UNIVERSITY OF CAPE COAST

THE ROLE OF PERSONALITY TRAITS IN DETERMINING TYPE OF EMPLOYMENT AND JOB PERFORMANCE IN GHANA

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2022

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BY

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Thesis submitted to the Department of Business Programmes of the College of Distance Education, University of Cape Coast, in Partial Fulfilment of the Requirements for the Award of Master of Commerce in Human Resource

DECEMBER, 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature …… Date ……..

Name: Nana Yaa Asarewaa Sarkodie Nunoo

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Supervisor's Signature ……Date …….

Name: Prof. Nana Yaw Oppong

ABSTRACT

The study examined the role of personality traits in determining the type of employment and work performance in Ghana. An explanatory research design was adopted and data from the Ghana STEP (Skills Toward Employment and Productivity) initiative were used. Specifically, the study considered the effect of personality traits on type of employment; and the effect of personality traits on work performance. The study adopted the Human Capital Theory and the Heckman equation as the theoretical basis for this study. The sample was gathered through a two-stage random sampling of households and individuals. A sample size of 2,987 consisting of individuals between 15 and 64 years of age and a response rate of 83% was obtained. The study employed student t-test, linear probability model, and probit regression for the empirical analysis. The findings revealed a relationship between type of employment (employed, public employed, self-employed) and personality traits. Further, higher education is associated with type of work the respondent does. Again, the respondent ability to read and write had an association with personality traits (conscientiousness, openness, stability, and agreeableness). Furthermore, agreeableness, in particular, had an increase in public sector employment while openness is associated with the rise self-employment. Also, openness and conscientiousness were associated with higher work performance. Besides, the study recommends that skills acquisition in lower and higher education must not only focus on technical skill and cognitive skills but target the development of skills in line with the individual abilities as manifested by their personality traits.

KEY WORDS

Personality traits

Job performance

Type of employment

ACKNOWLEDGEMENT

I would like to thank my supervisor, Prof. Nana Yaw Oppong for his professional supervision, advise, encouragement, and kindness in guiding this effort. I am extremely grateful. I am grateful also to all of the academic facilitators who taught me over my two-year master programme.

DEDICATION

To my husband, and mother

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CHAPTER ONE

INTRODUCTION

Over the years, education which aimed to improve human cognitive skills have served as the major employability skills. Indeed, many empirical findings have supported the relevant role of education in enhancing cognitive skills in the life of every individual. In recent years, however, personality traits have received attention in both practice and research as it seems to moderate individual functionality at school, work place or even at home. This study highlights the concept of personality traits; a distinctive pattern of actions, thoughts, and emotions that are shaped by biological and environmental variables and evolve over time. This study focuses on the dimensions of personality traits in Ghana and how they influence the kinds of jobs people can get and how well they do those jobs.

Background to the Study

The development of every economy depends on the level of productivity of the country's workforce. That is, countries with highly skilled labour are able to produce in abundance to supply other economies around the world (Foerster, Matthes, & Seitelman, 2020; Deleidi, Meloni, Salvati, & Tosi 2020; Chakamera, & Alagidede 2020). At the individual level, the productivity of each skilled labour is determined by many factors including the educational level, cognitive skills and the level of technical skills among others (Honorati & Silva 2016). The ability to read and write, count, understand complicated ideas, learn from experience, and analyze problems using logical procedures are all examples of cognitive skills (Honorati & Silva 2016). A complementary factor which has been noted to influence education, cognitive abilities and other

lifelong earning outcomes like employment, health and even social behaviour is the personality traits also known as the socio-emotional or non-cognitive skills.

Personality traits on the other hand embody behaviours, attitudes, and beliefs which are formed over time (Almlund, Duckworth, Heckman & Kautz 2011; Borghans, Golsteyn, Heckman, & Humphries 2011). These characteristics, which are known to accumulate over a person,s lifetime, have the tendency to influence choices and success not only in the labor market but also in terms of wellbeing and academic accomplishment, particularly in university education. The growing body of study demonstrations that personality traits are just as important as intellectual abilities in determining outcomes on the labor market in nations like the USA, UK, Sweden, the Netherlands, and Germany, including the likelihood of employment, higher wages, and positions held at the workplace (Bowles *et al*., 2001; Nyhus & Pons, 2005; Groves, 2005; Segal, 2013; Mueller & Plug, 2006; Borghans *et al*., 2008; Heineck & Anger, 2010; Heckman, Stixrud and Urzúa, 2006; and Lindqvist & Vestman, 2011). Goff and Ackerman (1992) suggested that personality traits or non-cognitive skills are more vital than intellectual skills in the long term when it comes to labour market outcomes.

The work of Kuhn and Weinberger (2005) on ,leadership skills and wages, provides proof that individuals who were in leadership positions in high school were associated with unique set of personality traits. After adjusting for cognitive abilities, they discovered that people who demonstrated leadership qualities were more likely to be employed as managers.

Additionally, the work of Murray and Robinson (2001) found a link between personality traits and academic abilities, including the capability to use statistical data and computer skills, communication skills, logical thinking aptitude, competency of learning new knowledge, team organisation skills, and the capability to prioritize responsibilities, which derives from cognitive ability. Characteristics that make up a person,s personality include, among other things, their creativity, suitable use of humor, self-assurance, trustworthiness and honour, approachability, ability to manage their time well, politeness, being detailed, skill to see the big picture, self-motivation, common sense, ability to make wise decisions, compassion for others, communication skills, and willingness to see a difficult task through to completion (TechTarget, 2021).

According to Honorati and Silva (2016), the majority of the Ghanaian urban population work in jobs that need only a few cognitive skills. The study reveals that vast majority of businesses are searching for people who exhibit characteristics like public speaking, leadership abilities and soft openness, which allow employees to connect and relate well with one another and clients, as well as proactive problem solvers. These traits are regarded by many corporations as having a significant impact on their hiring decisions due to their inherent ability to raise job performance (Ashill, Semaan, Gibbs, & Gazley 2020; Babar & Tahir 2020; Le, Robbins, Ilies, Holland & Westrick 2011).

Furthermore, many of the positions in Ghana are low-skilled, entailing only little use of numeracy, which is derived from cognitive capacity and is employed on a regular basis by all workers, particularly street vendors who charge for their items and public sector employees in the urban formal sector. According to research, individual personality traits are commonly used in such

roles (Ashill, Semaan, Gibbs, & Gazley 2020; Babar & Tahir 2020; Le, Robbins, Ilies, Honorati & Silva 2016; Holland & Westrick 2011). This view is supported by the human capital theory and Heckman equation which links personality traits and cognitive skills to productivity. As a result, the purpose of this study is to contribute to the literature by assessing the impact of personality traits in determining employee performance and job type in Ghana.

Statement of the Problem

Personality traits that define how people conduct themselves in social circumstances, includes social graces, communication ability, language proficiency, conduct patterns, emotional or cognitive empathy, time management, cooperation, and leadership qualities. The term "personality traits" is used to refer to a broad range of abilities that fall under three key functional categories: interpersonal, social, and professional qualities (see Foerster, Matthes, & Seitelman, 2020; Deleidi, Meloni, Salvati, & Tosi 2020). They are not limited to a single profession and thus the development of these skills is important to the growth and development of every society.

Glewwe (1991) studied whether the results of the private return to education research were tainted as a result of an omission to take into consideration differences in the participants, innate abilities and the quality of their schools. When years of schooling were utilized to quantify human capital, Glewwe discovered that education did not provide any return. According to the findings of the study, combining reading and mathematical knowledge was found to have significant and beneficial effects on cognitive ability. One cannot, however, ignore the role that personality traits have in academic performance.

Jolliffe (1998) used literacy and numeracy tests to estimate yields on on-farm profit, income not from farming, and overall income to determine how cognitive capacity affects household income. Powell,s censored least absolute deviations and Heckman,s two-step showed that Ghanaians, off-farm and overall earnings positively and substantially correlate with cognitive capacity. Ghana,s agricultural sector has low cognitive skill returns, they found. Despite their importance, the report failed to demonstrate how personality traits affected on-farm profit, income not from farming, and overall income.

A study by Vijverberg examined how cognitive abilities affect Ghanaians who work for themselves in farming or non-farm domestic employment. Despite the limited data and the authors, failure to account for the role of personality traits, the findings did provide some indication that intellectual skills as a measure of human capital had an affirmative impact on off-farm incomes of households (Vijverberg 1999). There is less study on the impact of intellectual skills—as measured by reading skills—on outcomes in the employment market than there is on academic accomplishment, according to Dearden et al. (2000).

When employing non-self-assessed literacy metrics, Vignoles, Schwartz, and Luyckx (2011) and Dustmann and Fabbri (2003) found that reading competency increases wages, employment, and earnings. According to Chiswick et al., (2003), improved reading and math skills improve labour market outcomes. However, the researchers failed to verify personality factors, impact on career performance.

Additionally, Murgor (2017) examined how personality traits affected self-employment among Kenyan graduates of VOTEC education and training.

According to the data, self-employment is significantly and favourably impacted by a person,s ability to solve problems, operate independently, interact with others, adapt, be creative, and invent. Assan and Nalutaaya also addressed Kenya,s youth unemployment problem (2018). The study examined how personality development and provision affect university students, employability in Kenya,s employment market. While evidence revealed its significant impact on employment, such studies are limited in the scope of employment in Ghana.

According to Majid, Eapen, Aung, and Thazin (2019) personality attributes are essential for job applicants as well as for a fruitful, fulfilling, and gratifying career. According to the study,s findings, employers expected incoming graduates to possess skills in areas including a pleasant attitude, teamwork, good ethics, and problem solving. Indeed, studies show that a person,s long-term development is reliant on personality qualities acquired over time (Honorati & Silva 2016; Heckman, Stixrud, & Urza, 2006). Nunoo (2020) also found that four out of the five personality traits significantly affect outcomes on the labour market in Ghana.

As a result, there is a gap in our understanding of how personality traits affect employment type and job performance in Ghana, even though many of these empirical investigations focused on the role cognitive skills play in educational attainment, health status, and labor outcomes. Research supports the association between cognitive capacity and employment (Mumford, Todd, Higgs, & McIntosh, 2017), but not personality attributes. Ghana also has gaps in how the five personality qualities relate to job type and performance. In other words, does one,s personality influence the type of work one does and how well one accomplishes it in Ghana,s urban communities? In light of these

circumstances, this thesis examines the effect of personality traits on employment type and job performance in Ghana.

Purpose of the Study

The purpose of the study is to probe the role of personality traits in determining employment type and job performance in Ghana.

Objectives of the Study

To achieve the study's overall goal, the objectives of the study were to:

1. Examine the difference in means between personality traits and selected socio-economic characteristics.
2. Determine the link between employment status and personality traits.
3. Estimate the effect of personality traits on the employment type.
4. Estimate the effect of personality traits on job performance.

Research Hypotheses

1. H_0: There is no statistical difference between personality traits and the selected socio-economic characteristics.

   $H_{1:}$ There is statistical difference between personality traits and the selected socio-economic characteristics.
2. H_0: Personality traits have no significant effect on the employment type.

   $H_{1:}$ Personality traits have significant effect on the on the employment type.
3. H_0: Personality traits have no significant effect on job performance.

   $H_{1:}$ Personality traits have significant effect on job performance.

Significance of the Study

The role of personality traits in determining employment type and job performance in Ghana has received little attention in both academic literature and policy circles. The present study propose that personality traits is essential in ensuring that individuals obtain the desired training needed to execute task at work. Supported by empirical evidence (Petasis & Economides, 2020, Dohmen, Falk, Huffman & Sunde 2018; Honorati & Silva 2016), researchers are becoming increasingly convinced of personality traits unique role in determining the employability and the productivity of an individual. That is, for government and employers to receive the maximum work output from their employees, personality must be among the primary requirement including education and cognitive skills. This study is relevant in the following ways:

This study will enlighten the government, entrepreneurs, business managers, and the public on personality attributes and economic productivity. Understanding personality features can help governments and private employees understand what organizations and businesses need to operate efficiently. Thus, this study showed that if personality traits form part of the employability skills employees must look out for apart from the cognitive and technical skills. In the area of academia, this study provides a major contribution to literature on the subject of personality traits in determining individual type of work and job performance in Ghana.

Delimitation of the Study

This investigation is limited as follows. First, the study is Ghana-only. The study only uses Ghana STEP (Skills Measurement Household Survey) data.

Further analysis is confined to individuals. A weakness of this study is the use of personality factors to determine job type and performance.

Limitation of the Study

The study acknowledges the limitation that confronts this present study. First, the measurement of job performance involves thirteen (13) indicators that form a composite index of job performance. This makes it difficult to ascertain which of the indicators has the greater dominance on the outcome variable of interest (personality traits). Second, the measurement of employment type (employed, public employed and self-employed) were binary and thus employed limited dependent variable estimation like probit regression. These limitations make it difficult to establish linearity between the independent and outcome variables as provided by linear regression.

One of the key benefits of the self-reported survey, according to Caution and Lilienfeld (2015), can be quickly and cheaply supplied to a big sample. When the sample is random, self-reported surveys allow for the collection of a lot of numerical data, making results easier to generalize. In scientific fields, self-reported surveys are often used as screening instruments in the first stage of a two-stage process. The information that respondents provide in self-report questionnaires also tends to be more accurate because they are far more familiar with the topics at hand than other people (Cautin and Lilienfeld, 2015). Others are only able to verbally respond to and report on the outward manifestations of the respondent,s experience. However, the drawbacks of employing self-report surveys are obvious.

Self-report surveys, major problem may be the risk of lying. Respondents may lie, especially about sensitive areas like income. Social

desirability bias may cause them to act socially acceptable (Cautin and Lilienfeld, 2015). Several issues compromise survey reliability and validity. One issue is response bias, or a person,s tendency to respond the same way regardless of the question. People may react "yes" or "no"—a non-acquiescent bias—regardless of the question,s content. Lack of clarity in self-report questionnaires may lead to inconsistent answers (Cautin and Lilienfeld, 2015).

Furthermore, in regard to highly organized questions, the framework may compel respondents to provide answers that do not reflect their ideas. For instance, the structure might reveal the researcher,s biases. Open-ended inquiries, on the other hand, might encourage subjectivity and more intricate examination. The researcher,s presence when the questionnaire is completed could have an impact on the respondents, responses. For instance, when participants are aware that they are being watched, they may alter their conduct or show an improvement in their results. More particular, a respondent might not feel at ease making the extreme choices while the examiner is present. With fixed-choice questions, inflexibility may be a downside. When scoring a statement, participants have little time to express themselves (Cautin and Lilienfeld, 2015).

Definition of Key Terms

Soft skills: are a broad category of abilities, competences, behaviours, attitudes, and personal traits that help people engage well with others, successfully navigate their environment, perform well, and accomplish their goals.

The Big Five Personality Traits: Openness to new experiences, conscientiousness, extraversion, agreeableness, and neuroticism or emotional stability are among the big five traits.

Work Performance: Work performance is defined as behaviors that have been assessed or measured in relation to how well they contribute to organizational objectives.

Organisation of the Study

The research was broken down into five different segments for easy reading. The introduction to the study, the backdrop, the statement of the problem, the purpose, the objectives, the study hypotheses, the significance, the delimitation, and the limitation, as well as the organization of the study, are all covered in the first chapter. The second chapter contains both a discussion of and a presentation of a literature study pertaining to the topic at hand. The techniques that were utilized in the research are dissected in detail in the third chapter. The findings of the research are dissected in Chapter Four. The findings of the study are discussed in Chapter Five, along with the inferences and recommendations that can be drawn from them. Additionally, it makes some suggestions for future research.

Chapter Summary

This chapter outlined the background to the study which covers brief information that would help to clarify the research objectives that the research is intended to achieve. In addition to that, it contained a statement of the problem, the goal of the study, the research objectives, hypotheses, the significance of the study, as well as the delimitation and limitations of the study. In conclusion, the chapter came to a close by discussing the structure of the study.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The review of the relevant prior research for this topic may be found in the next section. This article discusses the three primary theoretical viewpoints on the link between the development of cognitive and personality qualities and the outcome in the labor market. The following is an explanation of each theory: theories of human capital, signaling theory, and the Heckman equation are discussed. The idea of personality traits, as well as the Big Five Personality Traits, as well as the factors that determine cognitive abilities, were discussed in depth. The body of empirical research looked at the association between personality qualities and cognitive ability, as well as the connection between personality traits and labor market results. After that comes the presentation of the conceptual framework.

Human capital theory

Over the last few years, labour economics research has led to the creation of the human capital theory. This theory addresses a list of issues relating to people,s productivity as a result of their human capital. One of the most important ideas in the field of labor economics is the concept of viewing workers, marketable abilities as a form of capital, which gives them a number of options for how to put that capital to use.

The term "human capital" refers to a person,s knowledge, abilities, attitudes, and aptitudes, in addition to any other acquired qualities that contribute to output (Goode, 1959). The production function includes talents as an argument because they show individual capacities that contribute to

production (Bowles et al., 2001). According to Blundell et al., early ability (whether learnt or inherent) and skills obtained through schooling or on-the-job training are two significant constituents of human capital (2005). From Hall and Johnson (1980), human capital is distinct from other resources in that it can only generate fair yields in direct relationship to the amount of labour supplied by the employee. According to Ishikawa and Ryan (2002), the level of an individual,s stock of human capital is the primary factor in determining that individual,s earnings. In their 2004 article, Cahuc and Zylberberg present a comprehensive analysis of the human capital hypothesis.

Human capital theory (HCT) goes beyond economics. It analyzes many human challenges in the framework of a specific mindset and proposes remedies. Human capital economics has a lot of potential application in personnel or human resource management. Human capital theory has consequences for each of these decision areas, and firms make a range of decisions about the acquisition, development, allocation, conservation, and remuneration of people on a daily basis (Flamholtz & Lacey, 1981). Human capital theory inherits the "hard core" metaphysical assumptions of orthodox economics study from neoclassical economics (Zamora, 2006). The main assumptions are individualism, perfect understanding, shrewdness, private property rights, and the market economy (competition). Human capital theory says investments in human capital benefit persons and economies. This suggestion,s investment section contrasts human capital expenses from consumptive acquisitions, which offer little outside direct delight (Vaizey, 1962).

As stated earlier according to Blundell et al. (2005), two important aspects of human capital are early ability and abilities acquired throughout formal education or on-the-job instruction. Through the formal schooling or on-the-job training, one acquires some level of intelligence, development of ability and skills. Once the individual,s ability and skills are developed, it influences his choice of work or the type of employment to choose and also his job performance. Intelligent workers can control their emotions to maintain a positive attitude and improve job performance, according to Carmeli (2003). Due to its importance in workplace productivity, companies care about employee performance (Hunter & Hunter, 1984). Leephaijaroen, (2016) argues that skills needed for accomplishment, self-absorption, locus of control, affective outlook, and their interaction affect job performance.

Heckman Equation

According to James Heckman,s Heckman Equation, non-cognitive talents including personality traits, objectives, motivations, and wants allow people to learn new skills and develop old ones. This follows the human capital development paradigm, which considers a person as a flaccid beneficiary of one period,s knowledge and cognitive skills investment (Heckman & Kautz, 2012). Heckman believes all noncognitive skills are dynamic. The proposition,s strength is that early life and social skill development influences intelligence and personal and social output.

Heckman believes that developmental schooling in childhood is the most cost-effective time to acquire cognitive skills. He also stresses the importance of families in helping children develop essential skills early on. Poor families are less likely to have the economic and social resources to give every

kid the early developmental stimulus they need for success in school, college, work, and life (Heckman & Masterov 2007).

Investing in a child,s early education and development produces the human capital necessary for a nation to achieve sustained economic growth, as demonstrated by the Heckman equation.

Invest + Develop + Sustain = Gain

where "*invest"* denotes the investment required in the lives of poor families in the form of educational and developmental resources to offer equal access to successful early human development. The word "*develop*" refers to the effort put forth to foster in young children, from birth to age five, the cognitive abilities, personality traits, and physical well-being that are most crucial. The inclusion of "*sustain*" demands for the child,s continued early development and good education until adulthood. These initiatives will result in a better skilled, efficient, and productive workforce that will benefit the lives of the future generation.

Personality traits, as proposed by Heckman, Stixurd, and Urzua (2006) and Cunha, Heckman, Lochner, and Masterov (2006), can predict later-life success, such as academic achievement and labor-market results. Crime, high school dropout, single parenting, and poor health are also associated to low cognitive and personality qualities. They suggest that early childhood development prevention is more effective and cheaper than restoration. Heckman and Kautz (2013) argue that greater education can improve personality qualities that predict labor-market performance. They argue that personality traits matter as the foundation for cognitive skill development and interact positively with cognitive skills throughout one,s life cycle. Personality

traits can predict job performance and profitability by influencing eventual proficiency in knowledge and skill acquisition.

The Concept of Personality traits

Personality qualities are needed for personal, professional, and collective success. Personal traits that boost professional and social success. Instead of hard talents, which are particular to a task or activity, personality qualities are interpersonal and generically applicable. Many studies on personality features, such as Spencer and Spencer (1993) on positive psychology, imply that human action contains positive psychological capital. Positive psychological capital (Psy-Cap) study complements human and social capital research (Luthans et al., 2004; Luthans & Youssef, 2004).

Hurrell, Scholarios, and Thompson say personality qualities are "nontechnical and not reliant on abstract reasoning, involving interpersonal and intrapersonal talents that increase learned performance in particular contexts." Grugulis and Vincent listed communication, problem-solving, teamwork, motivation, judgment, leadership, and initiative as personality attributes. Unlike the previous idea, many of these vocations need abstract thought. Diane Parente, John Stephan, and Randy Brown call people management soft abilities. Their list includes "clear communication and relevant feedback, resolving and/or managing conflicts, and understanding human behavior in group settings" (Rao, 2018).

According to Sukhoo et al., personality qualities involve managing and working with people, assuring customer satisfaction to retain them, and establishing a favorable environment for the project team to deliver high-quality goods within budget and on schedule, exceeding stakeholders, expectations

(2005). Various definitions and classifications of "personality traits" include life skills (WHO 1993), twenty-first century skills (Moore and Morton 2017), transversal skills, generic competences, and key competencies for a successful life, a well-functioning society, and lifelong learning (EU 2006). Life skills, social skills, interpersonal skills, leadership skills, transversal competences, social competences, and meta-competences are used to describe the "emotional aspect" of humans, unlike IQ (Intelligent Quotient) (Delamare-Le Deist & Winterton 2005; Shalini 2013).

A person's personality is made up of a variety of cognitive, metacognitive, social, intellectual, and practical abilities. Personality qualities help people adapt and react constructively to overcome professional and personal challenges. Personality qualities include a wide range of interpersonal and social skills that are transferable across industries (Hurrell, 2016; Deloitte Access Economics, 2017). Communication, teamwork, problem-solving, creative thinking, self-confidence, ethical awareness, lifelong learning, ambiguity management, and accountability are examples of personality traits (Andrews & Higson, 2008; Harvey, 2000; Moore & Morton, 2017; Kalfa & Taksa, 2015).

The Big Five Personality Traits

Personality psychology describes qualities and implications of individual diversity. In many economic and social areas, personality traits determine success. Differences in psychological qualities, also called "personality traits" or "character skills," cause inequity. Therapies that target personality can modify personality traits, and interventions that target personality are promising (Heckman, 2012).

Psychology,s most widely accepted personality model is the Big Five: extroversion, neuroticism, agreeableness, openness to experience, and conscientiousness (Goldberg, 1992). The Big Five structure does not condense personality into five aspects; rather, these five traits describe personality at its most abstract level, and each dimension represents a large number of distinct, more specific personality traits (John & Srivastava, 1999). Under personality qualities, the Big Five are discussed.

According to Barrick and Mount (1991) extraversion is a personality attribute that includes traits like talkativeness, sociability, activity, and expressiveness. Sociability—exhibition and expression—is a hallmark of extraversion. They crave adulation, social recognition, power, and position (Costa & McCrae, 1997). Extraverts positively enhance affective commitment (Erdheim, Wang & Zickar, 2006).

Neuroticism causes anxiety, melancholy, rage, humiliation, emotionality, worry, and insecurity, according to Barrick and Mount (1991). Neuroticism is a lack of social skills and a desire to escape control (Judge, Locke & Durham, 1997). NA is closely associated to neuroticism (Watson & Tellegan, 1985). They feel less positive emotions than other people do (Magnus et al., 1993). Because resigning would be expensive for them, they would be forced to stay with the company, which would lead to terrible work habits. They fear starting a new job with increased challenges (Erdheim, Wang & Zickar, 2006). Neurotics favor long-term commitment (Erdheim, Wang & Zickar, 2006).

According to Barrick and Mount (1991), agreeableness includes civility, flexibility, trust, good natured, cooperative, forgiving, soft-hearted, and tolerant. Job performance is not strongly correlated with agreeableness (Barrick

& Mount, 1991). They say agreeability is substantially correlated with collaboration but not with any other quality or professional category (Barrick, Mount & Judge, 2001).

Barrick and Mount (1991) define openness to experience as innovative, sophisticated, curious, original, broad-minded, clever, and artistically sensitive. "Openness to Experience is a ,double-edged sword, that predisposes individuals to feel both the wonderful and the dreadful more deeply," DeNeve and Cooper (1998) noted. Psychologists have debated openness to new experiences, according to Costa and McCrae (1997) and Hough and Ones (2001). Openness to experience, like agreeableness, has the lowest average true score correlations across criteria and vocations, according to Barrick and Mount (1991). (Barrick, Mount & Judge, 2001).

Barrick and Mount (1991) define conscientiousness as industrious, meticulous, thorough, responsible, organized, and persevering (Barrick & Mount, 1991). Raja et al. (2004) found that conscientious people are more likely to create relational contracts with organizations about exchange. Long-term contracts are known as relational contracts because they incorporate terms for both economic exchange and loyalty or organizational growth (Rousseau & MacLean Parks, 1993). Affective commitment is favorably associated to this form of psychological contract (Raja, Johns & Ntalianis, 2004). Conscientiousness and affective commitment have a positive association, according to Erdheim, Wang, and Zickar (2006).

Personality Traits and Cognitive Skills

Cognitive talents are essential skills for middle-aged adults to meet the demands of work, school, and advanced training, as well as societal

expectations and the needs of everyday life (Lachman, 2004). Our genes and lifestyle have an impact on our cognitive abilities. During various times of life, the heritability of general cognitive capacity could be as high as 80%. (Plomin & Deary, 2015). However, lifestyle factors are thought to have a significant role in predicting individual differences in cognitive aging trajectories (Finkel et al., 1998).

The first population-based genetic analysis study found that environmental factors explain 75% of cognitive capacity variance from childhood to old life (Deary et al., 2012). Work surroundings and conditions can affect job-specific and individual cognitive development. Thus, environmental factors influence cognitive development more than in prior periods (Sternberg et al., 2001). This is like a genetic risk of heart disease that can be lowered by eating well and exercising.

Active and involved lifestyles are good for brain health (Foresight Mental Capital and Wellbeing Project, 2008; Fratiglioni et al., 2004; Hertzog, 2008), and mid- or late-life engagement may reduce dementia risk (Valenzuela et al., 2011; Valenzuela & Sachdev, 2006). Although the extent to which parental wealth impacts child development is mixed, it has been proven to be connected with cognitive achievement (Haveman &Wolfe 1995). Only a few types of household resources appear to have an effect on educational outcomes. The number of books in the house is the most influential of these, as they may be the best tool for boosting learning in various areas (Evans et al. 2010).

Dahmann (2017) uses a quasi-natural experiment to determine two ways schooling improves teenage cognitive skills: Academic-track high school years decreased by one between 2001 and 2007, while the curriculum stayed the

same. A study of seventeen-year-olds, IQ scores after increasing class hours, based on time and state variance, used German Socio-Economic Panel data. Second, German National Educational Panel Study data on high school graduates, ability to examine the effects of early teaching. The findings suggest that neither instructional duration nor age-specific sequencing of teaching enhances students, crystallized cognitive skills considerably in adolescence. Increasing instructional time, on the other hand, may benefit male pupils, worsening gender inequalities in numeracy.

Falch and Massih (2011) found that Swedish military enlistees in Malmo in 1947 and 1948 benefit from an additional year of schooling by 2.9 to 3.8 IQ points. Cascio and Lewis (2006) estimate returns to schooling using 1979 National Longitudinal Survey of Youth data and Armed Forces Qualifying Test (AFQT) scores of 15–19-year-old males and girls in the US (NLSY79). Changes in birthdate and school entry requirements only provide gains of 0.32 standard deviation for racial and ethnic minorities. Banks and Mazzonna (2012) study the long-term effects of compulsory schooling reform in England using regression discontinuity. Males and females over 50 improve memory performance by 0.35 to 0.6 standard deviation. Male executive functioning improved slightly, with impact sizes of 0.37 to 0.63 standard deviations.

Personality Traits and Employment Type

Studies show that personality traits affect wages and unemployment (see, e.g., Almlund et al., 2011). Personality factors also affect occupational sorting, which matches job seekers with different traits and open opportunities in the labor market. Studies support Holland,s vocational personality theory, which claims that persons with different combinations of RIASEC (Realistic,

Investigative, Artistic, Social, Enterprising, Conventional) attributes choose occupations with activities that match their personality type (Nauta, 2010). The Big Five personality traits—"openness, conscientiousness, extraversion, agreeableness, and neuroticism"—and positive core self-evaluations predict occupational sorting (Judge et al., 2000). (Ham, Junankar, and Wellis, 2009; John & Thomsen, 2014).

Sector choice is yet another crucial aspect of occupational sorting in relation to occupational fields. Research shows huge public-private job inequality. Even though the compensation gap between the public and private sectors is usually zero or positive in developed countries, public sector jobs pay less at the top (Lucifora & Meurs, 2006). Public sector occupations are more secure and family-friendly than private sector jobs (Munnell & Fraenkel, 2013). (e.g., Feeney & Stritch, 2019). Studies show that public and private sector workers differ. Public sector workers are more likely to be female, educated, married with children, and have public sector family connections. Risk-averse public sector professionals are also stated to (Buurman et al., 2012; Pfeifer, 2011).

The sectoral disparities in personnel traits may be partially explained by occupational sorting, but it is unlikely to be the primary explanation. Roy,s (1951) theory states that people choose careers that maximize their utility. Utility maximization relies on preferences. Those who value family-friendly work environments or non-cash incentives may self-select into the public sector. In contrast, psychology and management literatures emphasize motivational mechanisms in work-related sorting (see Barrick, Mount & Li, 2013; Ritz, Brewer & Neumann, 2016). Public service motivation (PSM), a "collection of

needs a person possesses connected to serving society" (Breaugh, Ritz, & Alfes, 2018, p. 1428), may explain why certain people appreciate public sector job (see, e.g., Ritz et al., 2016). Personality affects preferences, motivation, and sectoral choice (see Almlund et al., 2011; Barrick et al., 2013). Research has examined how personality qualities affect entrepreneurship (Frese & Gielnik, 2014; Brandstätter, 2011; Rauch & Frese, 2007).

Self-employment literature emphasizes personality in business creation and performance. Entrepreneurs develop firms to pursue opportunities (Bygrave and Hofer, 1991). Establishing and running a business calls for greater levels of self-initiative and discretion, risky choices in uncharted territory, tenacity in the face of difficulties, setbacks, and stress, and connections with financiers, vendors, and customers. A comparison of personality traits with entrepreneurial tasks gives intuitive clues regarding the relationship. The five-factor model, known as the "big five"—conscientiousness, extraversion, agreeableness, neuroticism, and openness—is one of the most thoroughly studied personality traits (Costa and McCrae, 1992; McCrae and Costa, 2008).

The Concept of Job Performance

Performance has many definitions. Performance is judged by how well behaviors support organizational goals (Cook & Hunsaker, 2001 cited in Katsaros, Tsirikas, & Nicolaidis, 2015). Similarly, Gareth (2003) defines company performance as how well managers use resources to serve consumers and achieve organizational goals. For this investigation, Gareth definition is used.

Aptitude, need for achievement, self-regard, locus of control, affective temperament, and their interaction affect job performance (Leephaijaroen,

2016). Darkwah (2014) defines performance as behaviors and consequences that transition the performer from concept to action. This is the consequence of mental and physical effort put to tasks, not results. Research shows personality traits affect job effectiveness (Alsuwailem & Elnaga, 2016; Waheed et al., 2017).

The "Big Five" Personality Traits and Job Performance

Both dispositional factors, such as personality traits, needs, attitudes, preferences, and motives that predispose one to react to situations in a particular way, as well as situational factors, such as job features, organizational structure, and coworkers, can affect job performance (Leephaijaroen, 2016). Job performance is influenced by aptitude, the desire for success, one's self-esteem, locus of control, affective temperament, and the interaction of these factors (Ongore, 2013).

There is general agreement that personality traits, when matched with the appropriate employment and organization, can predict performance. Employee job success has been correlated with extraversion, conscientiousness, openness to new experiences, neuroticism, and agreeableness (Waheed et al., 2017).

Extraversion

An extravert is gregarious, talkative, vivacious, active, and exuberant. Talkative and dominant, they (Ghani, Yunus, & Bahry, 2016). Extraversion predicts success and well-being in many areas (Alsuwailem & Elnaga, 2016). People with strong extraversion are lively, talkative, and gregarious. The opposite of extravert is introvert. Introverts are quiet, deliberate, and less gregarious. Introverts, independence and reserve are often misinterpreted as

arrogance or unfriendliness. Independent, low-extraversion people like loneliness (Attia, 2013; Waheed et al., 2017).

Conscientiousness

It measures responsibility, achievement, reliability, and perseverance. Conscientious people work hard and are disciplined. They tend to receive performance feedback and eliminate ambiguity. Conscientious people have good self-control, perform conscientiously, aim for success, follow a plan rather than behaving spontaneously, and are adept at setting long-term objectives, organizing and planning routes to success, and working consistently to attain goals (Ghani et al., 2016; Seng et al., 2013; Waheed et al., 2017).

However, conscientiousness can harm well-being when failure occurs. Conscientiousness is the strongest of the five factors that predict job performance (Seng, 2013), although task performance is the basic functions and duties as described in the job description, while contextual performance is extra role and pro-social behaviors that go beyond the basic job description (Alsuwailem & Elnaga, 2016; Attia, 2013; Waheed et al., 2017).

Openness to Experience

Cognitive style divides imaginative, creative, and conventional persons by openness to experience. Openness to experience measures creativity, thoughtfulness, curiosity, and openness to new experiences. It measures imaginative depth, breadth, and diversity and the desire for experiences. Open people tolerate ambiguity and seek excitement and dangers, while closed people fear risk and stick to the familiar. Openness to experience may assist identify "training ready" persons who want to learn (Seng et al., 2013; Alsuwailem & Elnaga, 2016; Attia, 2013; Ghani et al., 2016; Waheed et al., 2017).

Neuroticism

This is about emotional stability adjustment. The inclination to have disruptive emotions and thoughts is addressed. Low-neurotic people are self-confident, peaceful, even-tempered, and relaxed, while high-neurotic persons are worried, insecure, and more stressed. Stable emotions and careful actions work better in tasks than relationships. Low emotional stability or neuroticism lead to poor stress coping, illogical thinking, impulsive control, and concern (Ghani et al., 2016; Alsuwailem & Elnaga, 2016; Waheed et al., 2017; Attia, 2013; Seng et al., 2013).

Agreeableness

Trust, friendliness, and cooperation are measured here. Agreeable individuals are known for their cooperative, kind, modest, flexible, forgiving, courteous, and attentive nature, making them easy to get along with. They think people are good, honest, and trustworthy. Because they value social peace, they get along with others. High agreeableness isn,t beneficial in situations that require absolute or severe objective judgements (Attia, 2013; Alsuwailem & Elnaga, 2016; Ghani et al., 2016; Seng et al., 2013).

Empirical literature

In this section, we looked at other researchers, previous work that was similar to ours and was done on the same study subject. The significance of this is to amass a body of information on the subject that is being investigated so that ample opportunity can be made available for analyzing the data.

Personality traits and labour market outcomes

Human capital development and workforce success rely heavily on "personality traits." There is accumulating evidence to suggest that these traits can predict employment and wages, in addition to academic or technical abilities (Kautz et al., 2014). The need for people with such skills has soared over the past two decades as a result of the widespread transformation that has taken place in workplaces all around the world (Eger & Grossmann, 2004; Carnevale, 2013; International Labour Organization, 2008; Balcar, 2014). Nonetheless, many companies throughout the world report a personality trait "gap," in which job hopefuls lack the personality traits required to fill open positions (Manpower Group, 2013).

Kember, Leung, and Rosa (2007) state that there is a growing knowledge that certain personality qualities might assist kids achieve academic and career goals when they graduate from high school. According to this line of thought, personality traits have become an increasingly significant component of education to be included in the educational process. This is due to the fact that businesses are actively searching for people who possess a set of skills that appear to fall under the area of career preparedness as well as employability. According to Chamorro-Premuzic et al. (2010), employer queries have mirrored unhappiness with the degree to which personality traits are nurtured in postsecondary education. This displeasure was reflected in the number of questions that were asked.

Weinberger (2011) presented new research on the salary benefits of leadership abilities. She regressed the behavioral indicator of leadership on weekly wages seven years after graduation. Between 1979 and 1999, leadership

in organizations, performing arts, student publications, or athletics more than doubled, resulting in a 5.3 percent wage premium. In occupations that needed strong social and cognitive competence, the wage premium grew, remained roughly constant in those that required high social or cognitive skill (but not both), and fell in those with minimal skill requirements.

Karmel (2017) examined OECD country-level data to determine if the structure of countries, education systems, as measured by age participation at various International Standard Classifications of Education (ISCED), affects unemployment for 20-24 and 25-29-year-olds, taking into account the entire labor market and demographic structures. Karmel found that educational system structure matters, even though the employment market is critical. In as much as educationals systems in the job market, the study failed to examime the job market in relation to personality traits.

Albandea and Giret (2018) examined how personality affects French post-secondary graduates, wages. The study generated personality characteristics indicators and studied their effects on French master,s degree graduates, earnings using survey data. Quantile analysis is used to evaluate personality traits, effects on income. The research showed that personality factors influence recent master,s grads, wages. They affect top earnings and are essential for skilled jobs.

In numerous European nations, Succi and Canovi (2020) compared students, and employers, personality characteristic valuations. The data show that 86% of respondents think personality qualities have been more important in the last 5–10 years and that employers prefer soft skills above students/graduates. The research also found substantial differences in the

ranking of the 20 personality traits, indicating different priorities. The article recommends collaboration between businesses and HEIs to promote personality traits awareness and personal responsibility for skill development, enabling students to adapt to changing labor markets and enhance employability. They didn,t consider how skills affect the labor market, even though personality qualities boost employability.

Calanca, Sayfullina, Minkus, Wagner, and Malmi (2019) study personality features in job ads using computer science and economics, sociology, and psychology theories and data. Their semi-automated method uses crowdsourcing and text mining to identify personality traits. Researchers say personality attributes are important in job ads, especially for low-paying and female-dominated sectors. The research found that personality factors can somewhat predict occupational gender composition and that not all personality qualities earn similar wages. Wage penalties are often associated with women,s skills. Their findings improve our understanding of how personality factors affect income inequality and emphasize the importance of workplace gender segregation.

Balcar et al. (2018) assess the personality traits of Czech public university graduates. The findings demonstrate that university graduates are required to have the same personality traits as the general population (with the exception of problem solving), but that the required degree of these skills is 42 percent greater in the case of graduates. They claimed that employers, unfortunately, consider graduates, personality traits to be poor, since their level is 16.46 to 31.15 percent lower than required. A further in-depth examination revealed that, when it comes to the development of personality traits, Czech

colleges offer a fairly consistent service. University graduates have roughly identical levels of personality traits and can recognize similar strengths and deficiencies. While the study examined graduates, personality traits, it did not examine how those talents improve their employability in the labour market.Tang (2018) examined how 34 workshop attendees communicated personality traits and instructional experiences. These 34 Newton Fund Researcher Links Workshop-eligible lecturers comprise 20 Thais, 13 British, and one Vietnamese. The study used qualitative interviews. Interviews were used to explore these participants, main ideas on how to incorporate personality features to increase graduate employability. The study found that most higher education institutions are facing the challenges and rethinking career services, academics, and support services to boost employability.

Furthermore, the findings revealed that the importance of non-academic abilities to employability has been stressed in the UK higher education system. Furthermore, participants have identified a list of personality traits that graduates should possess, and it appears that the lecture theatre, tutorial room, or study group will be the most common places where these talents will be taught. The study after showing that participants identifying a list of personality traits did not look at how these lists of personality traits will impact the labour market.

Singh and Jayakumar (2019) investigated and identified personality traits competencies that are required for a broad set of entry-level employees, and then used the hospitality program and internships to identify deficiencies. The study is analytical in nature and includes a literature review as well as a questionnaire for stakeholders to complete as a survey instrument. Employers,

students, and staff of the service industry educator Vedatya Institute completed study questionnaires. The study focuses on entry-level employees, specifically students who have recently graduated from Vedatya Institute (Succi & Canovi 2020).

The employers are generally five-star hotel general managers and human resource managers who have recruited and participated in campus interviews. The study looked at personality traits or employability abilities for the hospitality sector, and it revealed useful insights from employers as well as graduates, assessments of their capacity to acquire those skills during their degree program. The importance of internships in improving personality traits was stressed in the study. The article makes recommendations for educators and organizations that can be implemented. The study compiled current thinking on essential personality traits for young entry-level employees and investigated the personality traits gap in the context of a rising personality traits training sector, as well as making recommendations to stakeholders (Succi & Canovi 2020).

The relationship between personality traits and cognitive skills

Cognitive abilities or capacities are how your brain remembers, reasons, holds attention, solves problems, thinks, reads, and learns. Your cognitive abilities help you process new information by sending it to the proper brain regions. Your brain will utilize cognitive skills to access and use that information later (Foerster, Matthes, & Seitelman, 2020). Cognitive skills can help your brain handle new knowledge faster and more efficiently. Cognitive skills help you understand data, remember team goals, focus in a vital meeting, and more at work. These abilities help you retain and link old and new

knowledge to achieve your company,s goals, making you more efficient (Foerster, Matthes, & Seitelman, 2020).

Self-motivation, honesty, and interpersonal connection are "soft abilities." Though less direct and conscious than cognitive skills, they may entail intellect. Personality qualities affect temperament, attitude, and personality. Personality traits such as working well with others and functioning efficiently in a work setting are required for practically all jobs. The ACT Work non-cognitive examinations assess personality traits that are important in a variety of jobs. The US Department of Labour established industrial competency models that are applicable across all sectors of the economy and include both cognitive and noncognitive core skills. Employers gain significant information by combining two diverse skill areas, which helps them make better decisions about recruitment, selection, promotion, and training and development (Deleidi, Meloni, Salvati, & Tosi 2020).

Many research definitions of personality traits agree that non-cognitive skills can be equally valuable as cognitive skills in the job (Gutman and Schoon, 2013). According to Balcar (2016), some personality qualities are more linked to cognitive ability than non-cognitive abilities (example problem solving, planning and organising or exploring and orientation in information). Heckman et al. (2006) found that motivation, self-esteem, and perseverance can exceed cognitive talents in academic and job performance. Lindqvist and Vestman (2011) used Swedish data to show that non-cognitive skills constitute a bigger barrier to employment for unemployed people. Low pay and long-term unemployment may be caused by a lack of non-cognitive skills rather than cognitive skills.

Personality traits and cognitive skills complement one other, according to certain authors. Deming (2015) noted the importance of high-skill work in the US during the 1980s and how social skills affect pay. These social skills promote teamwork and non-routine tasks while reducing coordination costs. Since new technologies cannot replace connection skills in specialized work, their compatibility with cognitive skills appears to have improved with time. Weinberger (2014) also noted the growing complementarity of social and cognitive skills in the US since the 1980s. Employers reportedly want young graduates with technical and social abilities, albeit some are more related to managerial professions than others.

Balcar (2016) found that personality qualities are as productive as hard skills in the Czech Republic: a standard deviation improvement in hard skills corresponds to an 8.8% salary premium, whereas the same increase in personality traits yields an 8.5 percent wage boost. From 1977 to 2010, employment in positions requiring only cognitive or personality attributes was rather consistent, but Weinberger (2011) found that employment in jobs requiring both is growing. It supports Bacolod and Blum (2008), who found a statistically significant correlation between cognitive and personality qualities needs, showing that they are complementary.

Bacolod and Blum estimated the salary benefits of cognitive, motor, and interpersonal skills (2008). One standard deviation gain in people skills was linked to a 3.2 percent salary rise in 1968 and a 6.0 percent wage increase in 1990, although cognitive skills improved by just 60 percent and physical skills fell by -50 percent between 1968 and 1990. An extensive investigation discovered that interpersonal abilities only strengthen other abilities. From 1968

to 1990, salary returns to people skills increased as returns to cognitive (or motor) and social skills improved. These results are in line with those of Weinberger (2011), who demonstrated a significant rise in employment requiring cognitive ability and interpersonal skills (in this case leadership).

Anger and Schnitzlein (2017) calculate sibling correlations in cognitive and non-cognitive skills to assess family history,s impact on skill formation. A constrained maximum likelihood model based on a large representative German dataset of IQ test scores and non-cognitive talents reveals a strong parental background-skill formation relationship. Sibling correlations in non-cognitive skills range from 0.22 to 0.46, indicating that shared sibling qualities explain at least 20% of the variance. Sibling correlations in cognitive ability are more than 0.50, therefore common familial background can explain more than half of cognition disparity. Similar to past findings on educational and income mobility, decomposition studies demonstrate that intergenerational correlations reflect just a portion of family,s influence on children,s cognitive and non-cognitive skills.

Relationship between personality traits and employment type

The notion of person organization fit suggests that public sector personnel with more experience have different personality traits than those with less or no experience. 711 Peruvian university executive extension students completed the Big Five Aspect Scales by León (2017). He discovered significant personality variations with age and gender, but public sector experience merely predicted higher openness. Openness was higher in women than men, and men predicted openness from public-sector experience more

often. Public sector experience appears to have no effect on personality in the population investigated.

The authors of the study, Zhao and Seibert (2006), compared the personality traits of business founders to those of dependently hired managers. According to their findings, those who are self-employed are distinct from managers on the personality traits of openness to experience, conscientiousness, neuroticism, and agreeableness.

Schmitt-Rodermund used structural equation modeling to study 322 East German 10th graders and 139 small business entrepreneurs (2004). His study found that authoritative parenting and entrepreneurial personality (low agreeableness and neuroticism, high extraversion, openness, and conscientiousness) were connected to teenage entrepreneurial competence in both groups. Entrepreneurship skill predicted better entrepreneurial inclinations, which in turn predicted entrepreneurial career prospects in students and an earlier first business start-up in founders. An early start-up and an enterprising founder were favorable to entrepreneurial success.

Conceptual Framework

The conceptual framework illustrated how researchers studied the "Big Five" personality traits, employment type, and job performance nexus. Time-tested theories based on countless examinations into phenomena were its focus. Figure 1 shows the association between the "Big Five" personality traits, employment type, and work performance, with the personality trait as the independent variable and the other two as the dependent variables. The "Big Five" personality traits are Extraversion, Neuroticism, Conscientiousness, Agreeableness, and Openness; public sector employment and self-employed are

used to measure employment type; and an additive composite index (from Ghana STEP data) uses 13 indicators to measure job performance in Ghana. It is argued that an individual,s personality trait can have a direct linkage with the employment type and performance. This conceptual framework was based on the detailed review of literature on the research area.

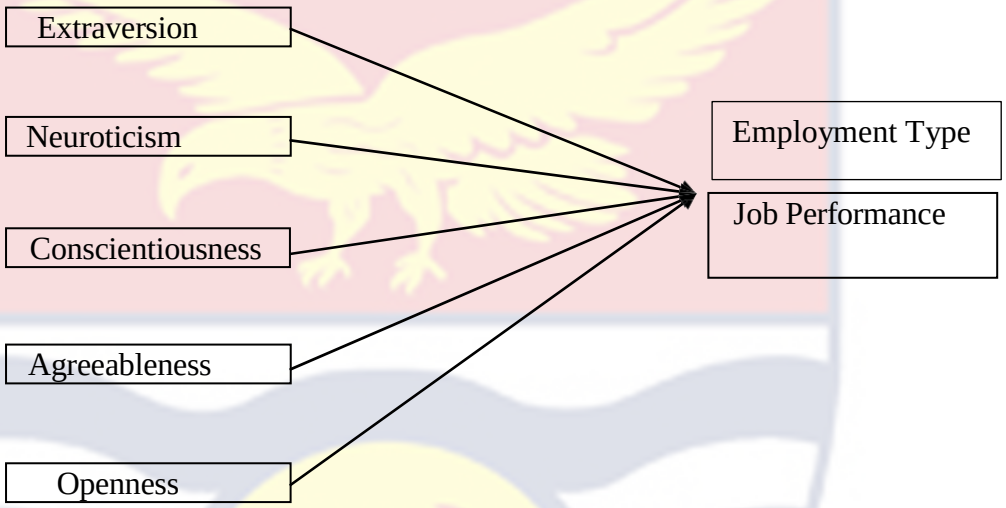

Figure 1: Conceptual framework of the study
Source: Author,s construct

Chapter Summary

In conclusion, empirical and theoretical studies show that personality traits affect job performance and employability. Despite personality traits, impact on labor market outcomes, the reviewed studies do not examine their effects on employment type and job performance. The literature review confirmed that personality traits are non-cognitive skills. Human Capital theory and the Heckman Equation also emphasize human capital development for productive labor outcomes. This development is however underpinned by the set of characteristics the individual trainee possesses and thus signifies the importance for researchers to pay particular attention to personality traits.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study examined the role of personality traits in determining employment type and performance in Ghana. An explanatory research design was adopted and data from the Ghana STEP (Skills Toward Employment and Productivity) initiative were used. Specifically, the study considered the effect of personality traits on type of employment; and the effect of personality traits on work performance. This chapter presents the methods which will be employed for the study. The chapter comprises mainly of the research approach, research design, data source and the proposed estimation technique for the study.

Research Approach

Three forms of research approaches have been identified in the literature. These include quantitative, qualitative, and mixed methods (Creswell, 2014). Quantitative research is defined as a systematic inquiry into a phenomenon that involves the collection of quantifiable data and the use of statistical methods to test the relationships between and among variables in an objective manner (Babbie, 2010). The principal focus of qualitative research is to explore and discover the reality. Unlike the qualitative approach to research, the quantitative research approach more often than not depends on existing data to test for hypothetical propositions. On the other hand, a mixed-method approach is a research methodology in itself. A mixed method research design, according to Creswell and Plano Clark (2011), is one that has its own philosophical assumptions and methods of investigation. It uses philosophical

presumptions as a technique to give instructions for the gathering and interpretation of data from several sources in a particular study. In particular, this study employed a quantitative research approach because of the fact that the study,s results can be replicated, and it maximizes objectivity and generalisability.

Research Design

A key aspect of an excellent research is to fit your study objectives and questions to your research designs (Sinkovics Penz and Ghauri, 2008). According to Saunders et al, (2007), a research design can be broadly classified into three types: explanatory, descriptive and causal. The study adopted an explanatory research design based on the available information, such as the nature of the problem, its scope, its objectives and the data collected. According to Saunders, Lewis, and Thornhill (2012), explanatory studies are those that aim to ascertain cause and effect associations among variables. An explanatory research design was adopted in order to gather background information as well as to define the terms of the research problem. The research design was appropriate for the study since it was meant to evaluate the cause-and-effect connection between personality traits, employment type and job performance. Additionally, it is conducted to gain a deeper understanding of the research problem.

Data Source, Description and Justification of the Data

The study employed secondary data which was sourced from Ghana STEP (Skills Toward Employment and Productivity) data. This was a household survey which was carried out in Ghana as part of the first wave of surveys under the STEP Skills Measurement Program between September 2011

and December 2013. The Ghanaian sample was gathered through a two-stage random sampling of households and individuals. It made up persons who are 15 to 64 years old. A two-stage random sampling of houses and people was used to compile the sample. A sample size of 2,987 consisting of people who are 15 to 64 years old and leading to 83% response rate. The STEP assessment program was the first ever effort to produce data on skills accessible in developing nations that were internationally comparable.The programme implemented standardised surveys to gather information on the supply and distribution of skills and the demand for skills in labour market of low-income countries. Along with the standard information captured at the household level, the STEP survey also collected extensive information on the skills level, education, and work history of the respondents involved in the survey randomly selected from each sampled household. The survey included three innovative modules on skills: (i) a specially designed assessment of reading literacy and competence to access, identify, integrate, interpret, and evaluate information; (ii) a battery of questions capturing self-reported information on personality traits and behaviours; and (iii) a series of questions on job-specific skills that the respondent possesses or uses in his or her jobs. The skills of the entire sampled population are captured, irrespective of their labor force status (employed, unemployed, or inactive) or sector of employment. This information collected from the respondents from the survey provides data on personality traits, employment type as well as job performance variables which are the principal focus of the study. Hence, the reason for adopting the Ghana STEP data for this study.

Measurement of Dependent Variable

The study employed two dependent variables for the study. The first dependent variable which answers the third objective is the employment type of the respondents sampled for the survey. The first category is wthether the respondent is employed coded as one and unemployed coded as zero. The employed category is then disaggregated into public sector employment and self-employed, respectively coded as one. For the second dependent variable (work performance) which answers the fourth objective. In all, 13 indicators were used to measure work performance. Each coded one if the respondent chooses yes and zero if otherwise. An additive composite index is generated out of these 13 indicators to form or represent work performance of the respondents in this sample. The following varibles were considered (whether as part of their work the respondent read bills, fill out forms, magazines, books, reports, measure or estimate distances, calculate cost, calculate fractions/decimals/percentages, perform multiplication/decision, use advanced math such as algebra, geometry and trigonometry, perform manual work and the respondent can read and write.

Theoretical Model Specification

Probit Maximum Likelihood Estimation

The study employs a probit regression model in the empirical analysis to analyse the first objective. A probit regression of outcome y_i on covariates X_i can be written as

$$y_i = 1\ (X_i\beta + \epsilon_i > 0) \quad (1)$$

y_i represent the outcomes variables (employed=1, public employed=1, self-employed=1). $X_i\beta$ is the vector of covariates and ϵ_i represent the error term (see

StataCorp, 2021, page 142). In estimating equation (1), the study assumed that ϵ_i is uncorrelated with the covariates (Wooldridge 2015). The study estimates linear probability model as robustness check for the first objective of the study.

Ordinary Least Squares

The study used Ordinary Least Squares (OLS) estimation method for analysing the second objective of the study. The application of OLS is subject to the assumptions underlying the Classical Linear Regression Models (CLRM). OLS deals with relationship between the dependent variable Y_i and the independent variables X_i such that the conditional mean function is specified as:

$$E\left(y_\iota/_{X\iota}\right) = \acute{X}\beta \quad (2)$$

and the resultant estimator ($\hat{\beta}$), which must satisfy the basic assumption underlying the classical regression model is given below:

$$\hat{\beta} = min \sum_{i=1}^{n} \left(\left(E\left(y_\iota/_{X\iota}\right) - \acute{X}\beta\right)^2\right) \quad (3)$$

Where, $\hat{\beta}$ is the estimator under OLS that minimises the conditional mean function. The estimator, which is the sum of the error squared is assumed Best Linear Unbiased Estimator (BLUE) under the Classical Linear Regression Model (CLRM) (Cameron & Trivedi, 2005). Under such an assumption it is important to ensure that the model is not only linear in parameters but also with an error term that is both serially uncorrelated and homoscedastic.

Empirical Model Specification

Linear Probability and Probit model

The empirical model specification for the probit regression for the effect of personality traits on type of employment can be modelled as

$$Y_i = \beta_O + \beta_i X_i + u_i \quad 3$$

Where for an individual i, Y_i is the respondent type of employment/ worker,s performance, x_i represent the personality traits the individual possesses in addition to all other control variables, u_i is the disturbance term, β_0 and β_1 are the intercept and slope parameter, respectively.

Y_i =measures the dependent variables (type of employment, worker,s performance)

X_i =refers to personality traits indicators as well as the control variables in the model.

ε_i=measures the residual/the error term in the model

Definition of Variables

The variables in Table 1 below relate to the original respondents of the household survey which was carried out in Ghana as part of the first wave of surveys under the STEP Skills Measurement Program.

Table 1: Definition of Variables

Variable	Measurement	Definition
Employed	Dummy	Yes=1, no=0
Public employed	Dummy	Yes=1, no=0
Self-employed	Dummy	Yes=1, no=0
Work performance	Continuous	Composite index (0-13)
Agreeableness	Continuous	Index (1-4)
Extraversion	Continuous	Index (1-4)
Conscientiousness	Continuous	Index (1-4)
Openness	Continuous	Index (1-4)
Stability	Continuous	Index (1-4)
Age	Continuous	Age of the respondent
Female	Dummy	Female=1, male=0
Married	Dummy	Married=1, not married=0
Education	Categorical	No education=0, primary=1, JSS/JHS=2, SSS/SHS=3, higher=4
Chronic disease	Dummy	Yes=1, no=0
Respondent can read	Dummy	Yes=1, no=0
Respondent can write	Dummy	Yes=1, no=0
Household size	Continuous	Number of members in household

Source: Author,s definition (2022)

Model Diagnostics

To ensure the model,s estimates are consistent, the study used robust standard errors. The study performs a correlation analysis to ensure that only variables that are correlated significantly include in the model. The study also computed the variance inflation factor to investigate if there is any issue with multicollinearity. Further, the study computes the correlation between (rho) between the errors of the structural and reduced-form equation to uncertain whether indeed the errors are correlated.

Chapter summary

In conclusion, this section examined the role of personality traits in determining employment type and performance in Ghana. This section presented the methods used to test the hypotheses of the study. Specifically, the research approach, the research design, data source and description, the theoretical model specification, the empirical model specification and definition of variable were considered.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the results and the discussion of the findings of the study. The chapter begins with an introduction, bar representation of descriptive, test of means, correlation analysis, Summary statistics, the effect of personality traits on type of work, effect of personality traits on performance, discussion and finally, the chapter summary.

Descriptive Statistics

Figure 2 display the distribution of type of work by sector of employment. Three things are noticeable. First, within type of employment, many employees work in the other-services category, about 69.8 percentage point. Further, many of the self-employed are in the commerce category, about 82.7percent, making it the highest while unpaid family workers are usually into agriculture, fishery, mining sector (14.1percent). Second, with respect to agriculture, fishery and mining sector, about 14.1 percent are unpaid family workers, about 4.5 times that of unpaid family worker belongs to the self-employed category while about 1.6 times that of unpaid family worker also belong to employee sector. Further, with reference to manufacturing and construction sector, about 1.8 percent services are unpaid, about 38.9 times that of unpaid are self-employed, signifying the great number of individuals who are self-employed while the remaining 28.1 percent are employees. For the commerce sector, about 5.9 percent are unpaid family workers, about 14 times of that of unpaid family works are self-employed while about 1.9 times of the unpaid family worker are employees. Further, about 1.8 percent of the unpaid

family workers belongs to other-services sector, about 15.8 times that of unpaid family worker are self-employed while about 38.8 times that of unpaid family workers are employees. Third, it can be observed that across all sectors, the self-employed individuals are the greater majority, beginning from commerce, manufacturing and construction, agriculture, fishery and mining sector and then followed by the other-services sector. This is followed by the employee category and the unpaid family worker category.

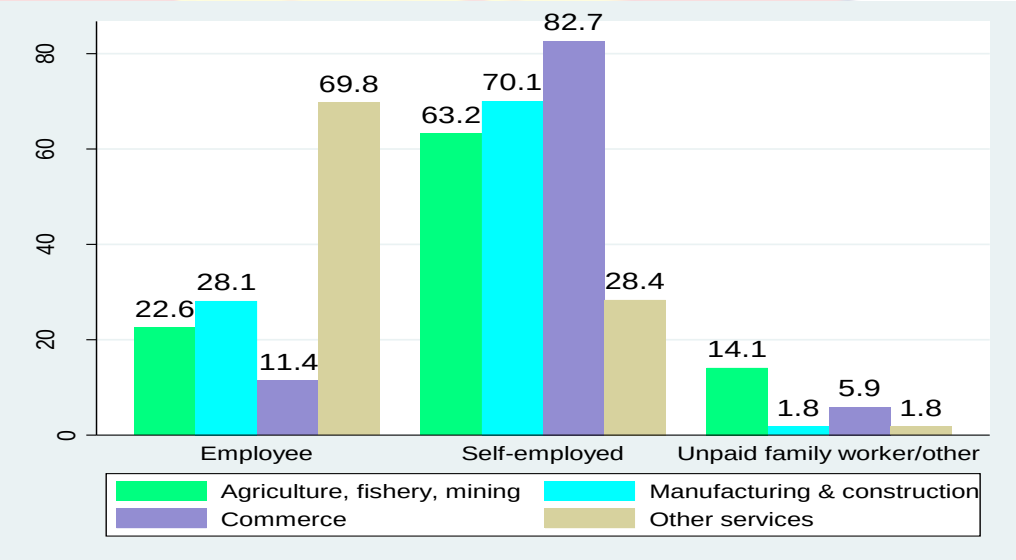

Figure 2: Distribution of type of work by sector
Source: Ghana STEP (2013) & Author,s calculation (2022)

Figure 3 presents the distribution of type of employment by education. Notably, respondents with higher education have higher representation in the employee category, about 80.1 percent, those with education have highest category in the self-employed, about 74.7 percent while those with primary education make the marginal share and yet the larger category amongst the unpaid family worker. Further, for respondent with no education, about 4.3 percent are unpaid service worker, about 17.4 times that of the unpaid family worker are self-employed while 21 percent are employees. For respondent with primary education, 7.8 percent are unpaid family workers, 63.3 percent belongs

to the self-employed while the remaining 29 percent are employees. Furthermore, MSLC/JSS/JHS represent 5.3 percent in the unpaid family worker category, 68 percent are self-employed while the remaining 26.7 percent are in the employee category. Also, SSS/SHS represent about 5.7 percent in the unpaid family worker category, 41.5 percent represent the self-employed category while the remaining 52.8 percent belongs to the employee category. Finally, about 51 times that of unpaid family worker with higher education belong to the employee category, 11.5 times that of unpaid family worker with higher 10 times are in the self-employed while only 1.6 percent with higher education work as unpaid family worker.

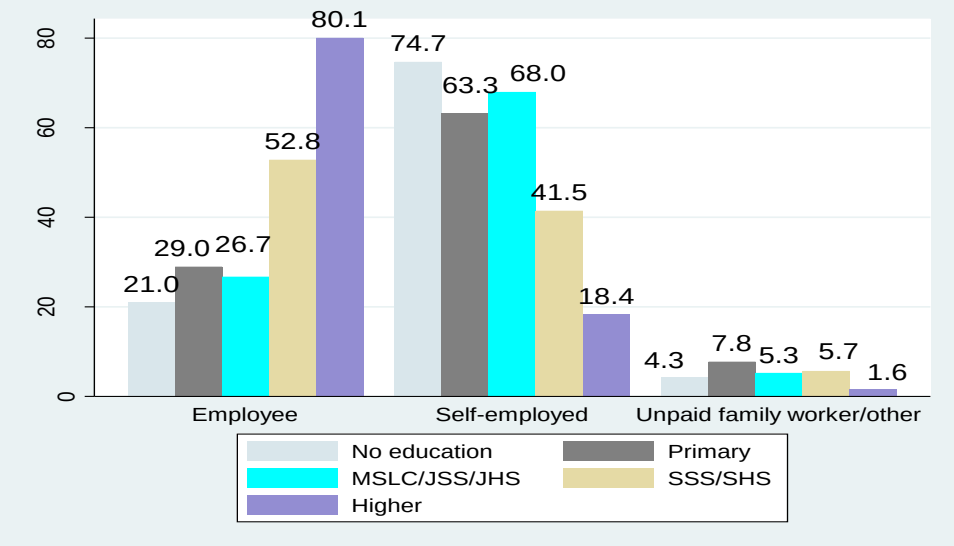

Figure 3: Distribution of type of work by education
Source: Ghana STEP (2013) & Author,s calculation (2022)

Figure 4 also show the distribution of type of employment by sex of the respondent. As noted, males represent the higher category with respect to employees, about 51.5 percent against 22.9 percent for females. Females represent the larger share in the self-employed category, about 71.8 percent against 44.2 percent for males while females again represent the larger share in the unpaid family worker against 4.3 percent for males.

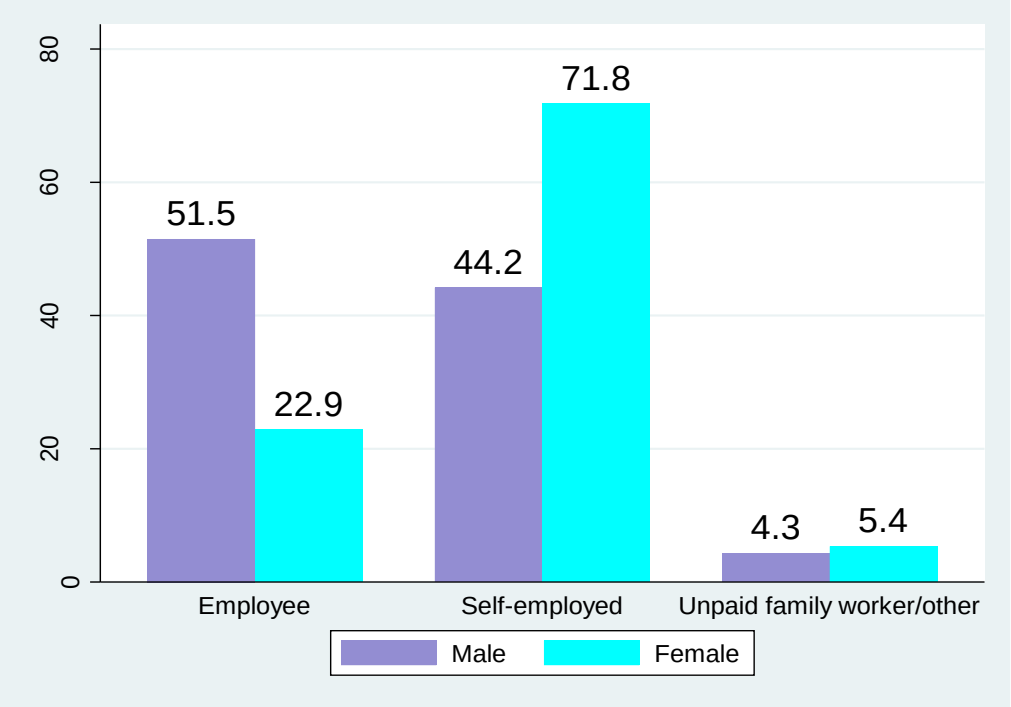

Figure 4: Distribution of type of work by Sex
Source: Ghana STEP (2013) & Author,s calculation (2022)

Figure 5 show the distribution of the work performance. Work performance is an additive scale ranging from zero (0) to thirteen (13). Figure 5 shows the proportion of each category with a total sum of 100 percent. One key observation from Figure 5 is that the distribution of the work performance is skewed to the right. This means that many of the respondent have lower score. For instance, 5.9 percent responded ,no, to all the 13 indicators, 19.8 percent responded ,yes, to at most one of the indicators. Similarly, about 24.6 responded to ,yes, to 2 of the indicators. This means that the respondent had two of the following indicators of work performance; whether as part of their work the respondent read bills, fill out forms, magazines, books, reports, measure or estimate distances, calculate prices or cost, calculate fractions/decimals/percentages, perform multiplication/decision, use advanced math such as algebra, geometry and trigonometry, perform manual work and

the respondent can read and write. About 1.4 percent had all the 13 indicators with about half of the respondent having a scale below three (3).

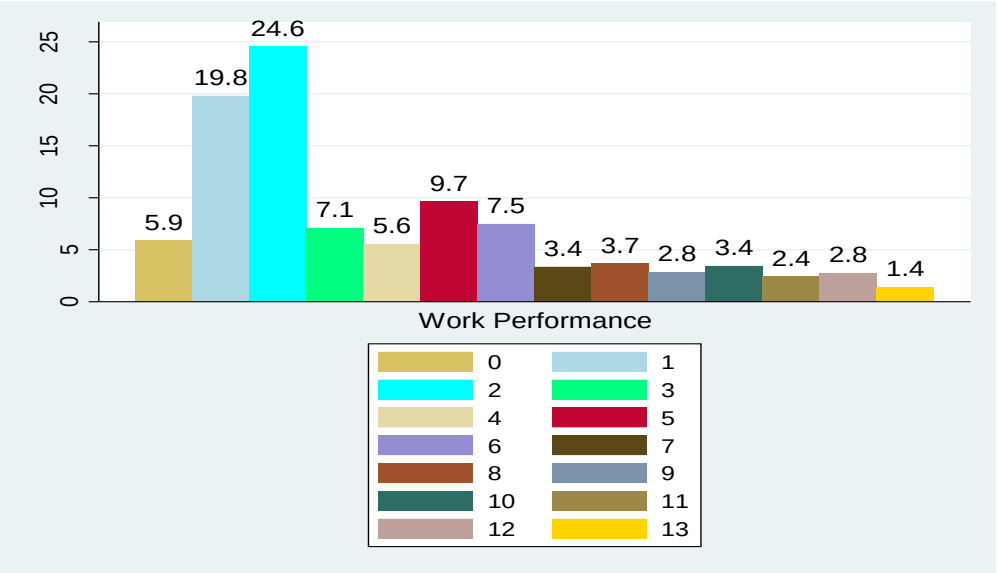

Figure 5: Distribution of work performance
Source: Ghana STEP (2013) & Authors calculation (2022)

Bi-variate analysis of personality traits and some selected covariates

Next, the study conducts a bi-variate analyses of the relation between personality traits and the control variables in the model. For the purpose of presentation, only covariates that had significant relationship with personality traits is discussed. Table 2 display the test of equal variances for the sex of the respondent and personality traits. First, the difference in conscientiousness between male and female is significant with males showing a higher level of conscientiousness than females. Further, the male respondent in the survey also had a higher level of openness than females and this is statistically significant at one percent. The difference in mean for stability is even higher, about 0.161 higher than females in the sample. The difference in means for extraversion and agreeableness were not statistically significant between males and females. Thus, on average males have higher personality traits than females.

Table 2: Sex and personality traits

Personality Traits	Male	Female	Diff	T-statistic	P-value
Extraversion	2.526	2.506	0.020	0.704	0.482
Conscientiousness	3.285	3.131	0.154	5.853	0.000
Openness	3.139	3.017	0.122	4.545	0.000
Stability	2.793	2.632	0.161	6.235	0.000
Agreeableness	3.051	3.020	0.030	1.028	0.304
Ha	diff! = 0				

Source: Ghana STEP (2013) & Authors calculation (2022)

Further, Table 3 shows the level of personality traits between respondents who are employed versus respondents that are unemployed. The results show that respondents that are employed have a higher level of personality traits than unemployed respondent with exception of openness. Employed respondent had a higher level of conscientiousness than unemployed respondent and it is significant at one percent. Also, employed respondent had a higher level of stability than unemployed respondent and this is significant at five percent. With respect of openness, however, unemployed respondent had a higher level of had a higher level when compared to employed respondent and this is significant at five percent.

Table 3: Employment Status and personality traits

Personality Traits	Not employed	employed	diff	T-statistic	P-value
Extraversion	2.514	2.517	-0.004	-0.132	0.895
Conscientiousness	3.156	3.238	-0.082	-2.914	0.004
Openness	3.119	3.061	0.058	2.024	0.043
Stability	2.674	2.736	-0.061	-2.213	0.027
Agreeableness	3.067	3.021	0.046	1.456	0.145
Ha	diff != 0				

Source: Ghana STEP (2013) & Authors calculation (2022)

Table 4 shows the test of equal variance between personality traits and marital status of the respondent. Similar to that of employment status and sex of the respondent, married respondent had a higher conscientiousness than un-

married respondent which is significant at five percent. Similarly, married respondent also had a higher level of stability than un-married respondent which is also significant at five percent. Openness, however, had a higher score for un-married respondent than married respondent and the difference is significant at one percent. One key observation is that the respondents show consistent pattern of significant for conscientiousness, openness and stability.

Table 4: Respondent has a spouse and personality traits

Personality Traits	No	Yes	Diff	T-statistic	P-value
Extraversion	2.530	2.496	0.034	1.178	0.239
Conscientiousness	3.190	3.244	-0.054	-1.990	0.047
Openness	3.120	3.016	0.104	3.765	0.000
Stability	2.696	2.748	-0.052	-1.951	0.051
Agreeableness	3.054	3.009	0.045	1.493	0.136

Source: Ghana STEP (2013) & Authors calculation (2022)

Table 5 presents the test of means for respondents who can read and their level of personality traits. As noted from the results, respondent who can read had a higher level of personality traits than respondent who cannot read. Specifically, respondent who can read had a higher level of extraversion (about 2.5) with a difference of 0.1 more than respondent who cannot read and this is significant at five percent. Conscientiousness had a higher score (3.2) for respondent who can read than respondent who cannot read (3.0), a difference of 0.21 and is significant at one percent. Agreeableness also had a higher score (3.1) for respondent who can read when compared to those that cannot read (2.8), a difference of 0.25 and this is significant at one percent. Openness is even much higher, with a difference of 0.31 for respondent who can read when compared with those that cannot read. Stability on the other hand did not reveal any significant difference between respondent who can read and those that cannot.

Table 5: Respondent Reading Status and personality traits

Personality Traits	No	Yes	diff	T-statistic	P-value
Extraversion	2.422	2.525	-0.104	-2.124	0.034
Conscientiousness	3.024	3.229	-0.205	-4.429	0.000
Openness	2.797	3.108	-0.310	-6.583	0.000
Stability	2.658	2.721	-0.063	-1.343	0.179
Agreeableness	2.807	3.058	-0.251	-4.821	0.000
Ha	diff != 0				

Source: Ghana STEP (2013) & Authors calculation (2022)

Table 6 also show results of the differences in means for respondent who can write visa vis respondents that cannot write. Again, the results reveal that respondent that can write have higher personality traits than those that cannot write. Specifically, conscientiousness had a mean of 3.2 for respondent that can write and 3.1 for respondent that cannot write, with a difference of 1.5 which is significant at one percent. Further, openness also had a mean of 3.1 for respondent that can write against 2.9 for respondent that cannot write, with a difference of 0.26 which is also significant at one percent. Further, agreeableness also had mean of 3.1 for the respondent that can write and a mean of 2.9 for respondent that cannot write with a difference of 0.16. Thus, respondent that can write show a higher level of personality traits score than those that cannot write.

Table 6: Respondent Writing Status and personality traits

	No	Yes	Diff	T-statistic	P-value
Extraversion	2.459	2.525	-0.066	-1.592	0.112
Conscientiousness	3.081	3.230	-0.149	-3.798	0.000
Openness	2.855	3.114	-0.259	-6.495	0.000
Stability	2.684	2.720	-0.037	-0.933	0.351
Agreeableness	2.894	3.057	-0.162	-3.684	0.000
Ha	diff != 0				

Source: Ghana STEP (2013) & Authors calculation (2022)

Personality traits, employment type and job performance (Correlation)

Next, the study discusses correlation analysis among personality traits and the outcomes variables. Table 7 presents two major observations. First, the employment status of the respondent has positive correlation with personality traits indicators with exception of openness which is negative. Further, conscientiousness, openness and stability have one percent, five percent and five percent level of significance respectively. Second, work performance and personality traits all have strong and positive association among them. The correlation is significant at one percent for all the personality traits variables and employment status. This support both the HCT and the HE that argues that both cognitive and personality traits affect labour market outcomes. One key question is whether the correlation will remain significant after controlling for other important covariates in the model. This brings the discussion to the summary statistics obtained from the regression.

Table 7: Correlation Matrix

	1	2	3	4	5	6	7
(1) Performance	1						
(2) Agreeableness	0.14***	1					
(3) Extraversion	0.13***	0.12	1				
(4) consciousness	0.20***	0.32	0.05	1			
(5) Openness	-0.19***	0.33	0.12	0.30	1		
(6) Stability	0.09***	0.05	-0.03	0.11	0.03	1	
(7) Employed	0.12***	0.01	0.02	0.02***	-0.04**	0.07**	1

Source: Ghana STEP (2013) & Authors calculation (2022)
Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Summary statistics of the regression analysis

Table 8 presents the summary statistics of the variables used in the regression analysis. The results from the bi-variate analysis revealed that personality traits have significant difference between married, employed,

respondent who can read, respondent who can write and gender. Further, the correlation analysis shows that there is significant association especially between work performance and personality traits. Table 8 reveals that work performance has a mean of 5.2 with a minimum of zero and a maximum of 13. Thus, on average respondents are proficient in 5 of the indicators used to measure performance; whether as part of their work the respondent read bills, fill out forms, magazines, books, reports, measure or estimate distances, calculate prices or cost, calculate fractions/decimals/percentages, perform multiplication/decision, use advanced math such as algebra, geometry and trigonometry, perform manual work and the respondent can read and write. Further, the results show that about 91 percent of the respondent are employed. About 35 percent work in the public sector while about 47 percent work in their own businesses or enterprise.

Further, the respondents portrayed a variant level of personality traits. The results reveal that extraversion had the lowest score of about 2.5 on a scale of 1 to 4. This shows that the respondents that were interviewed exhibit some level of extraversion and introversion. That is the respondent enjoys spending times with others as well observing some level of privacy when need be. This is followed by stability which has a score of 2.7 on a scale of 1 to 4. Thus, the respondents are fairly stable. Not exhibiting a pattern of wild fluctuations in their daily activities. Agreeableness and openness almost had the same score of about 3 which signifies that the respondents are usually warm, friendly and tactful in addition to being open-minded. Conscientiousness had the highest score of 3.2 on a scale of 1 to 4 which also show that the respondents are usually diligent and careful especially in their working environs.

The respondents in the sample were on average 34 years of age with a minimum of 15 years and a maximum of 64 years. Female respondents represent about 44 percent while married respondent were about 46 percent. Respondent with primary education represented about 12 percent while those with MSLC/JHS, secondary/SSS and higher education respectively had 39 percent, 27 percent and 19 percent. About 8 percent of the respondent had chronic disease. Respondents that can read and write represent 91 percent and 88 percent respectively. On average, household size in the sample were 3 members.

Table 8: Summary Statistics

Variable	Mean	Std. dev.	Min	Max
Performance	5.204	3.605	0	13
Employed	0.906	0.293	0	1
Public sector employee	0.354	0.479	0	1
Self employed	0.468	0.499	0	1
Agreeableness	3.027	0.640	1	4
Extraversion	2.523	0.604	1	4
Conscientiousness	3.241	0.563	1	4
Openness	3.074	0.592	1	4
Stability	2.725	0.564	1	4
Age	34	11	15	64
Female	0.444	0.497	0	1
Married	0.462	0.499	0	1
Education				
Primary	0.117	0.322	0	1
MSLC/JHS	0.394	0.489	0	1
Secondary	0.276	0.447	0	1
Higher	0.193	0.394	0	1
Chronic	0.083	0.276	0	1
Read dummy	0.912	0.283	0	1
Write dummy	0.875	0.330	0	1
Household size	3.432	2.247	1	15

Source: Ghana STEP (2013) & Authors calculation (2022)

Effect of Personality traits on Type of Employment

Table 9 present results of personality traits on the type of employment of the respondent. The study estimates probit marginal effect with robust

standard errors and used linear probability model as robustness check. The results in column 2 show that agreeableness marginally, decreases being employed by 2.5 percent. The LPM estimates this association between agreeableness and being employed by 3 percent reduction at 5 percent level of significance. Extraversion and stability although had a positive association with being employed but insignificant. Openness is negative but insignificant. Now, when being employed is disaggregated by public sector employment and self-employment, the result reveals that agreeableness increases public sector employment by 6.9 percent for probit marginal effect and 6.6 percent for LPM. Openness seems to be relevant for respondent who are self-employed. Both probit and LPM estimate this association to be 5 percent and significant at five percent level of significance.

For the control variables, the result reveals in column 2 that age of the respondent has a U-shape association with being employed. Age of the respondent had a positive association with being employed but turns negative at an additional year of age. The turning point is about 37 years of age. Female respondent had a reduction with being employed by 8 percent while married respondent had positive association with being employed by 5.6 percent. Respondent with JSS/JHS education had a negative association with being employed, a reduction by 9.1 percent and is marginally significant. A unit increase in household size also decreases being employed by 1.3 percent and this is significant at one percent.

Table 9: Effect of personality traits on the Type of Employment

	(1)	(2)	(3)	(4)	(5)	(6)
	Employed		Public sector		Self-employed	
VARIABLES	LPM	probit mfx	LPM	probit mfx	LPM	probit mfx
Agreeableness	-0.030**	-0.025*	0.066**	0.069**	-0.009	-0.009
	(0.015)	(0.015)	(0.030)	(0.031)	(0.022)	(0.021)
Extraversion	0.008	0.007	0.028	0.026	-0.029	-0.028
	(0.015)	(0.015)	(0.031)	(0.031)	(0.021)	(0.021)
Conscientiousness	0.009	0.008	-0.051	-0.048	-0.003	-0.005
	(0.017)	(0.017)	(0.036)	(0.038)	(0.025)	(0.024)
Openness	-0.015	-0.015	-0.005	-0.014	0.050**	0.050**
	(0.017)	(0.016)	(0.035)	(0.036)	(0.023)	(0.023)
Stability	0.006	0.007	-0.006	-0.011	-0.005	-0.006
	(0.016)	(0.016)	(0.033)	(0.034)	(0.023)	(0.023)
Age	0.092***	0.074***	0.018	0.022*	0.046***	0.043***
	(0.005)	(0.004)	(0.012)	(0.012)	(0.008)	(0.007)
Age square	-0.01***	-0.01***	-0.01	-0.01	-0.01***	-0.01***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	-0.08***	-0.08***	0.002	0.003	0.206***	0.200***
	(0.019)	(0.018)	(0.041)	(0.040)	(0.026)	(0.024)
Married	0.049**	0.056**	0.084*	0.077*	0.070**	0.071**
	(0.022)	(0.022)	(0.045)	(0.042)	(0.030)	(0.029)
Education						
Primary	-0.070	-0.071	0.091		-0.097	-0.106
	(0.065)	(0.059)	(0.066)		(0.106)	(0.106)
JSS	-0.091	-0.094*	0.13***		-0.072	-0.079
	(0.063)	(0.057)	(0.051)		(0.102)	(0.101)
SSS/SHS	-0.070	-0.087	0.27***		-0.230**	-0.234**
	(0.065)	(0.058)	(0.059)		(0.103)	(0.103)
Higher	-0.030	-0.046	0.45***		-0.41***	-0.48***
	(0.066)	(0.061)	(0.064)		(0.105)	(0.104)
Chronic	-0.005	-0.003	0.000	-0.008	-0.014	-0.012
	(0.031)	(0.034)	(0.071)	(0.069)	(0.045)	(0.045)
Read	-0.029	-0.020	0.083	0.161	-0.081	-0.085*
	(0.040)	(0.038)	(0.062)	(0.129)	(0.050)	(0.049)
Write	0.040	0.044	0.16***	0.242**	-0.029	-0.024
	(0.033)	(0.031)	(0.053)	(0.101)	(0.045)	(0.043)
Household size	-0.01***	-0.01**	-0.02**	-0.022***	-0.011*	-0.011*
	(0.004)	(0.004)	(0.008)	(0.008)	(0.006)	(0.006)
Constant	-0.80***		-0.61**		-0.308	
	(0.133)		(0.280)		(0.210)	
Observations	1,882	1,882	605	597	1,268	1,268
R-squared	0.341		0.184		0.234	

Source: Ghana STEP (2013) & Authors calculation (2022)
Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Effect of personality traits on work performance

Table 10 presents the effect of personality traits on work performance of the respondents. The study employs linear regression model and conduct a

stepwise regression to test the point whether after controlling to relevant determinants, does personality traits affect work performance. As noted from the first column, four out of the five variables measuring personality traits had a positive and significant association with work performance at 5 percent alpha level. After controlling for age, age square and sex, stability loses its significance to a marginal level. A further controlling for all relevant determinant in the third column, only conscientiousness and openness maintained their significance at 5 percent. Thus, the preferred model for discussion is the third column. As revealed, a unit increase in individual level of conscientiousness is associated with 0.313 increase in work performance. Openness is also associated with 0.315 increase in work performance all at 5 percent level of significance. Thus, conscientiousness and openness are potential drivers of work performance. Age of the respondent had a positive association with work performance but an additional year of age decreases work performance with a turning point of around 40 years. Again, the results revealed primary, JSS/JHS, SSS/SHS and higher education had significant association with work performance with coefficient of 1.82, 1.17, 3.1, and 5.62 units when compared with respondent with no education, all significant at one percent.

Table 10: Effect of Personality traits on Work Performance

VARIABLES	(1) Work performance	(2) Work performance	(3) Work performance
Agreeableness	0.207	0.249	0.005
	(0.157)	(0.152)	(0.138)
Extraversion	0.621***	0.652***	0.216
	(0.149)	(0.145)	(0.134)
Conscientiousness	0.871***	0.662***	0.313**
	(0.175)	(0.170)	(0.155)
Openness	0.727***	0.695***	0.315**
	(0.165)	(0.161)	(0.145)
Stability	0.422***	0.274*	0.168
	(0.163)	(0.161)	(0.141)
Age		0.323***	0.237***
		(0.045)	(0.044)
Age square		-0.004***	-0.003***
		(0.001)	(0.001)
Female		-1.186***	-1.009***
		(0.185)	(0.166)
Married			-0.060
			(0.190)
Education			
Primary			1.820***
			(0.391)
JSS/JHS			1.171***
			(0.336)
SSS/SHS			3.095***
			(0.363)
Higher			5.629***
			(0.385)
Chronic			-0.360
			(0.284)
Household size			-0.039
			(0.037)
Constant	-3.198***	-7.614***	-4.258***
	(0.763)	(1.111)	(1.106)
Observations	1,400	1,400	1,397
R-squared	0.073	0.128	0.326

Source: Ghana STEP (2013) & Authors calculation (2022)
Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Discussion

The study examined the role of personality traits in determining work performance in Ghana. The study examined two main objectives; the effect of personality traits on the type of employment and the effect of personality traits

on work performance. To fully understand the relationship, the study begun with graphs showing associations among the variables and then proceeded with bivariate analysis. The study further conducts a correlational analysis before presenting the main results of the study.

From the graph presentation, it was evident that respondent who are employed are usually found in the other-service and had about thrice the presentation when compared with agriculture, fishery and mining, the manufacturing and construction and the commerce sector. For respondent who are self-employed, the commerce sector dominates the category which represent about 4/5 of the whole sample. The unpaid family worker was dominated by respondent from agriculture, fishery and mining. Education and employment type also had a close association. The results revealed that about 4/5 of the sample who were employed had a higher level of education i.e., that is diploma, bachelor,s degree, master,s degree and PhD. This can be compared to respondents who were self-employed, representing about three-fourth of the sample.

Again, the results revealed that employed male respondent represent about half of the sample which can compared to female of the same category representing about 1/5 of the sample. The contrast is true for female within the self-employed category. Pretty close to 3/4 of the females in the sample are self-employed which can be compared to about 2/5 of males in the sample. Further, females that engaged in unpaid family worker was little above that of males. Further, with respect to work performance, the result reveals that about 1/5 of the sample had two indicators of work performance which is low when comparing with a scale of 0-13. Respondent with three indicators which

represent the higher percentage had a difference of just about 4.8 percentage point from that of respondent with two indicators. This point to the fact that about half of the respondents had just three indicators of work performance which is on the low side.

Again, the bivariate analysis reveals that males in the sample have higher conscientiousness, openness and stability when compared to female respondents. This means that males are more focus, friendly and open to few ideas. The difference between the males and females is significant although in terms of absolute values, the females score is pretty close to that of the males. Further, when comparing conscientiousness, openness and stability between respondent who are not employed to those that are employed, it is evident that employed respondent have a higher score for these three personality traits with exceptions of openness. A similar finding can be inferred from the status of employment to marital status. Married respondents scored high for conscientiousness and stability but the same cannot be said about openness. The findings from the respondent who can read and write gives evidence of the relevance of personality traits in daily life activities and with the particular focus of this study, the type of employment and work performance. The results revealed that respondent who can read and write have a higher score for extraversion, conscientiousness, openness and agreeableness when this is compared with respondent that cannot read and write. Stability is the only variable which was not significant in this example.

The results of the correlation study revealed that the respondent,s employment situation had a positive link with personality traits indicators, with the exception of openness, which has a negative correlation. Furthermore, a

positive correlation of work performance and personality traits can be found. The summary statistics show that work performance had on average a score of 5 on 0–13-point scale which add to the earlier point made. Further, on a scale of 0-4, conscientiousness had the highest score, followed by openness, agreeableness, and stability. The study also notes that on average the age of the respondents was 34 years with about 2/5 of the sample being females. The empirics shows that when considering the role of personality traits on employed respondents, the association is not significant or at best marginally significant and negative. A proper consideration must be disaggregating the employment by sector where off the results revealed a positive and significant association agreeableness and openness for public sector and self-employed respectively.

Further, after controlling for relevant covariates, extraversion, conscientiousness and stability did not have any significant impact on the type of employment, be it public sector employment or self-employed. The study also found a non-linear relationship with the age of respondent and the type of employment. The study also discovered that having a female gender increased one's likelihood of working for oneself, supporting the results of the exploratory analysis. A higher degree of education raises the likelihood of working in the public sector and decreases the likelihood of working for yourself, which further supports the findings of the exploratory analysis.

Of course, reading and writing has much relevance in one ability to work in the public sector as evidenced by the empirical results. Large household size decreases the probability of working, irrespective of the type of employment. Again, another relevant that the study sort to find is the role of personality traits on work performance. After, observing from the significant correlation between

personality traits and work performance, the questions which drives empirical investigation is whether after controlling for important covariates, the association will remain significant. Indeed, the results that 4 out of the 5 variables for personality traits all had significant effect on work performance at one percent significance.

However, as relevant covariates were introduced in the model, the level of significance and magnitude trickle down until a parsimonious is reached with an R2 of 33 percent. The results revealed that openness and conscientious maintain their association with work performance. This shows that individual level of conscientiousness and openness plays a relevant role in their performance on the job market. Kautz et al., (2014) found that personality traits are important in determining employment and earnings as well as academic or technical skills. Albandea and Girtet (2018) also found that personality traits impact tremendously on the incomes as well as individuals occupying high positions. Singh and Jaykumar (2019) found that personality traits competencies are required for a broad set of entry-level employees. This support both the human capital theory and the Heckman equation that argues that both cognitive and soft skills affect labour market outcomes. Despite the difference in the geographical setting of these studies, our results are similar to the findings of these studies and point the fact that personality traits are importance in determining employment type and work performance.

Chapter summary

The study examined the role of personality traits on work performance. This chapter presents the empirical results as well as the discussion of the findings of the study. Nine key findings are derived from the study. First the

study revealed that there is high association between type of employment and type of work, a key reference can be made with commerce, manufacturing and other services. Second, education is strongly correlated with being gainfully employed. An example can be inferred from Figure 2. Third, conscientiousness, openness and stability had a consistent association with sex of the respondent, employment status and married respondents. Fourth, respondent ability read and write had a positive association with conscientiousness, openness, stability and agreeableness. Fifth, agreeableness had a negative marginal level of significance on employed respondents, however, the effect is predominant when employment type is disaggregated. Specifically, agreeableness is associated with an increase in public sector employment. Sixth, openness is associated with an increase in self-employment. Seventh, respondent ability to read and write had positive association with public sector employment. Eighth, conscientiousness and openness are associated with an increase in work performance. Nineth, age of the respondent had positive associated with work performance but an additional year of age decreases performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The study examined the role of personality traits in determining employment type and work performance in Ghana. This chapter presents the summary, conclusions and the recommendations of the study.

Summary of the study

The study sort to provide evidence of the role of personality traits in determining employment type and work performance. Background studies relating personality traits to employment type and job performance are diverse. However, the summary point to the fact that evidence of these studies in relation to Ghana is limited. Two main objectives were analysed from the study. First, to examined the effect of personality traits on employment type and second, to examined the effect of personality traits on work performance. In chapter two, the literature shows that there is evidence of the role of personality traits on learning outcomes. Chapter three presents the methods that were used to achieve the objectives of the study. The study used probit and linear regression model to achieve the objective. Chapter four began with graphs depicting relationships between variables before moving on to bivariate analysis. Before providing the study,s major findings, the study does a correlational analysis.

Key Findings

Findings from the study revealed that when comparing agriculture, fishing and mining, manufacturing and construction, and commerce, it was clear that employed respondents are more likely to be found in the other-service sector, which had approximately thrice the presentation. The commerce sector

leads the category of self-employed respondents. Respondents from agriculture, fishing, and mining dominated the unpaid family worker category. There was also a link between education and the sort of job. The findings show that many of employed held a bachelor,s degree.

The results further revealed that employed male respondents make up roughly half of the sample, while females in the same category make up around a fifth of the sample. Most females in the sample are self-employed as compared to that of the males. Furthermore, the percentage of females who worked as unpaid family workers was similar to that of males. Furthermore, the results reveal that only a few of the sample had two indicators of work performance. Male respondents in the sample show more conscientiousness, openness, and stability than female respondents, according to bivariate analysis. Furthermore, when comparing conscientiousness, openness, and stability across employed and unemployed respondents, it is clear that employed respondents outperform unemployed respondents in all three personality traits, with the exception of openness. From employment status to marital status, a similar conclusion can be drawn. Conscientiousness and stability were high among married respondents, but not so among unmarried respondents.

With the exception of openness, which has a negative association, the results of the correlation analysis demonstrated that the respondent,s employment position had a positive link with personality traits indicators. Furthermore, a link between work performance and personality traits has been discovered. Agreeableness had a positive association with public sector employment. Further, openness had a positive association with being self-employed. Furthermore, extraversion, conscientiousness, and stability had no

significant impact on the type of work, whether it was public sector or self-employed, after adjusting for relevant factors. The study also discovered a non-linear association between respondent age and type of employment. The study also discovered that being a woman increases the likelihood of working as a self-employed. Furthermore, the findings demonstrated that a higher education increases the likelihood of working in public sector and decreases the likelihood of working for oneself, confirming the exploratory analysis.

Again, reading and writing were extremely important in one,s capacity to work in the public sector. Regardless of the sort of job, having a large home reduces the likelihood of working. Another crucial objective that the study looked into was the impact of personality traits on job performance. Indeed, four of the five personality traits factors all showed a substantial effect on work performance. The findings demonstrate that an individual,s level of conscientiousness and openness has an impact on their job performance. Despite the fact that the geographical context of these studies differs, the findings are similar to studies that emphasize the importance of personality traits in determining employment type and work performance.

Conclusion

The study examined the impact of personality traits on type of work and job performance in Ghana. The study concluded that personality traits (agreeableness and openness) had significant impact on the employment type, while extraversion, conscientiousness and stability had no significant impact on the employment of individuals in Ghana. The study came to the additional conclusion that personality traits are helpful in identifying the causes of individuals' job performance in Ghana. Additionally, a change in personality

features would lead to an improvement in job performance in Ghana. Particularly, those with high extraversion, conscientiousness, and openness to experience scores are likely to do their jobs more well.

Recommendations

The study the made the following recommendations from the findings.

First, authorities of educational institutions, the Association Ghana Industries (AGI) and Employers Associations in the country should develop appropriate policies and programs such as in and off service training to facilitate the activities of individuals having diverse personalities, in order to improve the quality of work performance. Given that personality traits can be enhanced throughout one,s life, continuous training can help improve and sharpen these traits. Empirical studies have shown that personality traits are developed over time (Almlund, Duckworth, Heckman & Kautz 2011; Borghans, Golsteyn, Heckman, & Humphries2011). The findings from the study revealed that openness, conscientiousness and agreeableness are particularly important in determining job performance and type of employment. That is, with the right kind of training and monitoring, people can form attributes which in later life can be identified with as wither conscientiousness, agreeableness.

Second, civil service organisations and non-governmental organisations should set up corporations and institutions that have a primary purpose of training on personality traits individuals possess and it related employment type or job market since the civil service organisation and non-governmental organisations also have a role to play in ensuring the acquisition of these relevant skills. This training will direct individuals to work as a teacher, as a nurses, as doctor or an economist etc. based on their personality traits. This is

expected to drive national output through effective employment and production in the long-run.

Suggestions for Further Research

The association between personality characteristics, work type, and job performance in Ghana was the main focus of the study. Research should be done in the future that takes into account the usage of other factors, such as the job need, as a predictor of job performance. Additionally, it is recommended that future studies combine qualitative and quantitative methods in order to comprehend the study factors.

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APPENDICES

A: Indicators for The Measurement of Work Performance

Variable	Mean	Std. dev.	Min	Max
Fill out forms	0.268	0.443	0	1
Pay bills	0.229	0.420	0	1
Newspapers & magazine	0.316	0.465	0	1
Instruction manual	0.231	0.422	0	1
Books	0.246	0.431	0	1
Read report	0.334	0.472	0	1
Measure sizes, weights, distances at work	0.554	0.497	0	1
Calculate prices or costs at work	0.785	0.411	0	1
Use or calculate fractions or decimals at work	0.337	0.473	0	1
Perform any other multiplication or division at work	0.337	0.473	0	1
Advanced math at work	0.337	0.473	0	1
Write	0.681	0.466	0	1
Read	0.550	0.498	0	1
Observation	1,397			