

Influence of Personality on the Buying Behaviour of Undergraduate Students in Universities in Cross River State, Nigeria

Philip Thomas Udo-Imeh¹

¹ Department of Management Technology, Modibbo Adama University of Technology, Yola, Nigeria

Correspondence: Philip Thomas Udo-Imeh, Department of Management Technology, Modibbo Adama University of Technology, PMB 2076, Yola, Nigeria. Tel: 234-806-435-7490. E-mail: freedomandenlightenment@gmail.com

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Abstract

The purpose of this study is to assess the effect personality has on buying behavior among university undergraduate students. Personality was defined in terms of the big five personality traits, agreeableness, extraversion, openness to experience, conscientiousness, and neuroticism. A sample of 323 undergraduate students was drawn from the two universities in Cross River State using a three-stage sampling technique. Multiple regression analysis was used in testing the hypotheses. The study shows that personality significantly influences buying behaviour and agreeableness was the strongest of the five predictor variables while neuroticism was the weakest. The study also reveals that socio-demographic variables have significant moderating effect on the influence of personality on buying behaviour.

Keywords: personality, buying behavior, big five personality traits, agreeableness, extraversion, openness to experience, conscientiousness, neuroticism

1. Introduction

The survival and growth of organizations in today's fast-paced, globalized and increasing competitive market is dependent on their ability to satisfy—and even delight customers. Customers' satisfaction and delight hinge heavily on organizations' identifying, understanding and implementing in the marketing strategies, information on the behaviour consumers exhibit in searching for, processing, using and disposing of products and services to satisfy their needs and wants. But these behaviours are functions of the environmental, cultural, personal and psychological factors. One of the psychological variables documented in marketing literature to influence consumers' buying behaviour is personality (Blackwell, Miniard, & Engel, 2007; Schiffman & Kanuk, 2010; Solomon, 2011). Personality distinguishes one person from another and shaped individual's interaction with the external environment. A person's attitudes, tastes, preferences and values are indicative of his or her personality. Unconscious drives, environmental influences and cognition determine personality (Myers, 1995; Burger, 2000; Franzoi, 2000; Blythe, 2008). As a person grows up his or her personality is altered or modified (Schiffman & Kanuk, 2010) by the people or event surrounding him or her or due to his or her education—be it formal or informal.

To understand this construct called personality and infuse the knowledge to gaining insights into 'the what?' 'the why?' 'the how?' 'the when?' and 'by the whom?' of the consumer buying behaviour, marketers, scholars and researchers have relied not only on Sigmund Freud's psychoanalytical theory, the Carl Jung-led Neo-Freudian theories, and the traits theory, but have also borrowed from other theories like, the behavioural theory, humanistic theory, and socio-cognitive theory. Of these, the trait theory has been "the primary basis of marketing personality research" (Blackwell, Miniard, & Engel, 2007, p. 273) due basically to its consistency, stability (DeJong, 2008) and its quantitative nature. There are many dimensions of personality traits, but in the 1930s, Thurstone (in Mikolajczak-Degrauwe, Brengman, Wauters, & Rossi, 2012) suggested that there are five independent common factors underlying personality, a notion supported by, Costa and McCrae (1985), John (1997), Wiggins (1996). 'The five factor model'—as it has come to be known—consists of five broad dimensions: agreeableness, extraversion, openness to experience conscientiousness, and neuroticism. Recent researches on personality in the field of consumer behaviour, seek to find out the relationship between these five traits and consumer buying behaviour.

A segment of consumer often not considered in most studies on consumer behaviour but whose importance is increasingly felt in business and marketplace in Nigeria, is the universities' undergraduate students. The students' population in any university in Nigeria is a major market for providers of goods and services in the towns or cities where universities are located. In Calabar, for example, where we have two universities, the business climate experiences doldrums whenever these schools are on vacations and more acutely during periods of industrial action in the university system. The extent of these business downturn (how-be it temporal) can be appreciated when one considers the fact that most of these universities are located in (or close to) the state capital. A business downturn in the capital city would have serious repercussions on the social and economic climate of that state and by extension, the country. Despite the relevance of undergraduate students of universities to the survival, performance and growth of businesses in these cities and in the country in general, little is known about their buying behaviour, implying an under exploitation of a potentially great market segment. Previous researches on consumer behaviour often focused on demographics and cultural variables whose limitations have been acknowledged by scholars such as, Plummer (1974), Evans and Berman (1995), Kucukemiroglu (1997), Schiffman & Kanuk (2010), Solomon (2011), and Pandey and Pandey (2012). Studies that however researched on personality are scanty and limited in scope. Their emphases were more on the explanation of the development and natures of the theories of personality than on its explanatory and predictive power with respect to buyers' behaviour. None, to the best knowledge of the author examined the moderating effect of socio-demographic factors on the influence of personality on buying behaviour, yet the need to "incorporate personality data with information about individuals' social and economic conditions" Blackwell, Miniard and Engel (2007, p. 273) as a measure to improve the predictability of consumer behaviour has been recognized by many authors (such as, Punj & Stewart, 1983; Solomon, 2011).

This study, therefore, seek to: (1) examine the influence of personality (define in term of agreeableness, extraversion, openness to experience, conscientiousness, and neuroticism) on the buying behaviour of undergraduate students in universities in Cross River State, Nigeria; and, (2) investigate the moderating effect of socio-demographics variables (gender, age, marital status, family size, monthly income, allowance source, residence, school, level of study and department) on the influence of personality on the buying behaviour of undergraduate students in universities in Cross River State, Nigeria.

2. Literature Review

2.1 Definition of Personality

Karsarjian (1971), Agbonifoh, Ogwo, Nnolim and Nkamnebe (2007), and, Pierre, Harthem, and Dwight (2011), contend that personality is difficult to define given its vast and dynamic nature and that there is no single generally accepted definition of the concept. This is also the position of Gangajail (2009, p. 97) who asserts that "personality is something which is difficult to explain in one sentence." It is said to be very vast and dynamic. Arguments such as these have made some authors and researchers, for example, Hawkins, Best and Coney (1995) questioned the exact nature of personality. But Roffe (2005) and Blackwell, Miniard and Engel (2007) explain that the definition of personality depends on the context in which it is discussed.

Thus, Arnould, Price and Zinkhan (2002, p. 254) define personality as "...the distinctive and enduring patterns of thoughts, emotions, and behaviours that characterized each individual's adaptation to the situations of his or her life," Blythe (2008, p. 73) as "...the collection of individual characteristics that make a person unique, and which control an individual's responses and relationship with the external environment," and, Kotler and Keller (2009, p. 197) as "...a set of distinguishing human psychological traits that lead to relatively consistent and enduring responses to environmental stimuli..." Like Blythe (2008), some authors feature responsiveness to the environment in their definitions. These include Smith (2001, p. 66) who defines personality simply as "...consistent ways of responding to the environment in which (a person) lives," Solomon (2011, p. 240) who sees it as "...a person's unique psychological makeup and how it consistently influences the way a person respond to her environment," and Schiffman and Kanuk (2010, p. 136) who define it as "...the inner psychological characteristics that both determine and reflect how a person responds to his or her environment."

Just as the word 'environment' is common in the different definitions of personality by these three authors, 'consistency' was a recurring theme in the definitions of the construct by other authors. In this category include, Smith (2001), Kotler and Keller (2009), and Berkowitz, Kerin, Hartley and Rudelus (1994, p. 147), who define it as "...a person's consistent responses to recurring situations," and also Assael (2002, p. 124) who defined it as "...as those characteristics that reflect consistent, enduring patterns of behavior." However, Blackwell, Miniard and Engel (2007, p. 271) by defining personality as, "... an individual's unique psychological makeup, which

consistently influences how the person responds to his or her environment,” marry the environmental and consistency emphases of these two sets of authors.

2.2 Theories of Personality

There are many approaches to studying personality. Different schools of thought in psychology influence many of these approaches or theories (Burger, 2000; Blackwell, Miniard, & Engel, 2007). These theories were developed “to explain the structure, process and development of human behavior” (Lee, 2009, p. 3). They include: psychoanalytic theory, neo-Freudian theory, and behavioural theory. Others include: humanistic theory, social-cognitive theory and trait theory. Though these six approaches are discussed in this study, the psychoanalytic theory, neo-Freudian theory and trait theory have, however, been found more useful to consumer behaviour analysts (Blackwell, Miniard, & Engel, 2007; Schiffman & Kanuk, 2010).

2.2.1 Psychoanalytic Theory

Credited to Sigmund Freud, an Austrian neurologist, the psychoanalytic theory describes human personality in terms of the interplay of three theoretical constructs: the id, the superego, and the ego. The id is the underlying drive of all psychic energy (Kassarjian, 1971; Williams, 1981; Agbonifoh et al., 2007; Blythe, 2008), it operates on the pleasure principle and contains the libido which demands immediate gratification of instinctual and biological desires such as sex and aggression (Schiffman & Kanuk, 2010). The superego is the moral and ethical dimension of the human psychic. “It defines what is morally right and influences the individual to strive for perfection rather than pleasure or reality and, in this sense, serves as an ethical constraint on behaviour” (Williams, 1981, p. 135). The primitivism of the id and the morality of the superego are balanced by the conscious ego. The ego considers the cost and benefits of an action in terms of what is socially acceptable before deciding to act upon or abandon impulses.

2.2.2 Neo-Freudian Theory

The Neo-Freudians were followers of Freud who however considered his contention that individual personality is a function of instinctual and sexual drives highly controversial. To them what influence individual personality is more in the social environment than in biological drives. Prominent Neo-Freudians include: Carl Jung, who developed the concept of the extroverted and the introverted personality, archetypes, and the collective unconscious; Alfred Adler, who researched on individual’s efforts at overcoming feeling of inferiority by striving for superiority (Schiffman & Kanuk, 2010), and; Karen Horney, who immensely contributed to the study of neurotic personality.

2.2.3 Behavioral Theory

Behavioral theory suggests that personality results from interaction between the individual and the environment. This theory is concerned with behavior that can be objectively and scientifically measured. Human emotion and thinking which are internal are not considered in this theory (McLeod, 2007). Human personality is understood through laboratory experimental procedures. Such procedures include conditional classical conditioning, operant conditioning, and observational learning.

2.2.4 Humanistic Theory

This theory considers the positive side of human behaviour and emphasizes freewill, creativity and individuals striving to achieve their full potentials. Bonin (2012) likened humanistic theory to existentialism in the sense that one’s choice of behavior is determined by one and not by fate. Two renowned contributors to the development of this theory were Abraham Maslow and Carl Rogers. Abraham Maslow in his ‘hierarchy of needs theory’ postulates that human beings strive for self-actualization, or to reach their finest self once they have satisfied their more basic needs. Carl Roger in his ‘person-centered theory’ considers self-concept as the most important element of personality, and this embodies thoughts, and beliefs people have about themselves

2.2.5 Socio-Cognitive Theory

The social-cognitive theories postulate that the environment and social elements shape one’s personality (Bruner, 2009). The theories are associated with the Bandura’s (1971) social learning theory. The social learning theory “contends that people learn social behavior primarily through observation and cognitive processing of information, rather than through direct experience” (Franzoi, 2002, p. 405). Social-cognitive theorists contend that personality is shaped by interaction among people’s cognition, their actions, and their environment.

2.2.6 Trait Theory

Trait theory suggests that personality is made up of a set of measurable units that explain general dispositions (Burger, 2000; Assael, 2002). The trait theories adopt a quantitative approach in measuring specific

psychological characteristics, called traits (Schiffman & Kanuk, 2010). Traits in common usage are characteristic way in which someone perceive or act. DeJong (2008, p. 20) described it as "...an underlying dimension along which people differ from one another." Personality theorists have been able to reduce these underlying dimensions from the thousands it was at inception of the development of personality theory (Allport, 1921) to five basic traits. This five traits dimension is known as the 'Big Five' personality traits (Costa & McCrae, 1985; McCrae & John, 1992)

2.2.6.1 The Big Five Factors of Personality

One of the daunting problems that personality psychology faced until the last five decades was the multiplicity of traits in which human behavior could be described. The manifestations of this problem in the opinion of John and Srivastava (1999) were the presence of 'a bewildering array of personality scales' and, the absence of a common taxonomy for the traits. This made integrative and systematic accumulation of research findings and seamless communication among researchers difficult. A descriptive model or taxonomy and a scale that would have a high degree of validity and reliability for all dimensions of personality traits were required. The search for elemental personality traits which shall ensure coherence in researches on personality saw the contributions of Klages, Allport, Raymond Cattell, Odbert and Eysenck among others (John & Srivastava, 1999; Ferrandi, Falcy, Kreziak & Valette-Florence, 2000; Franzoi, 2002; Azoulay & Kapferer, 2004; Roffe, 2005; Mikolajczak-Degrauwe et al., 2012).

The traits that constitute the 'Big Five' framework are, agreeableness (good-natured, compassionate and cooperative), extraversion (sociable, talkative and assertive), openness to experience (imaginative, artistically sensitive, and intelligent), conscientiousness (achievement-oriented, organized and dutiful) and neuroticism (anxiety, depression, and nervous). This model has received much attention in the literature and is generally accepted by personality psychologists and researchers in the social and behavioural sciences as having the best representation of the structure of personality traits (Costa & McCrae, 1992; McCrae & John, 1992; Ferrandi et al., 2000; Arnould, Price, & Zinkhan, 2002; Opoku, 2008; Larsen & Buss, 2010; Shahjehan, Qureshi, Zeb, & Saifullah, 2011; Gharibpoor & Amiri, 2012). McCrae and John (1992), for example, described the 'Big Five' as providing a reasonably comprehensive taxonomy of personality traits, while Larsen & Buss, (2010) credited the 'Big Five' with "achieving the greatest degree of consensus of all traits taxonomy." The traits have enjoyed a wide range of application and have been found to be both valid and reliable.

2.3 Relationship between Personality and Consumer Buying Behaviour

There is no agreement among analysts, researchers and authors on the correlation between personality and consumer buying behaviour. Agbonifoh et al. (2007, p. 154) noted that "some studies have found relationship between personality and product use while others have not." Studies by Evans (in Blackwell, Miniard & Engel, 2007) to predict brand choice between Ford and Chevrolet using personality as the predictive criterion also produced insignificant relationship. Crosby and Grossbart (1984) also reported low correlation between measures of personality traits and discrete instances of consumer behaviour in many past research works. Bearden, Ingram and Lafurge (1995) also described as 'disappointing' the use of general personality tool to explain purchase behaviour. A review of many past studies on the relationship between personality and consumer behaviour, carried out by Kassarijan (1971) found low correlations. Another review across numerous studies conducted by Kassarijan and Sheffet (in Arnould, Price, & Zinkhan, 2002, p. 255) revealed that "personality traits only explain about 10 percent of the variation in consumers' purchase, product preference..." on the strength of these findings, Arnould, Price and Zinkhan (2002) suggest that personality should be combined with other variable to improve the prediction of consumer behaviour.

The views of other researchers and scholars are, however, at variance with the ones discussed above. For instance, Kwak, Jaju and Zinkhan, (2000) state that, "in most studies, researchers find personality traits are important antecedents for explaining both buying behavior and consumers' perception of firms' marketing activities." Anderson and Cunningham (in Agbonifoh et al., 2007) found a linkage between personality traits and buying behaviour. A study by Anheuser-Busch, a premier German brewer, found personality to influence consumer brand choice (Hawkins, Best, & Coney, 1995). In their research work on the relationship between the 'Big Five' and brand personality, Mulyanegara, Tsarenko, and Anderson (2007) found strong correlation between personality traits and buying behaviour. Specifically, Mulyanegara, Tsarenko and Anderson's (2007, p. 234) study found out that: "consumers who exhibit a conscientious personality demonstrate preferences towards 'Trusted' brands. In contrast, those who are Extrovert are motivated by "Sociable' brands....Male respondents who are dominant on the Neuroticism dimension prefer 'Trusted' brand while 'Trusted' brand is preferred by females who are dominant on the conscientiousness dimension."

Rajagopal's (2008) study shows that the 'Big-Five' personality traits influence consumers' brand choice. A research work by Chen (in Tsao & Chang, 2010) reveals that the values and preference of consumers are reflected in their personality traits, which along with psychological state influence the formation of consumers' purchase motivation. Personality, he argued, can be used to explain an individual's behavior and hence his or her consumption behaviour and purchase decision. To verify this hypothesis, Tsao and Chang (2010) conducted a research on the impact of personality traits on online shopping behaviour, using the big five personality traits as predictor variables. The study shows that hedonic buying behaviour is positively influenced by three of the big five traits: neuroticism, extraversion, and openness to experience. This implies that the higher people are on neuroticism, extraversion, and openness to experience scales, the more inclined would they be to seek, out fun, excitement, and enjoyment during online shopping. Tsao and Chang's (2010) study supports Hirschman and Holbrook's (in Tsao & Chang, 2010) findings that consumers seek fantasies, excitement, and fun in the buying process. This implies that utilitarian purpose is not the only motives to buy. Personality has been found to influence certain aspects of buying behaviours, such as, compulsive buying behavior. Studies by Mowen (2000) found significant positive correlations between neuroticism and agreeableness, the predictor variables, and compulsive buying behaviour, the criterion variable. The findings of these studies were inconsistent with that of Balabanis (2001) which found a negative relationship between agreeableness and compulsive buying behaviour. This inconsistencies in the relationship between the five personality traits—especially agreeableness—and compulsive buying behaviour prompted Milkojczak-Degrauwe, and Brengman (2012) to investigate the relationship between these constructs. Milkojczak-Degrauwe and Brengman's (2012) study provides strong empirical support that personality does impact on consumer buying behaviour.

3. Methodology

3.1 Study Design and Sampling

A cross-sectional survey design was adopted for this study. The population of the study consisted of undergraduate students in universities in Cross River State, which were the male and the female undergraduate students of the 2012/2013 academic session in two universities in Cross River State: the University of Calabar and the Cross River University of Technology. Both the probability and the non-probability sampling techniques were used in this study. The probability sampling techniques used were the multi-stage sampling and the simple random methods. These probability sampling methods were used in the selection of faculties and departments from both universities. The University of Calabar (UNICAL) and the Cross River University of Technology (CRUTECH) were stratified into twelve and nine mutually exclusive groups respectively based on faculty. From each school, simple random method was used to select eight faculties from UNICAL (one of the faculties, UNICAL Consultancy services, differs from all other as it runs remedial, diploma and certificate programmes which do not have the normal four years level—except the sandwich programmes) and six faculties from CRUTECH. From each of the sampled faculties, simple random method was again used to select three departments from UNICAL, given a total of 21 departments and three units (the three units are from UNICAL Consultancy Services). When the same procedure was applied in CRUTECH, it yielded 18 departments. Thus, a total of 39 departments from both universities were included in the study.

To determine the sample size of undergraduate students, the Topman formula as presented by Luck and Rubin (1997) was applied and it resulted in 323 students. The assumption of the study was that there are four level of study in the all the departments in both universities. Thus, for departments with 5 levels of study, the last two levels (i.e, 4th year and 5th year were both taken as 4th or final year). Based on this assumption, the convenience sampling method was used in selecting respondents. Two undergraduate students were sampled from each level of study of the selected departments. This resulted in a total of eight undergraduate students per department or 168 undergraduate students from the 21 departments of UNICAL. From UNICAL Consultancy Services, four students were samples from each of the Remedial and the Diploma programmes and three from the Certificate programmes. This gives a total sample size of 179 for UNICAL. The same procedure when applied to CRUTECH resulted in eight students per department or 144 students from the 18 sampled departments of CRUTECH. The summation of 179 undergraduate students from UNICAL and 144 from CRUTECH gives the total study sample size of 323 undergraduate students.

3.2 The Questionnaire

An extensive review of literature on personality research, lifestyle research and buying behavior studies preceded the development of the questionnaire. The items in the questionnaire are both standardized and ad hoc. Standardized statements were used as they have been tested by past researchers for reliability and validity. Ad

hoc statements were used owing to the peculiarity in social and cultural contexts of the research subjects. The questionnaire was a seven-page instrument measuring three constructs spread into three sections as follows:

Section A: this section measured personality traits of respondents on the ‘Big-Five’ personality framework. The scale developed by Costa and McCrae (1992) and John and Srivastava (1999) were the bases for measuring the personality construct. The original instruments by these researchers have lengthy questionnaire and would be time-consuming on the part of respondents to complete. Consequently, only selected items from the original instrument and some ad hoc statements were used for each of the big five personality dimension, totaling 25 statements (i.e, 5 statements for each personality trait).

Section B: this section measured buying behavior. This section consisted of 10 statements.

Section C: this section used multiple choice questions to measure 10 socio-demographics’ information. These were: gender, age, marital status, family size, average monthly expenses, allowance source, residence, school, level of study, and departments.

The questionnaire was structured in nature, composed of close-ended questions formatted on a synthetic metric scale, specifically, a 5-point Likert Scale. The Likert Scale ranged from Strongly Disagree (with 1 point) to Strongly Agree (with 5 points). The questionnaires were administered through the assistant of class representatives (class captains) of the respective classes (levels) of each department. Completed questionnaire were collected (through the class representative) between 2 to 7 days after administration. Before the survey, a pilot study was undertaken with a small group of respondents in both universities during which the questionnaire was pre-tested. The instrument was also vetted by academics in test and measurement in the University of Calabar. The validity of the questionnaires would be further enhanced by the fact that some of the lifestyle and personality statements have been used by widely cited researches. According to Wen-Hsien (in Liu & Tsai, 2010, p. 1027) “...if the questionnaire items are based on theoretical foundation, logical inference, and expert consensus, the questionnaire can be viewed as having high validity.” The questionnaire in this study met the first two conditions and partially the third condition, and, therefore, be considered as having high validity. The Cronbach Alpha reliability Coefficient (α) was used in testing for the reliability of lifestyle variables, personality variable and brand choice. According to Guieford (in Liu & Tsai, 2010), Cronbach (α) above 0.70 indicates high reliability, Cronbach (α) in the range 0.55 – 0.7 is acceptable and modification of the questionnaire is required if Cronbach (α) is below 0.54. The Scientific Package for Social Science (SPSS) version 18 was used in the analysis of all data. Table I, shows that Cronbach (α) coefficient was above 0.50 across all the dimensions and average 0.67 for the 9 variables which was considered sufficient and adequate for the study.

Table 1. Test for reliability

No of items	Variable	X	SD	Alfa Coefficient
5	Agreeableness	16.84	2.36	0.70
5	Extraversion	15.70	3.98	0.69
5	Openness to exp.	14.22	2.86	0.71
5	Conscientiousness	13.84	2.76	0.63
5	Neuroticism	14.60	3.43	0.52
10	Buying behaviour	30.44	5.22	0.65

Source: Field survey, 2014.

4. Analysis and Result

A total of 323 questionnaires were distributed among participants from both universities out of which 228 (70.6%) were fully and correctly completed. The 228 returned questionnaires constituted the workable sample for this study. The distribution of each of the social and demographic factor in terms of frequency and percentage is presented in Table 2.

Table 2. Socio-demographic characteristics of respondents

Characteristics	Scale description	Frequency	Percentage
Gender	Male	120	52.6
	Female	108	47.4
		228	100.0
Age (Years)	> 16	0	0.0
	16-18	27	11.8
	19-21	57	25.0
	22-24	61	26.8
	25-27	39	17.1
	28-30	41	13.6
	31-33	7	3.1
	34 +	6	2.6
		228	100.0
Marital Status	Single	174	70.3
	Married	50	21.9
	Separated/Divorced	4	1.8
	Widowed	0	0.0
		228	100.0
Family size`	1	21	9.2
	2-3	33	14.5
	4-5	87	38.2
	6-7	58	25.4
	8+	28	12.7
		228	100.0
Monthly income (average)	>10,000	17	7.5
	10,000 - >20,000	31	13.6
	20,000 - >30,000	71	31.1
	30,000 - >40,000	77	33.8
	40,000 +	32	14.0
		228	100.0
Allowance Source	Family support (FS)	110	48.2
	Part-time job (PTJ)	12	5.3
	Friend (F)	18	7.9
	Mainly FS, partly F	15	6.6
	Mainly FS, partly PTJ	7	3.1
	Mainly FS, partly PTJ, partly F	13	5.7
	Mainly PTJ, partly FS	8	3.5
	Mainly PTJ, partly F	5	2.2
	Mainly PTJ, partly FS, partly F	4	1.8
	Mainly F, partly FS	21	9.2
	Mainly F, partly PTJ	9	3.9
	Mainly F, partly FS, partly, PTJ	2	.9
	Scholarship/Student aid	3	1.3
	Other sources	1	.4
		228	100.0
Residence	Hostel	76	33.3
	Rent apartment outside school/at staff quarter	86	37.7
	Live with relative/guardian	66	29.0
		228	100.0
School	University of Calabar	126	55.3
	Cross River University of Technology	102	44.7
		228	100.0

Level of study	100	61	26.8
	200	35	15.4
	300	59	25.9
	400	73	32.0
		228.0	100.0
Department	Accounting	7	3.1
	Agricultural economic & Extension	6	2.6
	Agronomy	8	3.5
	Animal Science	6	2.6
	Architecture	4	1.8
	Banking & Finance	8	3.5
	Biochemistry	4	1.8
	Biological Science	8	3.5
	Business Administration & Mgt.	4	1.8
	Chemical Science	8	3.5
	Chemistry	8	3.5
	Civil Engineering	2	.9
	Computer Science	7	3.1
	Crop Science	2	.9
	Curriculum & Teaching	6	2.6
	Economics	8	3.5
	Educational Electronic Engineering	4	1.8
	English & Literary Studies	6	2.6
	Estate Management	7	3.1
	Fisheries & Aquatic Science	7	3.1
	Forestry & Wildlife Management	0	0.0
	Genetics & Biochemistry	8	3.5
	Geography & Regional Planning	6	2.6
	Hospitality & Tourism Management	7	3.1
	Human Anatomy	7	3.1
	Linguistics & Communication Science	6	2.6
	Management	5	2.2
	Marketing	4	1.8
	Mechanical Engineering	2	.9
	Medical Biochemistry	7	3.1
	Medical Physiology	7	3.1
	Microbiology	4	1.8
Nursing Science	8	3.5	
Radiology	7	3.1	
Sociology	8	3.5	
Theatre & Medical Studies	4	1.8	
Urban & Regional Planning	8	3.5	
Vocational Education	8	3.5	
		228	100.0

Source: Field survey, 2014.

4.1 Test of Hypotheses

The two hypotheses for this study were tested using multiple-regression analysis at 0.05 level of significance. The Scientific Package for Social Science (SPSS) version 18 was used in testing the hypotheses.

4.1.1 Hypothesis One

There is no significant relationship between personality (agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) and buying behaviour of undergraduate students in universities in Cross River State.

The independent variable in this hypothesis is undergraduate students' personality in terms of agreeableness, extraversion, openness to experience, conscientiousness and neuroticism, while the dependent variable is buying behaviour. The result of the analysis is presented in Table 3. The table shows that a combination of the

undergraduate students' personality in terms of agreeableness, extraversion, openness to experience, conscientiousness and neuroticism yielded a coefficient of multiple regression (R) of .305 and a multiple regression R-square (R^2) of .093. The result also shows that analysis of variance for the multiple regression data produced an F-ratio of 4.561 which is higher than the critical F-value of 2.10 and was significant at .05 level [F-statistic (6, 222) = 4.561 compared to $F_{0.05}(6, 222) = 2.10$]. $H_0: \mu = \mu_0$ was rejected and $H_0: \mu \neq \mu_0$ was accepted. The null hypothesis was rejected and the alternative hypothesis which states that there is a significant relationship between personality (agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) and buying behaviour of undergraduate students in universities in Cross River State was accepted. Thus, when these variables are taken together, they significantly predict undergraduate students' buying behaviour. This implies that undergraduate students' personality in terms of agreeableness, extraversion, openness to experience, conscientiousness and neuroticism when taken together are significant predictors of undergraduate students' buying behaviour. A multiple R^2 of .093 implies that the independent variables (undergraduate students' personality in terms of agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) jointly explain 9.3 percent of the variance in undergraduate students' buying behaviour. To find out the relative contributions of the individual factors, a test of regression weight was carried out. The result shows that the standardized regression weights (Beta) ranged from -.023 to -.406 and t - ratio from -.183 to -3.076. The Beta weights of three (agreeableness, extraversion and conscientiousness) variables were significant at .05 level, while the other two variables (openness to experience and neuroticism) were not significant at .05 level. This result implies that when the variables were taken individually, only three namely; agreeableness, extraversion and conscientiousness significantly predict students' buying behaviour. The result further showed that agreeableness ($t = -3.076$) made the greatest contribution to buying behaviour, followed by conscientiousness ($t = 2.294$), while neuroticism ($t = -.183$) made the least contribution to buying behaviour.

Table 3. Multiple regression analysis of the influence of personality on buying behaviour of undergraduate students (N=228)

Model	R	R. square	Adjusted R. square	Std error of the estimate		
1	.305a	.093	.073	5.55650		
Model	Sum of square	df	Mean square	F	p-value	
Regression	704.144	5	140.829	4.561*	.001	
Residual	6854.172	222	30.875			
Total	7558.316	227				
Variables	Unstandardized regression weight B	Standardized regression weight	Beta weight	t	p-value	
Constant	30.068	3.460		8.691*	.000	
Agreeableness	-.406	.132	-.212	-3.076*	.002	
Extraversion	.396	.133	.213	2.987*	.003	
Openness to exp.	-.145	.113	-.082	-1.286	.200	
Conscientiousness	.278	.121	.157	2.294*	.023	
Neuroticism	-.023	.128	-.013	-.183	.855	

* Significant at .05 level. Critical F- value = 2.26.

4.1.2 Hypothesis Two

Socio-demographic variables (gender age, marital status, family size, monthly expenses, allowance source, residence, school, level of study and department) have no significant moderating effect on the influence of personality (agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) on buying behaviour of undergraduate students in universities in Cross River State.

The independent variables in this hypothesis are undergraduate students' personality (agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) and socio-demographics (gender, age, marital status, family size, monthly expenses, allowance source, residence, school, level of study, department) while the dependent variable is buying behaviour. The result of the analysis is presented in Table 4.

Table 4. Multiple regression analysis of the moderating effect of socio-demographic variables on the influence of personality on buying behaviour of undergraduate students (N=228)

Model	R	R. square	Adjusted R. square	Std error of the estimate	
1	.486a	.237	.182	5.22318	
Model	Sum of square	df	Mean square	F	p-value
Regression	1784.530	15	118.969	4.361*	.000a
Residual	5756.422	211	27.282		
Total	7540.952	226			
Variables	Unstandardized regression weight B	Standardized regression weight	Beta weight	t	p-value
Constant	29.655	3.884		7.635	.000
Gender	0.027	.711	.002	.038	.970
Age	.027	.359	.007	.075	.940
Marital status	1.038	.923	.085	1.124	.262
Family size	.065	.310	.013	.209	.835
Expenses	.677	.329	.134	2.055	.041
Allowance	.006	.117	.004	.050	.960
Residence	-.295	.468	-.040	-.630	.529
School	-.265	.815	-.024	-.326	.745
Level	1.348	.431	.278	3.129	.002
Department	.096	.031	.195	3.092	.002
Agreeableness	-.401	.129	-.209	-3.112	.002
Extraversion	.235	.133	.126	1.769	.078
Openness to experience	-.136	.119	-.077	-1.142	.255
Conscientiousness	.068	.125	.038	.547	.585
Neuroticism	-.190	.127	-.102	-1.500	.135

* Significant at .05 level.

Table 4 shows that a combination of the moderating effect of socio-demographic variables on the influence of personality on buying behaviour yielded a coefficient of multiple regression (R) of .486 and a multiple regression R-square (R^2) of .237. The result also shows that analysis of variance for the multiple regression data produced an F-ratio of 4.361 which is higher than the critical F-value of 1.67 and was significant at .05 level [F-statistic (16, 212) = 4.361 compared to $F_{0.05}(16, 212) = 1.67$]. $H_0: \mu = \mu_0$ was rejected and $H_a: \mu \neq \mu_0$ was accepted. The null hypothesis was rejected and the alternative hypothesis which states that socio-demographic variables of undergraduate students in universities in Cross River State have no significant moderating effect on the influence of personality on buying behaviour was accepted. Thus, when these variables are taken together, they significantly predicted students' buying behaviour. This implied that socio-demographic variables and personality when taken together are significant predictors of undergraduate students' buying behaviour. A multiple R^2 of .237 implies that the independent variables—students' socio-demographic variables and personality—jointly explain 23.7 percent of the variance in buying behaviour.

To find out the relative contributions of the individual factors, a test of regression weight was carried out. The result shows that the standardized regression weights (Beta) ranged from .002 to .278 and t-ratio from .038 to 3.129. The Beta weight of 12 variables (marital status, family size, expenses, residence, school, level of study, department, agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) were significant at .05 level, while the other three variable (gender, age and allowance source) were not significant at .05 level. This result implies that when the variables were taken individually, only 12 namely; marital status, family size, expenses, residence, school, level of study, department, agreeableness, extraversion, openness to experience, conscientiousness and neuroticism, significantly predict students' buying behaviour. The result further showed that level of study ($t = 3.129$) made the greatest contribution to buying behaviour, followed by agreeableness ($t = -3.112$), then department (3092), while gender ($t = .038$) made the least contribution to buying behaviour.

5. Discussion

This study showed that Personality is a strong predictor of buying behaviour. At 0.05 level of significance, the F-ratio was 4.561 which is greater than the critical table value of 3.00. The research finding showed that

personality significant influenced the buying behaviour of undergraduate students in universities in Cross River State. The finding of this study collaborates the finding of researchers such as Kwak, et al. (2002) that personality is a predictor of buying behaviour. Anderson and Cunningham (in Agbonifoh, et al., 2007), Rajagopal (2008) and Mulyanegara et al. (2009) also found significant relationship between personality and buying behaviour. Personality traits have been found to influence many aspects of consumer buying behavior such as online buying behaviour Tsao & Chang (2010) and compulsive buying behavior (Milkojczak-Degrauwe, et al., 2012). In terms of the 'Big Five' dimension, the influence of each of the five broad traits to the particular buying behavior differs. This study showed that each of the five personality variables were predictor of buying behaviour. However, agreeableness was the strongest predictor of buying behavior. Study by Mowen (2000) found significant correlation between agreeableness and neuroticism, the predictor variable, and compulsive behavior, the criterion variable. A study by Chen (in Tsao & Chang, 2010) showed that hedonic buying behaviour is positively influenced by three of the 'Big Five' traits: extraversion, openness to experience and neuroticism. This study revealed that students buy brands whose personality matches their own, which is in line with the position of Hawkins, Best and Coney (1995) that people have personality and often buy products whose personality synchronizes with their own.

When tested at 0.05 significant level, the combination of socio-demographic variables (gender, age, marital status, family size, monthly expenses, allowance source, residence, school, level of study and department) and personality (agreeableness, extraversion, openness to experience, conscientiousness and neuroticism) yielded a F-ratio of 4.361. This implied that socio-demographic variables have significant moderating effect on the influence of personality on buying behaviour of undergraduate students in universities in Cross River State. However it is observed that the F-ratio fell slightly from 4.561 when agreeableness, extraversion, openness to experience, conscientiousness and neuroticism were the predictor variables to 4.361 when the 10 socio-demographic variables were combined with the personality variables. It can be inferred that socio-demographic variables have the slightly less strength than personality variables in predicting consumer buying behaviour. When combined personality and socio-demographic variables significantly influence buying behaviour. When studies on personality failed to established strong correlation with consumer buying behavior, scholars and researchers advocated for the inclusion of demography to personality construct to enhance its explanatory and predictability power (Kassarjian, 1971; Kwak et al, 2000; Solomon, 2011)

6. Summary and Conclusion

The study was on the influence of personality on the buying behaviour of undergraduate students in universities in Cross River State. Personality was measured on the 'Big Five' personality traits - agreeableness, extraversion, openness to experience, conscientiousness and neuroticism. The study was focused on undergraduate students of the 2012/2013 academic session in the University of Calabar and the Cross River University of Technology. The study also found that personality is a significant predictor of consumer buying behaviour. Of the five personality variables, agreeableness had the strongest influence on buying behaviour while neuroticism had the least influence. The study also showed that socio-demographic variables like gender, age, marital status family size, expenses, allowance source, residence, school, level of study and department have significant moderating effect of the influence of personality on brand choice.

The 'Big Five' personality trait achieved the highest consensus among scholars and researchers in the field of consumer behavior and consumer and it is the most commonly used personality scale. Measured on this dimension, personality significantly influenced buying behaviour of undergraduate students in universities in Cross River State. Socio-demographic variables when combined with personality significantly influenced the buying behaviour of undergraduate students in universities in Cross River State. The combination of socio-demographic and variables personality help to predict consumer buying behavior better thereby overcoming the weakness of using only one factor in isolation.

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