LINKING JOB PERFORMANCE AND BIG FIVE PERSONALITY TRAITS OF EMPLOYEES IN CHANDIGARH IT SECTOR

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Abstract

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Present study investigates employees from selected IT companies in Chandigarh to explore the predictive validity of big five personality traits on their job performance and identify the relationship between personality traits and job performance. The Big Five Personality dimensions, commonly known as five factor model consists of extraversion, agreeableness, conscientiousness, openness to experience and neuroticism. The BFI-Personality Inventory – Revised and self structured Performance Appraisal Questionnaire were used as measuring instruments. A Correlation analysis and Causal Study (Multiple Regression Analysis) was conducted on 404 employees of selected IT companies in Chandigarh to analyzepredictive relationship. Openness to Experience, Agreeableness and Extraversion emerged as significant correlates and predictors of job performance and explained 35.2% of the variance in participants' management performance.Neuroticism was found to be a negative correlate. On the other hand, Conscientiousness trait had insignificant relation to the model. Theoretical and managerial implications are discussed.

Key words: Personality, Conscientiousness, Extraversion, Agreeableness, Neuroticism, Five factor model of personality, Openness to Experience, Job performance

1. INTRODUCTION: The relationship between personality and job performance has been studied often in industrial psychology in the past century. Personality has been considered as an important factor for analyzing job performance. It is a behavior which differentiates one person from another person (Beer, (2011)). Personality provides insight whether a person will be able do a particular job or not. Job performance is a result of skills, knowledge, efforts and abilities directed at role prescribed behavior. Individuals can be differentiated on the basis of their

personality traits. These traits will make them more or less suitable for a particular job. Therefore, it is important to know how different factors are contributing to job performance. Personality development has been a major topic of interest for some of the most prominent researchers. Personality research was full to the brim of psychometricians who were interested in defining what personality was and how it could be measured.

Then applied researchers worked on whether personality made any difference to the real world, or not? This was in the early eighties and the research was not promising. According to the research; personality made very little difference in predicting work performance. Then in the nineties with the dawn of large scale meta-analyses, and personality as a useful work based variable was back on track.

Recently, with the development of meta-analytical techniques acceptance of the Five Factor Model, has given support to the limited utility of personality assessment as an aid to the selection and development of employees. The majority of researchers tend to report correlations and predictions based upon the FFM labels. Despite some criticisms of the FFM this does provides a superior tool to narrowly constructed dimensions in other inventories for utilizing personality as a tool in the workplace.

1.1 COMPONENTS OF JOB PERFORMANCE

Performance is a multi-dimensional concept. Traditionally, job performance has been conceptualized as the degree to which an individual performs his role with reference to specified standards set by the organization. It is divided into two dimensions – task performance and contextual performance.

- Task performance refers to a person's ability with which he or she performs activities which add to the organization's 'technical core'.
- Contextual performance refers to activities which do not contribute to the technical core but which support the organizational, social, and psychological environment in which organizational goals are worked on.

Job performance is a result of skills, knowledge, efforts and abilities directed at role prescribed behavior. Individuals can be differentiated on the basis of their personality traits. These traits will make them more or less suitable for a particular job. Therefore, it is important to know how different factors are contributing to job performance.

1.2 FIVE FACTOR MODEL OF PERSONALITY:

The most frequent model that is currently used for assessing personality is known as the Five-Factor Model. The five factors in this model include: (1) Extraversion, (2) Conscientiousness, (3) Emotional Stability (4) Agreeableness, and (5) Openness to Experience. The Five-Factor Model provides a common concept of personality that can be used by organizations to select employees. Each of the Big Five dimensions comprises a set of traits that tend to occur together. The characteristics of these factors are discussed below:

Factors	Positive characteristics	Negative characteristics
Extraversion	Outgoing, talkative, assertive, gregarious	Cautious, retiring, shying
Conscientiousness	Thoughtful, careful, diligent	Indiscipline, unreliable
Emotional Stability	Steadfast, dependable, stable	Uneasy, depressed, nervous, upset
Agreeableness	Polite, flexible, participative, patient, compatible	Apathetic, hatred, heartless, stubborn, selfish, ambitious
Openness to experience	Wise, creative, innovate, knowledgeable, complex	Simple, without imagination

The Big Five model has received support from a number of large meta-analyses, showing its predictive value across a range of behaviors.

2. REVIEW OF LITERATURE:

The role of personality in job performance is important, as certain personality variables contribute to workplace success. The results of various studies including (Barrick, & Mount, 1991); (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990); (Salgado, 1997); (Tett et al, 1991); (Vinchur, Schippmann, Switzer, & Roth, 1998)showed that big five personality dimensions are related to job performance. Large-scale research using data from tens of thousands of employees (e.g. (Barrick, & Mount, 1991) on the relationship between Big Five personality traits and job performance has found that certain personality traits significantly predict job performance.

S Rothmann& E P Coetzer (2003) in their study determined the Relationship between personality dimensions & job performanceof 159 employees of a pharmaceutical company and concluded that Emotional Stability, Extraversion, Openness to experience & Conscientiousness were related to task performance & creativity. The personality Dimensions, Emotional Stability, Openness to Experience & Agreeableness explained 28% of the variance in participants' management performance[19].

Riette Sutherland, Gideon P bruin & Freddie Crous (2007) worked on examining the relationship between Conscientiousness, empowerment & job Performance among IT professionals. An

Employee Empowerment Questionnaire, a Conscientiousness scale anda social desirability scale was administered to 101 IT customer service engineers. The performance of engineers was judged with a Performance Evaluation Questionnaire by their respective Managers. The results show a significant relationship between Conscientiousness & empowerment. A curvilinear relationship was observed between empowerment & performance.[21]

Murray R Barrick&Micheal K Mount(1991) investigated the relation of the Big Five Personality Dimensions with three job performance criteria i.e. Job proficiency, training proficiency & personnel data among five occupational groups: professionals, police, managers, sales, skilled/semiskilled employees. They concluded that Conscientiousness showed consistent relations with all the three job performance criteria for all occupational groups. For other personality dimensions the correlations varied by occupational group & job criteria[2].

Karthikeyan& Dr. D.K. Srivastava (2011) studied the relation of five factor model of personality with individual level job performance of managerial & executive cadre employees working in Indian organizations. They found that the factors: Conscientiousness, extraversion and emotional stability were predictors of job performance and had impact on components: task performance, adaptability, employee productivity. Neuroticism had a significant relationship with job stress.[15]

(Barrick, Murray and Stewart, Greg, 2009)did meta analysis that investigates the degree to which the Five-Factor Model (FFM) dimensions of personality are related to performance in jobs involving interpersonal interactions. The meta-analysis was based on 11 studies with a total sample of 1,586. They concluded that Conscientiousness, Agreeableness, and Emotional Stability are positively related to performance in jobs involving interpersonal interactions. Also Emotional Stability andAgreeableness are positively related to performance in jobs that involve team-work (where employees interact interdependently with coworkers), than in those where employees provide a direct service to customers and clients.[17]

Motowidlo and Van Scotter (1994) indicated that the Big Five factors of personality have varying relations with job performance within the task-versus-contextual distinction explicated by(Motowidlo, (1997))(Borman, 1993). The work suggested that personality predictors have their largest impact on contextual dimensions of job performance. Van Scotter and Motowidlo showed that Extraversion and Agreeableness were more strongly related to the interpersonal facilitation component of contextual performance than they were to task performance[18].

2.1 Openness to Experience and Job Performance

Individuals high on openness to experience display a preference for variety, they enjoy grasping new ideas, and they have an intrinsic interest in and appreciation for novelty. Research has shown that Openness to Experience is related to achievements in consulting, training and change adaptation.

In contrast, ((Johnson, 1997) and (Hayes, Roehm, & Castellano, 1994)found that successful employees obtained significantly lower scores on Openness. Further, (Tett et al, 1991)meta-analysis also suggested that openness may not be a valid predictor of job performance and perceived it to get moderated by organizational factors. This trait can vary with job requirements.[23]

2.2 Conscientiousness and Job Performance

People who are high in conscientiousness generally perform better at work than those who are low in conscientiousness. Individuals high on Conscientiousness are meticulous, methodical, neat, well-organized, less impulsive, dedicated to their goals, reliable, trustworthy, and achievement striving ((Digman, 1990); (Roberts, Chernyshenko, Stark and Goldberg, 2005);Employees who are conscientious are better performers in their respective jobs when compared with their less conscientious counterparts ((Barrick, & Mount, 1991); (Hurtz, G. M., & Donovan, J. J., 2000) Conscientiousness shows consistent relations with all performance criteria for all occupational groups. A meta-analysis of 21 studies involving 4,106 individuals revealed a predictive validity of .31 for overall job performance. Similarly, (Borman, White, Pulakos, & Oppler, 1991)and (Hough et al., 1990)found a correlation of 0.80 between reliability (an aspect of Conscientiousness) and job performance. Various researchers reported significant correlations between Conscientiousness and job performance.

2.3 Extraversion and Job Performance

Extraversion refers to the level of sensory stimulation with which one is comfortable. The behavioral tendencies used to measure this factor include being sociable, gregarious, assertive, talkative, and active [2.]Extraversion is a valid predictor for occupations such as management and sales which involve social interaction. It was found that Extraversion is a valid predictor of performance in jobs characterized by social interaction, such as sales personnel and managers (Johnson, 1997) found a positive relationship between Extraversion and job performance of police personnel, and explained this relationship in terms of the high level of interaction in the police service.

2.4 Agreeableness and Job Performance

The behavioral tendencies typically associated with this factor include being courteous, flexible, trusting, good-natured, cooperative, forgiving, soft-hearted, and tolerant [21]. In work contexts, agreeable employees show higher levels of interpersonal competence and work effectively when combined action is needed. According to (Tett et al, 1991), Agreeableness is a significant predictor of job performance. (Salgado, 1997)in his research came up with the conclusion that Agreeableness is related to training success. The co-operative nature of agreeable individuals may lead to success in occupations where teamwork and customer service are relevant (Judge et al, 1999)

2.5 Neuroticism and Job Performance

Neuroticism is the strength of stimuli required to bring out negative emotions in a person. Persons who are high on this dimension are usually anxious, depressed, angry, embarrassed, emotional, worried, and insecure [2].(Dunn, Mount, Barrick & Ones, 1995)showed that Neuroticism is the second most important characteristic that affects the employability of candidates. (Judge et al, 1999)concluded that Neuroticism is inversely related to job performance. However, (Hörmann & Maschke, 1996) and (Salgado, 1997) concluded that Neuroticism is a predictor of performance in various occupations.

Personality is considered as the motor which depicts behavior. It has proven to predict success at work for more than 50 years. An individual's unique combination of the five factors of big five model determines and predict his work success.

3. OBJECTIVES OF THE STUDY:

Review of literature provides information regarding that there is not much work done in this area in context of Indian IT sector and especially Chandigarh IT sector. Therefore, present study will investigate employees of selected IT companies of Chandigarh to explore the predictive validity of big five personality dimensions on their job performance and analyze the relationship between these variables. Hence, the objectives of the study are outlined below:

i.   To find out which traits are positively correlated to job performance of employees

ii. To explore the role of big five personality dimensions in predicting job performance of employees.

4. RESEARCH DESIGN:

Cross sectional causal study of hypothesis testing was conducted to measure the relationship between variables. The study was predictive, which determines the correlations between the variables and also investigated that how significantly personality traits can influence the overall performance of employees.

4.1 Sampling:

A total number of 501 questionnaires were disbursed to the employees working in selected IT companies. Out of which 404 employees reverted back. Hence, the actual sample size is 404 which are about 3.1% of the population.

The sample included employees working from the trainee level to middle level managers. Out of the total population of employees participated in the research, approximately 57% of the sample consisted of males and 43% Females. The ages of the participants varied between 22 and 41 years, with 62% employees in the age group between 27 and 31.

4.2 Measuring Instruments:

The data was collected using a structured questionnaire which was divided into two sections. Section-1 consists of Big Five Inventory (BFI)constructed by John, Donahue & Kentle. It has 44 items in total with a 5 point likert scale measurement. The Big Five inventory is a self report inventory designed to measure the Big Five dimensions of Personality and popularly used by a number of researchers. Cronbach alpha (coefficient of reliability) for every factor of the questionnaire is more than 0.70, thus indicating the goodness of the scale used –Openness to Experience (0.8), Conscientiousness (0.8), Extraversion (0.7), Agreeableness (0.9) and Neuroticism (0.7). The second section was self structured Performance Appraisal Questionnaire (PAQ) to collect data ofemployee performance. It consists of 14 items measuring the different components of overall job performance. The questionnaire was pre-tested by a Pilot study for reliability and validity before the main study was conducted. Acceptable Cronbach alpha coefficients were found for the questionnaire. Ratings (on a 5-point scale) of the performance of employees were gathered.

5. DATA ANALYSIS TECHNIQUES EMPLOYED

The statistical analysis was carried out by SPSS Package version 17. Descriptive statistics (means, standard deviations) were used to gather the first hand information on various variables considered for the study.Correlation between the factors was applied in order to identify whether

performance is correlated with the personality factors under study. Regression analysis was done to find out predictive validity of the traits on job performance of employees.

6. RESULTS:

6.1 Pearson Correlation:

Pearson's correlation analysis was carried out to examine the bivariate relationship between the variables. Table 4.19 displays the results of the correlation analysis of the study variables.

Objective 1: To find out which traits are positively correlated to job performance of employees

Table 4.19 – Correlation Coefficients for Big Five Traits

	Correlation	Sig. Value
Extraversion	0.096	0.036
Agreeableness	0.110	0.014
Conscientiousness	0.018	0.362
Neuroticism	- 0.081	0.009
Openness	0.135	0.003

Dependent Variable – Performance

The statistics indicates that the performance is positively correlated with all the independent variables (personality factors) except Neuroticism under the study. That shows the positive contribution of positively correlated variables (personality factors) on the performance of employees. It means increase in one unit of independent variable (personality factors) will lead to increase in dependent variable in the same direction.

The statistics shows that Extraversion, Agreeableness and Openness are the personality factors with significant positive correlation as the sig. value for all these independent variables is lesser than 0.05 (Extraversion = 0.036, Agreeableness = 0.014 and Openness = 0.003) except Neuroticism = -0.081 which has a negative correlation with performance. Conscientiousness did not show significant correlation with performance as their significant value is higher than 0.05 (Conscientiousness = 0.362).

6.2 Multiple Linear Regression Analysis

Multiple linear regression analysis is a method which uses more than one independent variable to explain variance in a dependent variable. It has been used in this research to lay down the predictive validity of job performance from the Big Five personality dimensions.

The following tables present the results of Multiple linear Regression Analysis of individual personality traits and job performance.

Objective 2: To explore the role of big five personality dimensions in predicting job performance of employees of IT companies in Chandigarh.

Table 4.8. Regression Coefficients (Openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism)

Model		Unstandardised Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	54.074	6.262		8.635	.000
	Extraversion	.977	.782	.067	1.250	.012*
	Agreeableness	1.592	.728	.108	2.185	.029*
	Conscientiousness	.100	.856	.006	.117	.907
	Neuroticism	-.696	.731	-.051	-.952	.012
	Openness	2.199	.919	.125	2.393	.017*

indicates the significant variables at 5% level of significance

The above statistical table shows the values of beta for all variables in the model i.e. extroversion, conscientiousness, agreeableness, neuroticism and openness to experience. The higher value of t at significance level (<.05) would mean that the variable contributes more towards job performance.

The above table indicates that only Agreeableness (t- statistics = 2.185 and Sig. value = 0.029), Openness (t- statistics = 2.393 and Sig. value = 0.017) and Extraversion (t- statistics = 1.250 and Sig. value = 0.012) are significant among all the five variables that contribute to the model.

The statistics show that with one unit change in openness the performance of employees will increase by 2.199 units whereas with one unit change in agreeableness the performance of employees will increase by 1.592 units. For the independent variable of Extraversion, with one unit change, the performance of employees will increase by 0.977 units. Neuroticism, on the other hand, is contributing negatively to job performance. Moreover, Conscientiousness does not contribute to the model for predicting Job performance. Based on the result shown by table 4.8, we can conclude the following equation:

Performance of employees = 54.074 + 0.977 * Extraversion + 1.692 * Agreeableness + 0.100 * Conscientiousness + (-.696)*Neuroticism + 2.199 * Openness

7. DISCUSSION:

According to the Correlation analysis conducted, Openness to experience emerged as the most significant traits positively contributing to job performance. It shows that the companies selected for the study give emphasis to being open to learning new things, giving innovative ideas and adapting to change becomes mandatory for successful job performance. Moreover, Openness to experience trait is a situation specific productive trait in organizational settings where facilitation of new ideas and innovation is mandatory for enhancing their profitability. IT sector is one of the most dynamic industries where professionals have to be creative, smart and technically strong in order to survive.

Agreeableness showed second strongest positive correlation with job performance as per the analysis. Since service sectors business needs and models necessitate a relatively higher level of customer interaction across levels facets of agreeableness like compliance, modesty, trust can influence stability of performance to a certain extent. Hence, co-operative nature of agreeable individuals affects performance positively.

Extraversion showed second strongest correlation followed by with job performance. Extravert employees perform well on the job & hence the organizations value them & hence retain them. The emergence of extraversion trait does show that the assertive and sociable trait of employees does play a significant role in overall performance of employees of IT companies.

Personality dimensions are always related to management performance. Openness to Experience, Agreeableness and Extraversion were practically significantly related to management performance. They explained 35.2 % of the variance in job performance according to the multiple regression analysis performed.

When the relationship between Conscientiousness and Job performance was analyzed, a weak correlation of 0.362 at significance levels greater than 0.05 was found. Hence, it comes as surprise that Conscientiousness was not a significant predictor of job performance in the current study. Further, jobautonomy and goal setting levels of an organization also influence the relationship between Conscientiousness and job performance.

The analysis revealed negative correlation between Neuroticism and Job performance. The correlation coefficient is -.001 between neuroticism and job performance. Employees high in

neuroticism perform poor compared to emotionally stable individuals. This result confirms the findings of (Hörmann & Maschke, 1996), (Dunn, Mount, Barrick & Ones, 1995)and (Judge et al, 1999).

Overall, Extraversion, Agreeableness and Openness to experience are the personality factors with significant positive correlation whereas Conscientiousness does not show any significant correlation with performance.

8. LIMITATIONS OF THE STUDY:

This study has some limitations. Firstly, this study was conducted in Chandigarh only, so it may not reflect views on whole population. It would be more effective to repeat it in other cities of the country to do it better. Secondly, besides the Big Five Model of personality, there are other factors that have an impact on job performance. No such factors have been taken into consideration in this study. Due to the use of self-reported information for analysis, there is a possibility that the relationships observed were as a result of a self-reported variance.Hence, A larger study should be conducted using quality methods of data collection and larger sample size or intercity comparison of IT managers in order to further get reliable results.

9. IMPLICATIONS OF THE STUDY AND RECOMMENDATIONS:

Overall, the large scale Meta-analyses demonstrating that the Big Five have significant correlations with important job criteria ((Barrick, & Mount, 1991); (Salgado, 1997) over the past two decades have led to a revolution in personnel selection.

The contribution of personality traits in enhancing one's job performance cannot be overemphasized. Understanding employees' unique characteristics may help organizations recruit highly motivated and performing individuals. These will also help organizations in assigning IT employees to projects and tasks where they are likely to be more productive. Further, this data will also help them plan training and development of employees in order to maximize their potential. Moreover, impact of personality on the job performance of the human resources is absolutely clear and many organizations use this for hiring their employees. Personality assessments are superior to job interviews and better than cognitive ability tests. Therefore, it becomes necessary to profile personality traits of employees for overall organizational success.

REFERENCES

Barrick, M.R., Mount, M.K. &Judge T, A (2001) *Personality and Performance at the Beginning of the New Millennium: What Do We Know and Where Do We Go Next? International Journal of Selection and Assessment, 9, 9-30.*

Barrick, M. R., & Mount, M. K. (1991). *The Big Five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44, 1-26.*

Barman, W. C and Motowidlo, S. J. (1997) 'Task performance and contextual performance: The meaning for personnel selection research', *Human Performance, 10: 99-109.*

Beer, A., & Brooks, C. (2011). *Information quality in personality judgment: The value of personal disclosure. Journal of Research in Personality , 45 (2), 175-185*

Borman, W. C. and Motowidlo, S. J. (1993) 'Expanding the Criterion Domain to Include Elements of Contextual Performance', in N. Schmitt and W. Borman (eds), *Personnel Selection in Organizations. New York: Jossey-Bass, pp. 71-98.*

Borman, W. C., White, L. A., Pulakos, E. D., &Oppler, S. H. (1991). *Models of supervisory performance ratings. Journal of Applied Psychology, 76, 863-872.*

Digman, John M. 1990. *Personality structure: Emergence of the five-factor model. Annual Review of Psychology 41.1: 417–440.*

Dunn, W. S., Mount, M. K., Barrick, M. R., & Ones, D. S. (1995). *Relative importance of personality and general mental ability in managers' judgments of applicant qualifications. Journal of Applied Psychology, 80(4), 500-509.*

Hörmann, H. &Maschke, P. (1996). *On the relation between personality and job performance of airline pilots. The International Journal of Aviation Psychology, 6, 171-178.*

Hurtz, G. M., & Donovan, J. J. (2000). *Personality and job performance: The Big Five revisited. Journal of Applied Psychology, 85(6), 869-879.*

Hayes, T.L., Roehm, H.A. &Castellano, J.P. (1994). *Personality correlates of success in total quality manufacturing. Journal of Business and Psychology, 8, 397-411.*

Hough, L. M., Eaton, N. K., Dunnette, M. D., Kamp, J. D., &McCloy, R. A. (1990). *Criterion-related validities of personality constructs and the effect of response distortion on those validities. Journal of Applied Psychology, 75(5), 581-595.*

Judge. T.A., Higgins, C.A., Thoresen, C.J. &Barrick, M.R. (1999). *The big five personality traits, general mental ability, and career success across the life span. Personnel Psychology, 52, 621-652*

Johnson, J.A. (1997). *Seven social performance scales for the California Psychological Inventory. Human Performance, 10, 1-30.*

Karthikeyan, Dr.D.K.Srivastava (2012); *The Relationship Between The Five Factors Of personality, Individual Job Performance And Its components In The Indian Corporate Sector. International journal of advanced research in management, pp. 37-55*

McHenry, J. J., Hough, L. M., Toquam, J. L., & Hanson, M. A. (1990). *Project A validity results: The relationship between predictor and criterion domains. Personnel Psychology, 43(2), 335-355.*

Michael K., Barrick, Murray R. and Stewart, Greg L.(1998) 'Five-Factor Model of personality and Performance in Jobs Involving Interpersonal Interactions', *Human Performance, 11: 2, 145 — 165*

Motowidlo, S.J. and Van Scotter, J.R. (1994) Evidence That Task Performance Should Be Distinguished from Contextual Performance. Journal of Applied Psychology, 79, 475-480.

Rothmann S., Coetzer E.P., (2003). The big five personality dimensions and job performance. S.A Journal of Industrial Psychology, 29(1), 68-74.

Roberts, Brent W., Oleksandr S. Chernyshenko, Stephen Stark, and Lewis R. Goldberg. 2005. The structure of conscientiousness: An empirical investigation based on seven major personality questionnaires. Personnel Psychology 58.1: 103–139.

Riette Sutherland, Gideon P bruin & Freddie Crous (2007), The relation between conscientiousness, empowerment and performance. SA Journal of Human Resource Management, 5 (2),60-67

Salgado, J.F. (1997). The five-factor model of personality and job performance in the European Community. Journal of Applied Psychology, 82, 30-43.

Tett, R.P., Jackson, D.N. & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. Personnel Psychology, 44, 703-742.

Vinchur, A.J., Schippmann, J.S., Switzer, F.S. & Roth, P.L. (1998). A meta-analytic review of predictors of job performance for salespeople. Journal of Applied Psychology, 83, 586-597.