope	.658	.042	19.601	***
tide	<	trans	.744	.127	9.754	***
tins	<	trans	.814	.034	6.167	***
tint	<	trans	.732	.135	11.062	***
tind	<	trans	.738			
tgen	<	EA	.763			
twork	<	EA	.697	.076	16.420	***
ttint	<	EA	.817	.083	17.135	***
ttask1	<	Task	.689	.035	20.154	***
ttask2	<	Task	.782			
tcont1	<	Cont	.801			
tcont2	<	Cont	.766	.046	20.775	***

Table 3Regression weight: overall variable

Construct measurement model of overall variable has 17 items with six constructs. After the assessment, the CMINp is equal to. 031, the CMIN/df is equal to 3.242, the GFI is equal to. 933, and the RMSEA is equal to. 074. Each value of CFI (.965), TLI (.924), NFI (.919), and AGFI (.904) were acceptable since each of them is higher than. 90 as recommended. All of these indices confirmed on good model fit. Factor loadings according to Hair, Black, Babin, and Anderson (2010), in the range of 0.3 - 0.4 are considered to meet the minimal level of structural interpretation. All factor loadings that exceeded. 30 are significant.

### The Construct Model

After each proposed model has been evaluated to see whether it is the data-fit model, each then will be combined into the total model in order to apply for the seeking of answer for the hypothesis. To analyze the overall model, the structural equation modeling (SEM) is used where it has the ability to initially indicate the correlation between latent variables and secondly to present the correlation between the latent variables and secondly to present the correlation between the latent variables.

SEM consists of two personality dimensions model (extraversion and openness), transformational leadership, perceived organizational support, expatriate adjustment, and expatriate performance (task performance and contextual performance). The model is performed and presented in Figure 3.

SEM analysis on the proposal models and AMOS is also used by the researcher with the Maximum Likelihood estimation and Unbiased and display results based on standardized estimation mode. For the model analysis, CMIN/df, CMINp, GFI, AGFI, RMSEA, TLI, and NFI are among the indices to use here. After the study, the results of model fitting indices from CMINp is found to be equal to. 034, the CMIN/

df is equal to 2.615, the GFI is equal to. 938, and the RMSEA is equal to. 060. Each value is of CFI (.944), TLI (.929), NFI (.963), and AGFI (.907).

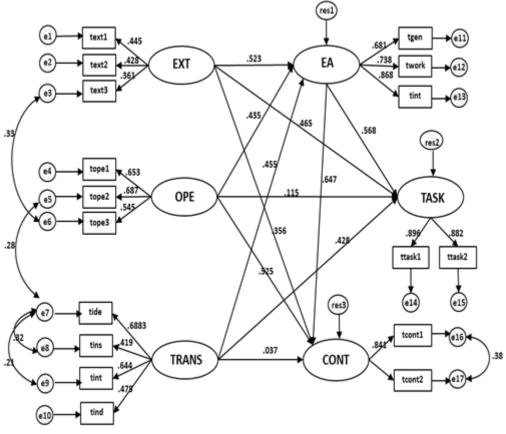


Figure 3: Structural Model of Expatriate performances

### **Hypothesis Testing**

		Hypothesis		Path coefficient	<i>C</i> .R.	Р
H1	TASK	<	EXT	.565	4.481	.018
H2	CONT	<	EXT	.356	2.461	.023
H3	TASK	<	0PE	.115	1.525	.310
H4	CONT	<	0PE	.525	6.135	.003
H5	TASK	<	TRANS	.428	3.068	.016
H6	CONT	<	TRANS	.097	0.601	.514
H7	EA	<	EXT	.523	2.958	.030
H8	EA	<	0PE	.435	10.557	***
H9	EA	<	TRANS	.455	6.777	.021
H10	TASK	<	EA	.568	9.794	***
H11	CONT	<	EA	.647	10.543	***

Table /

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Considering on Table 4, the hypothesis testing results are shown as follows:

**H1:** There is a positive relationship between extraversion and task performance. This hypothesis is supported by the standard regression weight of. 565 (p < 0.05).

**H2:** There is a positive relationship between extraversion and contextual performance. This hypothesis is supported by the standard regression weight of. 356 (p < 0.05).

**H3:** There is a positive relationship between openness and task performance. This hypothesis is not supported with standard regression weight of. 115 (p > 0.05).

H4: There is a positive relationship between openness and contextual performance. This hypothesis is supported by the standard regression weight of. 525 (p < 0.05).

**H5:** There is a positive relationship between transformational leadership and task performance. This hypothesis is supported with the standard regression weight of. 428 (p < 0.05).

**H6:** There is a positive relationship between transformational leadership and contextual performance. This hypothesis is not supported with the standard regression weight of. 037 (p > 0.05).

**H7:** There is a positive relationship between extraversion and expatriate adjustment. This hypothesis is supported from the standard regression weight of. 523 (p < 0.05).

**H8:** There is a positive relationship between the openness and expatriate adjustment. This hypothesis is supported with the standard regression weight of. 435 (p < 0.05).

**H9:** There is a positive relationship between transformational leadership and expatriate adjustment. This hypothesis is supported by the standard regression weight of. 455 (p < 0.05).

**H10:** There is a positive relationship between expatriate adjustment and task performance. This hypothesis is supported by the standard regression weight of. 568 (p < 0.05).

**H11:** There is a positive relationship between expatriate adjustment and conceptual performance. This hypothesis is supported with the standard regression weight of. 647 (p < 0.05).

### 6. DISCUSSION AND FUTURE RESEARCH

### Discussion

This research result found that on the effects of personality and transformational leadership on expatriate adjustment and performance had suggested that either personality or adjustment were crucial for job performance enhancement. The extraversion and openness to experience found to better adjust with the new cultural environment and seemed likely to have better job performance.

The crucial factor here was the personality and the expatriate adjustment. If the particular personality traits relationship to the expatriate adjustment was clear, then we can set for the effective selection criterion toward better expatriate performance achievement where another research was found that personality had the direct relation to the new culture adjustment. The adjustment was also directly related to the performance on international assignment. The implications were given from the results to the individual and organizations on job performance. The relationships among personality, expatriate adjustment and

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job performance had suggested that either personality or adjustment were crucial for job performance enhancement. The extraversion and openness to experience found to better adjust with the new cultural environment and seemed likely to have better job performance.

Moreover, In the process of transformational leadership, the leaders took the actions with the aim to increase the followers' awareness on the crucial and correct subjects. This was the motivating process for the followers' performance "beyond expectation" and to encourage them to consider beyond their self-interest and to look for the group or the organization sake. The transformational leader hard work will enhance the followers in skills development from their decision taking on the greater responsibility. The transformational leadership behavior had confirmed as highly in average with the positively correlation with the effectiveness, satisfaction, and extra effort of the followers. But in general, we considered the transactional leadership to have the positive link with the performance outcomes.

#### **Future Research**

This study results may be beneficial as the guideline toward the understanding on the factors of personality, transformational leadership, and expatriate adjustment in which significantly related to the expatriate performance. Thus, it is possibly for the research in the future to extend their study in more detail in the relationship between the expatriate adjustment and their performance with limited to less than three years working experience. The analysis model could be applied to test with the other industries or groups focusing on the expatriate employees and to use with the new employee adjustment with other organizations in Thailand.

It is suggested for the future research to survey with all international firms in Thailand in comparison of this research and the past to educate that different regions and nationalities can give the diverse results. It was suggested from the researcher that studies in the future should use the longitudinal analysis to prove on the expatriate adjustment effect on the expatriate performance. This will contribute toward the understanding on the long-term effect from transformational leadership and perceived organizational support in promoting of expatriate jobs in the long run.

Moreover, the models development may assist the organization in selecting the expatriates for the specific assignments with the higher possibility toward success.

### References

Bass, B. (1985). Leadership and Perfortmance Beyond Expectations. New York: The Free Press.

Bass, B., & Avolio, J. (1990). The Multifactor Leadership Questionnaire. Palo Alto, CA: Consulting Psychologists Press.

- Black, J. S. (1988). Work role transitions: A Study of American expatriate managers in Japan. *Journal of International Business Studies*, 19, 277-294.
- Black, J. S., & Stephens, G. K. (1989). The influence of the spouse on Amarican expatriate adjustment in the Pacific Rim overseas assignments. Journal of Management, 15, 529-544.
- Borman, W. C., & Motowidlo, S. J. (1993).Expanding the criteria domain to include elements of contextual performance. In Schmitt N, Borman WC and Associates (Eds.), Personnel selection in organizations, (pp. 71-98). San Francisco: Jossey-Bass.
- Burns, J. (1978). Leadership. New York: Harper.

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- Caligiuri, P. M. (2000b). The big five Personality characteristics as predictors of expatriate's desire to terminate the assignment and supervisor rated performance. Personnel Psychology, 53, 67-88.
- Campbell, J. P. (1999). The definition and measurement of performance in the new age. In D. R. Ilgen& E. D. Pulakos (Eds.), The changing nature of performance: Implications for staffing, motivation and development, 339-429. San Francisco, Calif: Jossey-Bass.
- Campbell, J. P., McCloy, R. A., Oppler, S. H., & Sager, C. E. (1993). A theory of performance. In N. Schmitt, W.C. Borman, & Associates (Eds.), Personnel selection in organizations, (pp.35-70). San Francisco: Jossey-Bass.
- Costa, P. T., Jr, & McCare, R. R. (1992). Revised NEO Personality Inventory and NEO Five Factor Inventory: Professional Manual. Odessa, FL: PAR.
- Dawis, R. W., & Lofquist, L. H. (1984). A Psychological Theory of Work Adjustment. Minneapoles, MN: University of Minnesota Press..
- Digman, J. M. (1990). Personality structure: Emergence of the five-facfor model. Annual Review of Psychology, 41, 417-440.
- Garver, M. S. and Mentzer, J.T. Logistics research methods: Employing structural equation modeling to test for construct validity, Journal of Business Logistics, 20, 1, 1999, pp. 33-48.
- Goldberg, L. R. (1992). The development of markers for the Big-five factor structure. Journal of Personality and Socail Psychology, 59(6), 1216-1229.
- Hair, J. F., Black, W.C., Babin, R. E., & Anderson. (2009). Multivariate Data Analysis A Global Perspective (7 th ed.). Delhi: Pearson.
- Hair, J. F., Black, W.C., Babin, R. E., & Anderson. (2010). Multivariate Data Analysis (6 th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J. F., Black, W.C., Tatham, R., & Anderson, R. E. (1998). Multivariate Data Analysis (5 th ed.). London: Prentice Hall International.
- Hays, R. D. (1972). Ascribed behavioral determinants US expatriate mangers. Journal of International Business Studies, 2, 40-46.
- Kristof, A. L. (1996). Person-environment fit: an integrative review of its conceptualizations, measurement, and implications. Personnel Psychology, 49, 1–49.
- Lauridsen, J., & Mur, J. (2006). Multicollinearity in Crooss-Sectional Regressions. Journal of Geographical Systems, 8, 317-333.
- McCrae, R. R., Costa, P. T., & Jr. (1996). Toward a new generation of personality theories: Theoretical contexts for the Five-Factors Model. In J. S. Wiggins (Ed.), The Five-Factors Model of personality: Theoretical perspectives, (pp. 55-87). New York: Guilford Press.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Big five factor model and its applications. Journal of Personality, 60, 175-215.
- Mohsen, H., Hamid, J., & Zynalabedin. (2011)Modeling the Effect of Coaches' Leadership Styles on Athletes' Satisfaction and Commitment in Iranian Handball Pro League. Journal of Applied Sciences,14 (9),1299-1305.
- Nicholsen, N. (1984). A Theory of Work Role Transitions. Administrative Science Quarterly, 29, 172-191.
- Rehfuss, J. A. (1986). A Representative Bureaucracy? Women and Minority Executives in California Career Service. Public Administration Review, 46(5), 454-460.
- Rust, J. (1999). Discriminant Validity of the 'big five' personality traits in employment settings. Social Behavior and Personality, 27, 99-108.