



## **Personality Traits as Predictors of Work Efficiency Among Nigerian Oil Company Workers**

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### **ABSTRACT**

This is a correlational research designed to establish the relationship between personality traits and work efficiency of oil company workers in Rivers State of Nigeria. The population covered all the one thousand, two hundred and twelve (1212) staff of Shell Petroleum Development Company (SPDC) and ELF Petroleum of Nigeria Limited, comprising seven hundred and forty-three (743) staff of Shell Petroleum Development Company and four hundred and sixty-nine (469) staff of ELF Petroleum of Nigeria Limited. The sample was made up of 528 staff drawn using disproportionate stratified sampling technique. Three research questions and hypotheses guided the study. The instruments used for data collection were adopted from The Conscientiousness and Agreeableness Inventory (CAI) with validity coefficient of 0.85 and reliability coefficient of 0.85 and Job Performance Appraisal (JPA) from Oliver, 1999 and University of Houston (2005) respectively. The Pearson's product moment correlation statistics was used to answer the research questions, while z-test was used to test the null hypotheses. Results indicate that there is a very strong relationship between conscientiousness of workers and their work efficiency in oil companies and conscientiousness is significantly related to work efficiency. Also, agreeableness of workers and work efficiency of workers in oil companies was found to be relatively high and agreeableness of workers is significantly related to work efficiency. Based on the findings of the study, recommendations were made on assigning individual workers to critical or unique task based on their personality trait to ensure optimum performance of every worker in the oil companies. Also recommendation was made for the use of counselling psychologists in secondary schools and should serve and prerequisite for guiding student to choosing their future career.

## INTRODUCTION

In the past, studies of workers' efficiency and proficiency had always been based on the worker's intellectual abilities, spatial abilities, and perceptions of details, mechanical comprehension, and motor abilities. Little or no evaluation is made on the personality traits of the individual as a yardstick for efficiency in industries and, most especially in the oil industries on which this study will focus attention. The definitions of personality try to explain what people are. However, Bergh (2003:291) argued that there is to some extent an agreement on some aspects which should be included in a personality definition. These include the external visible or observable physical appearances, behaviour and traits, the original meaning of personality; possible invisible, covert or unconscious behaviours, emotions, attitudes, values, thought and feelings within people; enduring patterns and consistencies, but also the dynamic natures of behaviour, indicating motivation and change; the uniqueness of each person; organisation of wholeness and differentiation in personality, a person being body and mind with all its separate and integrated functions; the necessity to accept that personality refers to a living human able to adapt to situations.

Though, Bergh definition of personality seem all encompassing, Nadelson (2001) stated that personality is not something that a person has. It rather describes certain characteristics of an individual's behaviour and it is the distinctive way that each person thinks, feels, behaves or adapts to various situations. Meyer, Moore and Vijoer (1997) explained personality as the ever changing, yet relative stable organization of all physical, psychological and spiritual characteristics of an individual that determines his/her behaviour in interaction with the environment. Aiken (1994), argued that personality is a composite of mental abilities, interests, attitudes, temperament, and other individual differences in thought, feelings, and behaviour. All these assertions indicate that personality is individual's uniqueness in the way he/she feel, think, perceive things and acts under different conditions to a given stimulus.

A trait share basically a common focus which is a feature of a person's behaviour. Freeman (1964:556) defines a trait as: "a generalized mode of behaviour or a form of readiness to respond with a marked degree of consistency to a set of situations that are functionally equivalent for the respondent". Neill (2003), also stated that traits are defined as distinguishing qualities or characteristics of a person. Traits could be readiness to think or act in a similar fashion in response to a variety of different stimuli or situations. Arnold, Cooper and Robinson, (1995), refer to a trait as "an underlying dimension in which people differ from one another".

When combining the above, it leads us to a fairly common perception of the term personality traits, which is well defined by Louw, Van Ede and Louw, (1998:523) that describes a personality trait as "a relative constant characteristic of a person that is responsible for the consistency of his or her behaviour". According to Psychometrics (2006), most personality can be

grouped into the following categories. They include working with others which shows how an individual interacts with others. They help you identify individuals who are outgoing, warm and consultative, and those who are quiet, reserved and independent; energy and drives which explain how individuals set goals, work to achieve those goals, and move forward in their careers. They show you which people are energetic, persistent, and ambitious and who gravitate toward leadership; work style concerned with peoples' dependability, attention to detail, and desire for structure and guidance. Some people work well in structured environments and pay close attention to details. Other people work well in flexible environments and focus on broad issues; problem solving which describe how people analyze information and develop solutions. Some people are very analytical and try to develop solutions that are well researched and practical. Other people rely on their intuition to interpret information and develop solutions that are creative and original; dealing with pressure and stress which show how people deal with pressure and stress. People who have a high level of self-control and can cope with many demands work well in high pressure jobs. People who experience stress quickly generally find success in less demanding occupations; and identifying and managing change which is concerned with how an individual takes initiative and deals with change. For work that involves a lot of change, people who are flexible and future oriented are better suited. In work environments with greater stability, people who are consistent and focused on the present are more effective.

Pall (1989), stated that most performance measure can be grouped into one of the following six general characteristics: They include effectiveness, concerned with a process characteristics indicating the degree to which the process output (work product) conforms to requirement. (Are you doing the right things?); efficiency which is a process characteristics indicating the degree to which the process produces the required output at minimum resource cost. (Are you doing things right?); quality concerned with the degree to which a product or service meets customer requirements and expectations; timeliness which measures whether a unit of work was done correctly and on time. Criteria must be established to define what constitute timeliness for a given unit of work. The criterion is usually based on customer requirements; productivity which is the value added by the process divided by the value of the labour and capital consumed; and safety which measures the overall health of the organization and the working environment of its employees.

This research study investigated the relationship between personality traits of workers and their work efficiency in Shell Petroleum Development Company and ELF Petroleum Nigeria Limited in Rivers State using The Big Five Personality (BFI) factor Questionnaire and Job Performance Appraisal Form to determine their work efficiency in four sections of the oil company, viz: Production, Drilling, General Services and Human Resources.

A lot of resources are being used in training of staff in the oil companies on safety, health and environment and yet, it has not fully yielded the desired

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result. Also, optimum efficiency of workers which is as a result of no accident which may lead to damage to equipment, man-hour loss, injury, and loss of lives and which may reduce the fortune of the oil companies has not been achieved. A lot of families have been left to suffer because of the loss of their breadwinners which ultimately affect the society at large.

Personality traits have been recognized as the totality of an individual's disposition to all activities, situations and events which include his/her work/job performance and efficiency in everyday life. However, the extent to which the individual's personality traits relate with his/her work efficiency has not been determined. This study therefore seeks to answer the questions, thus: what is the relationship between individual's personality traits and his/her work efficiency in oil companies? And to what extent could individual personality traits relates to his work efficiency in oil companies? These questions are the focus of this study.

### **Purpose of the Study**

The main purpose of this study is to determine the extent to which personality traits relate to workers' efficiency in two multinational oil Shell Petroleum Development Company and Elf Petroleum Nigeria Limited. The specific objectives of this study are to:

- i. to determine the extent to which conscientiousness of workers relate to their work efficiency.
- ii. to find out the extent work efficiency of workers relate to their agreeableness.

### **Research Questions**

The following research questions guided the conduct of this research. They are:

- i. What is the relationship between conscientiousness of workers and their work efficiency?
- ii. What is the relationship between agreeableness of workers and their work efficiency?

### **Hypotheses**

The following null hypotheses were tested at 0.5 alpha level.

- 1 Conscientiousness of workers does not significantly relate to their work efficiency.
- 2: There is no significant relationship between agreeableness of workers and their work efficiency.

## METHODS

This research study investigated the relationship between personality traits of workers and their work efficiency in Shell Petroleum Development Company and ELF Petroleum Nigeria Limited in Rivers State using The CAI and Job Performance Appraisal Form (JPF) to determine their work efficiency in four sections of the oil company, viz: Production, Drilling, General Services and Human Resources. This is a correlational research designed to determine the relationship between Conscientiousness and Agreeableness Inventory (CAI) and Work Efficiency of staff of Shell Petroleum Development Company and ELF Petroleum Limited, all in Rivers State of Nigeria. The population consisted the one thousand two hundred and twelve (1212) staff of the two oil companies under study. The sample of the study consisted 540 workers (270 from Shell and 270 from ELF). A total of 360 workers were drawn. To obtain this sample from Production, 60 from Drilling, 60 from General Services and 60 from Human Resources Departments of the two companies under investigation. This means that 180 workers were drawn from the Production Department of each of the two companies, while 30 workers were drawn from each of drilling, general services, and human resources departments of each of the two companies.

Table 1 explains the distribution of subjects according to companies and departments.

**Table 1:** Distribution of Subjects according to Companies and Departments.

Company	Departments				Total
	Production	Drilling	General Services	Human Resources	
Shell	180	30	30	30	270
Elf	180	30	30	30	270
Total					540

The disproportionate stratified random sampling technique was used in drawing this sample. The researchers employed simple random sampling method, by ballot to select the workers that constituted the sample across the two oil companies. Two (2) standardized instruments were adopted for use in data collection. The first instrument is Conscientiousness and Agreeableness Inventory (CAI) adapted from The Big-Five Inventory (BFI) by Oliver, (1999) , while the second instrument is Job Performance Appraisal Form (JPA) developed by the University of Houston Victoria (2005). After the administration of the two instruments, 528 were returned. The reliability coefficient value of the CAI (Conscientiousness and Agreeableness Inventory) is 0.79, while that of the JPA is 0.83. Pearson Product Moment Correlation

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statistic was used to determine the relationship between the workers personality traits and their work efficiency, while z-test was used to test the null hypotheses at 0.05 alpha level of significance.

#### **Research Question 1: What is the relationship between conscientiousness of workers and their work efficiency?**

**Table 2:** Pearson (r) on conscientiousness of workers and their work efficiency.

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>r</b>
Work Efficiency	528	56.16	9.18	0.829
Conscientiousness	528	28.52	2.54	

Table 2 showed that there is a positive relationship between conscientiousness of worker in oil companies and their work efficiency. The correlation co-efficient (r) was 0.829. This showed that there is a very strong positive relationship between conscientiousness and work efficiency.

#### **Research Question 2: What is the relationship between agreeableness of workers and their work efficiency in oil companies?**

**Table 3:** Relationship between agreeableness of workers and their work efficiency in oil companies.

<b>Variable</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>	<b>r</b>
Work Efficiency	528	56.16	9.18	0.585
Agreeableness	528	29.49	2.77	

Data in Table 3 showed that there is a positive relationship between agreeableness of workers and their work efficiency. The correlation coefficient co-efficient was 0.585. This showed that there is a strong positive relationship between agreeableness and work efficiency.

#### **Hypothesis 1: Conscientiousness of workers do not significantly relate to their work efficiency.**

**Table 4:** Test of significant relationship between conscientiousness of workers and their work efficiency.

<b>Variable</b>	<b>N</b>	<b>r</b>	<b>df</b>	<b>Cal z</b>	<b>Crit z</b>	<b>P&gt;0.05</b>
Conscientiousness	528	0.83	526	34.13	1.96	0.05
Work Efficiency						

S = Significant

Table 4 showed that the calculated z-test of 34.13 is greater than the critical z value of 1.96 at 526 degree of freedom. Once the calculate z - test is greater than the critical z – value, the hypothesis is rejected. The table showed that conscientiousness of workers significantly relate to their work efficiency. Therefore, the null hypothesis 1 is rejected.

**Hypothesis 2: There is no significant relationship between agreeableness of workers and their work efficiency.**

**Table 5:** Z- test on the relationship between agreeableness of workers and their work efficiency.

<b>Variable</b>	<b>N</b>	<b>r</b>	<b>df</b>	<b>Cal z</b>	<b>Crit z</b>	<b>P&gt;0.05</b>
Agreeableness	528	0.59	526	16.76	1.96	0.05
Work Efficiency						

S = Significant

Table 5 showed the calculated z value of 16.76 is greater than the critical z value of 1.96 at 526 degree of freedom. Once the calculated z score is greater that the critical z value, the hypothesis is rejected. The table shows that there is a significant relationship between agreeableness of workers and their work efficiency in oil companies. Therefore, the null hypothesis 2 is rejected.

## **DISCUSSION**

The relationship between personality traits of workers and their work efficiency in Shell Petroleum Development Company and ELF Petroleum Nigeria Limited in Rivers State was investigated in this study. Table 2 showed that the mean value of conscientiousness was 28.52 in contrast of work efficiency with a mean value of 56.16. The correlation coefficient (r) is 0.829. This implies that there is a very positive relationship between conscientiousness of worker and their work efficiency in oil companies. The relationship between Conscientiousness of workers and their work efficiency

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is also significant. This is in support of Barrick and Mount (1991) findings that conscientiousness relates consistently with job performance and those highly conscientious individuals may also perceive greater fit because they perform better. This also indicates that workers that do thorough job, very careful, are reliable, are very organized, are very hardworking, can preserve until a task is completed, do things efficiently, make plan and follow them through, precise, practical, cautious, deliberate, and cannot be easily distracted are very efficient in their job performance and less prone to mistakes which may lead to accident on risk areas of job performance and thereby have less man-hour loss on job performance.

Table 3 showed that agreeableness has a mean value of 29.49 value in contrast to 56.16 mean value of work efficiency. The correlation co-efficient (r) was 0.585. This indicated that that is a positive relationship between agreeableness of workers and their work efficiency in oil companies. It also showed the relationship between agreeableness of workers and their work efficiency in oil companies is significant. Graziano and Eisenberg (1977), stated that in relation to how individual perceive themselves as fitting with their environment, those high in agreeableness should have tendency to perceive their fit after accounting for the actual degree of value congruence. This implies that workers that demonstrates traits like appreciate, good-natured, sensitive, cooperative, pleasant forgiving, soft-heartedness, Generous, trusting, helpful, gentle, unselfish, warm, are more likely to perform well in their work within the oil companies environment because they do not have anything in mind that may be disturbing them, so they can concentrate on their job which reduces risk of making mistakes and are like to keep to the rules and procedures that governs the operation of specific high risk task.

### **CONCLUSION**

From the findings of this study, it was concluded that

1. There is a very strong relationship between conscientiousness of workers and their work efficiency in oil companies and conscientiousness is significantly related to work efficiency.
2. Agreeableness of workers and work efficiency of workers in oil companies was found to be relatively high and agreeableness of workers is significantly related to work efficiency.

### **RECOMMENDATIONS**

Based on the following findings, it was therefore recommended that:



1. The management of oil companies should consider the personality traits of their workers before unique and specific tasks are assigned to them
2. Personality traits should be a prerequisite for recruitments to very critical tasks in the oil industry.
3. Every worker in the oil industry should be given tasks that are related to their personality traits to ensure optimum efficiency and job satisfaction.
4. Career guidance counselors should consider the personality traits of individual should as a requisite for guiding them towards the choice of their future career.
5. The services of guidance counsellors should be employed in secondary schools to help the students choose careers that can be well suited for their personality traits for better performance.

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