



GRADUATE SCHOOL OF BUSINESS & LEADERSHIP

**Influence of Biopsychosocial Factors on Entrepreneurial Education
and Students' Entrepreneurial Inclination in Selected Nigerian
Universities**

By

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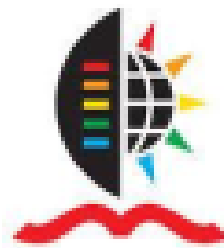
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DEDICATION

This thesis is heartily dedicated to the Triune God, the Most Holy, for translating me out of obscurity to the realm of Your Dear Son so that I can soar like the eagle.

It is dedicated to my auteur teacher, pastor, husband and friend, Dr Robert Waidi Odewale; your priceless contribution has been unparalleled. Also to my beloved children and everyone without them this lofty dream would have remained a mirage.

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ABSTRACT

Entrepreneurial education has attracted a great deal of attention worldwide because of the idea that it is one of the panaceas for today's societal unemployment problems among university graduates. The aim of this dissertation is to investigate the relationship between entrepreneurial education and the entrepreneurial inclination of students at Nigerian universities. Even more importantly, the study examined the role of biopsychosocial factors as a moderator of the relationship between entrepreneurial attitude, entrepreneurial knowledge and venture creation skills and entrepreneurial inclination. Using cross-sectional data, 385 usable questionnaires were received from final-year undergraduate students from five universities in the South West geo-political Zone. Final-year students were selected based on the assumption that they must have completed their entrepreneurship modules in order to make decisions about their entrepreneurial activities. Of the sample, 68.31% were management students and 31.69% were non-management students. Preliminary statistical analysis was conducted using the IBM Statistical Package for Social Sciences (version 23), and covariance-based structural equation modeling was used to examine the study hypotheses using Analysis of Moments Structure (AMOS) (version 24). The study established that strong positive relationship exists between entrepreneurial education (entrepreneurial attitude and venture creation skills) and entrepreneurial inclination among Nigerian university students and the sub-samples of management and non-management students. The most gratifying results are those that indicate that biopsychosocial factors negatively moderate the relationship between entrepreneurial attitude and entrepreneurial inclination among Nigerian university students and non-management students. With regard to differences between groups, this study reveals that management students have higher levels of entrepreneurial attitude, entrepreneurial knowledge and venture creation skills than their non-management counterparts. The study contributes to the literature by highlighting the role of biopsychosocial factors in influencing entrepreneurial thinking amongst Nigerian university students. This suggests that university students could become potential entrepreneurs when they consider biopsychosocial factors to enable them develop the right attitude towards entrepreneurial inclination. The managerial implication of this study indicates that university administrators and other stakeholders should consider biopsychosocial factors to be important in response to increasing the inclination of university students to entrepreneurship. This will help increase prospective entrepreneurs and reduce graduate unemployment. The study opens a new frontier with regard to biopsychosocial factors as a moderator in the field of entrepreneurship.

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LIST OF ABBREVIATIONS

ABBREVIATION	FULL LIST
AGFI	Adjusted Goodness-of-Fit Index
AMOS	Analysis of Moments Structures AMOS
ASUU	Academic Staff Union of Universities
AVE	Average Variance Extracted
BFP	Passion
BSF	Biopsychosocial factors
CB-SEM	Covariance-Based Structural Equation Modelling
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMB	Common Method Bias
CR	Composite Reliability
DV	Discriminant Validity.
EFA	Exploratory Factor Analysis
EFG	Government Policy
EFR	Role Models
ENA	Entrepreneurial Attitude
ENI	Entrepreneurial Inclination
ENK	Entrepreneurial Knowledge
GEM	Global Entrepreneurship Monitor
GFI	Goodness-of-Fit Index
ILO	International Labour Organisation
IR	Indicator Reliability
KMO	Kaiser-Meyer-Olkin
NFI	Normed Fit Index
NYSC	National Youth Service Corps
PFI	Innovativeness
PFR	Risk-taking
PWC	PricewaterhouseCooper
RMSEA	Root Mean Square Error of Approximation index
SD	Standard Deviation
SEI	Students' Entrepreneurial Inclination
SRMR	Standardized Root Mean Square Residual
SPSS	Statistical Package for Social Sciences

UNDP	United Nations Development Programme
VCS	Venture creation Skills
YOE	Year of Establishment
5WsH	What, Why, Where, When, Who and How.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The exponential growth of entrepreneurs has been identified as an antidote to the current societal ills that plague our world, in particular the less developed and emerging economies (Chin & Yong, 2017). Developing countries are grappling with a variety of challenges, including graduate unemployment, poverty, economic decline, and lack of wealth creation (Fields, 2014; Olorundare & Kayode, 2014) as well as entrepreneurial disinclination among youth (Koloba, 2016; Edirisinghe & Nimeshi, 2016). However, the growing global recognition of and enthusiasm for teaching entrepreneurship in curricula could lead to an increased inclination towards entrepreneurship among students. This has led some to believe that entrepreneurial traits can be learned, negating the assumption that entrepreneurs are born and not made (Shuaibu, Jogana, & Mukhtar, 2018; Baptista & Naia, 2015).

As a result, there has been an on-going search for research approaches, teaching methods and factors that could transform theoretical knowledge from non-functional to functional practicality (Fang & Chen, 2019). These should have a positive impact on entrepreneurial activity. Accordingly, different methodologies are used to identify the most appropriate and plausible techniques for raising potential entrepreneurs in Nigeria (Olorundare & Kayode, 2014). These range from traditional classroom-based approaches to case studies, company visits, interviews with entrepreneurs, guest speaker conferences, workshops and seminars, mentors, simulation games and computers (Ahmad, 2013; Maritz & Brown, 2013). All of these approaches have gone a long way in advancing the field of entrepreneurship. Nevertheless, most of these methodologies have been criticised for their inability to raise graduates prone to entrepreneurship; who normally should recognize entrepreneurship as a panacea for the teeming unemployed youth (Longe, 2017).

The National Bureau of Statistics (NBS), (2017) has shown that around 52 million economically viable Nigerians remain unemployed. Unfortunately, a substantial proportion of graduates are sent on an annual basis to the unemployment market (Longe, 2017), and that has become a significant challenge for all stakeholders in Nigeria. The Nigerian government seems disturbed by the rise in the unemployment rate of graduates in the country (Eme, 2014), but the non-functional measures have little surpassed impoverishment. The country is considered one of the poorest in the world (Ogbeidi, 2012; Chenube, Saidu, Chiedu, & Omomoyesan, 2011), although the largest black nation on earth (Adekola, Allen, Olawole-Isaac, Akanbi, & Adewumi, 2016).

In addition, a report by Ács, Szerb, Autio, and Lloyd (2017) found that Nigeria ranked 100th out of 137 countries surveyed on the health entrepreneurship ecosystem. Furthermore, at the regional level,

Nigeria's performance remains low in terms of capacity, attitudes and aspirations, with Benin, Sierra Leone and Chad in sub-Saharan Africa outperforming Nigeria (Ács *et al.*, 2017). A plausible reason for this, as pointed out in previous studies, is that entrepreneurial education in Nigeria is deficient due to inconsistent government policies (Longe, 2017). The current global perception of entrepreneurship education is that it is great enough to stop the tide of graduate unemployment. However, the entrepreneurial challenge in a developing nation such as Nigeria is multifaceted. In fact, it can be compared to an acclaimed curative therapy wrapped in hidden side effects and with no caution, only to be administered to the detriment of the patient. Eventually, the result could help either assert its power, if it works, or its vulnerability, in the event of failure.

Building on this, the recruitment of potential entrepreneurs from the university has remained a daunting task in developing economies such as Nigeria. Therefore, to understand the promising entrepreneurial culture, associated with entrepreneurial inclination, and for emerging entrepreneurs to move beyond miscarriages and start-up failures, a paradigm shift is needed. Furthermore, increasing the number of potential entrepreneurs requires strong interest, engagement, collaboration, passion and concentration of all stakeholders on entrepreneurial initiatives (Etodike, Ezeh, Ogbeide, & Ike, 2018). A passionless enterprise is unfounded and a potential victim who has been recruited to increase the mortality rate of new enterprises. On the other hand, complementary expertise in furthering business creation beyond the training stage demands the pursuit of passion-driven dreams.

Nevertheless, societal problems are strongly linked to social factors, which imply that solutions to the above challenges (graduate unemployment, poverty, economic retrogression and lack of wealth creation) need to be addressed in a holistic manner. Therefore, embarking on a viable and healthy enterprise requires thinking and taking into account all factors, such as biological, psychological, behavioural and environmental. Obviously, stakeholders have devoted resources (both in time and capita) to developing qualified entrepreneurs, especially at the university level, but the challenges that emerging economies face in supporting potential entrepreneurs lie in a number of latent factors.

Therefore, previous studies have focused mainly on expected output, advocating business creation among Greenhorns without having an idea of what the required inputs entail. Therefore, this dissertation complements the study by Xie (2014), who argued that entrepreneurial behaviour can be well understood by looking at both the individual and the environment. As a result, the author proposed a conceptual model based on “the integration of two levels of analysis, the individual and the environment” (Xie, 2014, p. 25). It has also been argued that without the interaction of the individual and the environment, the development of the entrepreneurial spirit (inclination) may be hampered, thus requiring further research. To corroborate the view of Xie (2014), Tiftik and Zincirkiran (2014) in their survey of Economics and Administrative Science students in Turkey argued that the individual and the environment should align to enable entrepreneurs to thrive.

However, previous research on entrepreneurial inclination has shown that emphasis has been placed on individual variables without the combination of individual-environment interaction (Edirisinghe & Nimeshi, 2016; Koloba, Dhurup, & Radebe, 2015; Keat, Selvarajah, & Meyer, 2011).

The absence of these fundamentals have succeeded in multiplying start-up trepidation and fear rather than venture creation (Global Entrepreneurship Monitor (GEM), 2017; Kelley, *et al.*, 2012a; Shahrial, 2018). There is a lack of detailed research on how to improve entrepreneurial activities in the real world, and this starts with the desire to be entrepreneurial. It is therefore crucial to motivate potential entrepreneurs, since this study argues that this will lead to likely business start-ups. It is therefore important to consider how to strengthen entrepreneurship by taking into account individual and environmental factors. Therefore, this dissertation draws on a research strategy developed by Xie (2014), which suggested that future research should take into account the impact of the environment on individuals. The author has focused on one fundamental issue in the area of entrepreneurship: why do some people, but not others, choose to become entrepreneurs? Different responses to this important issue have been suggested by different academics. Thus, conducting empirical research provides strong evidence in support of Xie's (2014) conceptual model.

Moreover, Obschonka and Schiller (2016, p. 198) stated that “early characteristic adaptations in entrepreneurial development are at the center of a biopsychosocial life-span of model of entrepreneurship”. The authors provided an overview of research into the connection between adolescent development and entrepreneurship. In light of this, this dissertation considers the influence of biopsychosocial factors (BSF) (combination of biological, psychological, behavioural and environmental or contextual factors) as a moderator variable on entrepreneurial education and the entrepreneurial inclination of students in selected Nigerian universities.

1.2 Background of the Study

Entrepreneurial education, as a concept, has evolved to address a variety of challenges. This has led to different terminologies that include enterprise education, entrepreneurial learning, entrepreneurial education and external entrepreneurship education (Lackeus, 2015). It is argued that entrepreneurial education inspires hope among individuals and organisations to flourish with aspirations for creativity and innovation. Similarly, the argument that entrepreneurship could be the path to economic growth and development makes it important in various fields and offers it a prominent place on a global scale (United Nations, 2017; Alcaraz-Rodriguez, Alvarez, & Villasana, 2014; Storen, 2014; Dobni, 2014; Ibrahim & Abdullahi, 2014; Kaegon & Nwogu, 2012; Maresch, Harms, Kailer, & Wimmer-Wurm, 2016). Gurgel, Rodrigues, and Vieira (2014) acknowledged that entrepreneurship now plays an important role in the global political agenda.

Thus, a broad vision of the “mission statement” of entrepreneurship education in response to the challenges of graduate unemployment predates the idea that entrepreneurship education is part of the curricula of Nigerian universities (Aboho, Aleru & Danladi, 2016). In pursuit of actualising the goals of entrepreneurship, higher education institutions in Nigeria make entrepreneurship training mandatory for all students, irrespective of their curriculum (Akhueomonkhan, Raimi, & Sofoluwe, 2013; Anger, 2010), as it is in many other countries (Jones, Matlay, & Maritz, 2012). In addition, researchers have written extensively on entrepreneurial education as a field of study and its ability to positively influence the population (Maresch *et al.*, 2016; Liñán & Fayolle, 2015; Martin, McNally, & Kay, 2013; Hebert & Link, 2011).

This is why, to meet the aspirations of society on the perceived competency of entrepreneurial education (Ahmad & Buchanan, 2015; Olorundare & Kayode, 2014; Baldegger *et al.*, 2013; European Commission, 2012b), researchers, academics, educators, governmental and non-governmental organizations are engaged in the race to make up for this achievement, which, according to some, has not yet been realized (United Nations, 2015; Cooney, 2012; Zhou & Xu, 2012; Keat *et al.*, 2011). The reason for the non-realization may be connected to Xie's (2014), question ‘why do some people, but not others, create their own venture?’.

1.2.1 Issues related to entrepreneurship

Oloruntoba and Akinfolarin (2018, p. 27) defined entrepreneurship as “the process of bringing together creative and innovative ideas and combining them with management strategies and functions in order to meet identified needs thereby creating wealth”. Stough (2016, p. 131) stated that “entrepreneurship is the process of starting and growing a business making entrepreneurs those who start and grow businesses”. For Drucker (1985, P. 26), “entrepreneurship, then, is behaviour rather than personality trait”. The European Commission (2012b, p. 82) defined entrepreneurship’s key competence “as a composition of an entrepreneurial attitude, entrepreneurial skills and knowledge of entrepreneurship”. With this understanding, a transfer of knowledge acquired in entrepreneurial education should set the pace not only for entrepreneurial skills, but also for a high propensity for entrepreneurial activity. which in turn could produce competent entrepreneurs (Onuma, 2016; Rontas & Lengyel, 1997). This assertion is grounded in human capital theory, which asserts that education has the potential to positively influence different categories of people (Becker, 1964).

In addition, Onuma (2016) suggested a paradigm shift from general education to integrated entrepreneurship education, as entrepreneurial education has been unable to alleviate graduate unemployment in Nigeria. The reason for the failure to meet the supposed goals of entrepreneurial education has remained a puzzle among stakeholders (Johansen, 2014). Possible explanations for this might be that students are not able to translate entrepreneurial knowledge to make them inclined

towards entrepreneurship, or they lack key entrepreneurial skills to enhance optimal performance. In addition, an overview of the Lackeus (2015) study showed that the big barrier to entrepreneurship is the translation of theoretical learning into business creation, and this requires further study.

Besides the lack of entrepreneurial activities, Agri, Nanwul and Acha (2017) have summarized in two sub-headings some of the challenges facing entrepreneurial education in Nigeria. This starts with business constraints, including a lack of appropriate entrepreneurial skills, a lack of technological innovation, a lack of access to financing, and unsupported government policies. The second relates to environmental constraints such as illiteracy and lack of entrepreneurial education, gender discrimination, epileptic electricity supply, political instability and official corruption. These unresolved difficult situations have resulted in a lack of policy direction and economic development (Obaji & Uche, 2014; Okoli & Allahna, 2014).

Moreover, from a global perspective, the validity of the impacts of entrepreneurship education remains to be determined, as conflicting results remain in previous studies. (Nabi, Fayolle, Lyon, Krueger, & Walmsley, 2017; Rauch & Hulsink, 2015; Jones *et al.*, 2012; Lorz, 2011; Gary, Jones, Miller, Pickernell, & Thomas, 2010). Blundel and Lockett (2011, p. 4) in the many faces of entrepreneurship, stated that entrepreneurship education “involves all sorts of people, operating in different contexts, engaging in a wide range of activities and creating a variety of organizational forms”. Thus, some literature complicates the issues not because they come from different philosophical perspectives, but from divergent concepts, leaving room for variations in objectivity and antithetical definitions (Hebert & Link, 2011). This inconsistency in terms and concepts (Neck & Greene, 2011) leaves some of the students at the end of the reception confused and indecisive (Heinonen & Poikkijoki, 2006).

1.2.2 Current Disinclination among Youths

Emergent trend among youths indicates that most of the youths in the society only aspire to become millionaires in a jiffy without pursuing the guiding prerequisites (Koloba *et al.*, 2016). Thus, rather than engaging in entrepreneurial activities, it is the pursuit of immediate, sweat-free wealth. The literature provides evidence of an emerging decline in entrepreneurship activity among young people (Koloba, 2016; Edirisinghe & Nimeshi, 2016; Ahmad & Buchanan, 2015; Ogoma, 2014). Furthermore, it is evident that the current generation of young people want to be like the richest man on Earth without pursuing the prerequisites to reach such a height. As a result, the lack of entrepreneurial inclination has resulted in the search for wealth without being conscious of its subtleties. To corroborate this view, some Nigerian undergraduate students opted for a Ponzi scheme with their tuition fees. The evidence indicates that about four thousand students from one institution deposited about US\$6.5 million into the failed scam (Fatunde, 2017). Instead of brainstorming

creative business ideas, these students had nerves about an opulent lifestyle with no identifiable source of income.

Anecdotal evidence shows that youth are influenced by social media, and the Nabi *et al.* (2017) systematic review identified entrepreneurship as the journey of the heart, and the Holy Bible says, “where your treasure is there will your heart be also” (Matthew 6:21). Maybe the hearts and minds of some of these young people are controlled by information in social media. As entrepreneurial educators develop strategies on how best to advance entrepreneurial knowledge at the university, some of these undergraduate students are busy connecting on social media and searching the Internet for prohibited engagements (Baptista & Naia, 2015; Shepherd & Williams, 2015; Rae & Woodier-Harris, 2012). Unfortunately, discouraging them on the use of social media could be efforts in futility (Mukherjee, 2013) because some have become addicted that talking and chatting now takes precedence to the detriment of thinking and writing business proposals. In addition, the availability of different information on the Internet, such as the bankruptcy rate of enterprises (Corner, Singh & Pavlovich, 2017) and the adverse business climate in developing countries may contribute to the rise of the ‘quick fix’ syndrome of wealth (Meager, Martin, & Carta, 2011).

Therefore, taking into consideration what venture creation entails in the real world and the level of students’ entrepreneurial inclination especially in developing countries, promoting entrepreneurship education as a must for all students (Obschonka & Schiller, 2016; Solesvik, Westhead, Matlay, & Parsyak, 2013; Jones *et al.*, 2012) will require further deliberation on other factors. This assertion is supported by the study conducted among Norwegian students, which revealed that only one third of the entrepreneurship graduates were inclined to self-employment if given the privilege to choose (Storen, 2014). Of course, the other two-thirds were mere participants, who may have some interest and focus outside the entrepreneurial sphere. Thus, it can be concluded from the above that raising student entrepreneurs may be one of the most challenging phases in the field of entrepreneurship (Lackeus, 2015).

Entrepreneurship education has been designed in the curricular to raise potential entrepreneurs (Shuaibu *et al.*, 2018; Okeke, Okonkwo, & Oboreh, 2016), however, some constraints have limited business start-ups, such as a lack of interaction of other factors. Student entrepreneurial inclination (SEI) cannot be considered in isolation, and combining other factors requires more research.

The current economic challenges in Nigeria (Oguntimehin & Olaniran, 2017) was the antecedent to the general consensus that students of higher institutions of learning must be encouraged to become entrepreneurs (Koloba *et al.*, 2015). Therefore, these students do not have the prerogative to make their choices, but are enrolled in a mandatory manner. As a result, some entrepreneurial participants are not entirely in tune with the mandatory entrepreneurship courses; moreover, the concept is inhibited by the simple gesture to create a business. It is therefore clear that researchers should

explore practical ways of turning entrepreneurial knowledge into businesses. An attempt to bridge this gap is the core of this dissertation, with focus on the moderating effect of biopsychosocial factors on students' entrepreneurial inclination in a developing economy like Nigeria. This is because there may be no solid justification for suggesting that the entrepreneurial inclination of students be determined by only one factor. Therefore, in-depth empirical research is required to identify potential entrepreneurs, and to do this, biopsychosocial factors should be explored as a moderating variable.

1.2.3 Perception of Entrepreneurial Inclination and Biopsychosocial Factors

There are few prior studies that provide guidance on entrepreneurial inclination with a particular focus on business start-ups. Okeke *et al.* (2016, p. 15) defined entrepreneurial inclination “as the degree to which an individual is predisposed to taking up entrepreneurial activities”. They argued that personal preference or disposition is important for becoming an entrepreneur, and that entrepreneurship education prepares students to be inclined to entrepreneurship, and subsequently to become self-employed. Previous researchers have agreed that entrepreneurship education could accomplish its assigned roles, which include elimination of poverty, provision of employment opportunities for the teeming youths (Edirisinghe & Nimeshi, 2016; United Nations, 2015), innovativeness and creativity for organizational performance (Dabale & Masese, 2014), and unsurpassed economic growth and development (Rauch & Hulsink, 2015; Naudé, 2013).

However, the basic reason of introducing entrepreneurship education is that the noble goals itemised above will be actualized, but the actualization is still being trailed with uncertainties (Hinks, Fohrbeck, & Meager, 2015). Martin *et al.* (2013) argued that past findings on entrepreneurship education have not been impressive in spite of human and material resources being invested into it globally. It is obvious therefore that certain variable needs to be factored into entrepreneurship education and students' entrepreneurial inclination if the intended goals are to be achieved. This dissertation therefore argues that biopsychosocial factors linked to entrepreneurship education could lead to a better understanding of the entrepreneurial inclination of students.

In the light of the above submission, an in-depth examination of the biopsychosocial framework was carried out since this is a required component for raising would-be entrepreneurs as suggested by Obschonka and Schiller (2016). For this purpose, biopsychosocial factors were used as a moderator variable in the relationship between entrepreneurial education and the entrepreneurial inclination of students. However, the training of university entrepreneurs demands individual cognitive abilities and passion on the part of students. Bygrave and Zacharakis (2011, p. 58) put it more succinctly that “The idea in itself is not what is important. In entrepreneurship, ideas are really a dime, a dozen. Developing the idea, implementing it, and building successful business are the important things”.

The moderating role of biopsychosocial factors seems to have received little or no attention in the literature, whereas this could be the trajectory to solving the complex problem of graduate unemployment in Nigeria and other emerging economies from Sub-Saharan Africa. Although, using biopsychosocial factors as a moderating variable could have some complexities, it can be explored by using Analysis of Moments Structures (AMOS) Covariance-Based Structural Equation Modelling (CB-SEM) as suggested by Hair, Gabriel, and Patel (2014a). This technique is shown to be relevant when considering the moderating effect of a third variable. Hence, this dissertation used AMOS being one of the authoritative approaches for the measurement of latent (unobserved) variables using the Structural Equation Modelling (SEM).

Since Obschonka and Schiller (2016) stressed the interconnection of biopsychosocial factors in the development of entrepreneurs, this dissertation considers that the entrepreneurial inclination of students should be considered in line with this interconnection. This dissertation argues that the interaction of biopsychosocial factors with entrepreneurship education will unfold nascent entrepreneurs; this also links with Xie's (2014) integrative approach, which considered the integration of individuals and the environment. Thus, in order to investigate how these factors work, some variables have been recognized as important to entrepreneurial activity, which have been combined and studied in an integrated framework. These include gender, previous work experience, family financial status, passion, government policy and innovativeness that have been recommended for further studies (Nabi *et al.*, 2017; Stough, 2016; Viinikainen *et al.*, 2016; Sanchez, 2013; Von Graevenitz, Harhoff, & Weber, 2010; Chell, Haworth, & Brealey, 1991). In addition, there is no evidence that these variables were examined as an entity to moderate the relationship between entrepreneurship education and the entrepreneurial inclination of students in previous studies. It is therefore not a misplaced research to consider whether the instrumentality of biopsychosocial model can be an avenue to identify the entrepreneurially inclined and how such potential entrepreneurs can be nurtured.

For example, one of the top-notch business magnates in Nigeria started trading from elementary school and later studied Business Administration at the university. He started his business immediately after graduation with a lump sum obtained from a relation (Vanguard Newspaper Special Report March 22, 2014). Similarly, another eminent personality in Nigeria graduated as a trained lawyer, but never practiced Law for once after graduation, because she studied law to comply with the family demands on her. She was financially empowered to start her business soon after graduating (The Punch Newspaper, October 21, 2017). There is the possibility of referring to the establishment of businesses by these individuals to their rich family history. However, Tibor, Gyorgy and Beata (1991) recognized that financial support will not guarantee the creation of enterprises or the automatic success of enterprises.

Furthermore, how do we link the two scenarios above to students' entrepreneurial inclination? To answer this question, the following words could suffice: firstly, "Feeling and longing are the motive forces behind all human creations..." (Albert Einstein, 1930 as cited in Baron & Tang, 2011, p. 51). Secondly, "Passion is defined as a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy" (Vallerand *et al.*, 2003, p. 756). The interpretation of these two quotations could make it possible to understand the entrepreneurial inclination of students, which is central to this research.

Although, as students, the level of work experience, which often serves as driver to new innovations and opportunities may be low or lacking, yet individuals can unearth ideas through passion (Bygrave & Zacharakis, 2011), while studying and learning can invigorate the mind for excellent entrepreneurial foundation. It could therefore be argued that the entrepreneurial spirit of the two aforementioned individuals stems from the positive interactions of biopsychosocial factors (Ramaswamy, 2013).

Therefore, having potential entrepreneurs (that is, individuals who are willing to launch into a new business or in the process of advancing an existing business) from the university will require individual cognitive mental qualities, passion, coupled with positive interaction of varied factors, which surround entrepreneurial action. Hence, Keat *et al.* (2011) argued that entrepreneurship education in the universities is meant to cause attitudinal change in students to make them embrace entrepreneurial spirit. However, individual factors and environmental influence on would-be entrepreneurs cannot be underestimated (Ács *et al.*, 2017) as these could either strengthen or weaken their resolve to enter into entrepreneurial ventures.

However, in the study of Rotefoss and Kolvereid (2005) on aspiring, nascent and fledging entrepreneurs, they concluded that in order to have a solid footing in business start-up a blend of human and environmental resources may be required. They then called for continued research into the interactions between human and environmental resources. Therefore, to improve the entrepreneurial inclination of students, certain factors associated with the growth of future entrepreneurs should combine. It is therefore empirically appropriate to examine the interplay of different factors on entrepreneurship education and students' entrepreneurial inclination. Thus, the interest, motivation and idea of what should be the drive in the field of entrepreneurship irrespective of the background, and getting the mechanisms required by the entrepreneurial inclined in nurturing viable and successful venture remains the focus in this dissertation.

1.3 Problem Statement

Entrepreneurship has been shown to be multidimensional (Arshi & Burns, 2018; Johansen, 2014), but the high societal value placed on the university as the citadel of learning makes it the focal point

on all issues, including multiplication of entrepreneurs via entrepreneurship education (Cooney, 2012; Onuma, 2016). However, accomplishment of entrepreneurship education's mission statement remains mixed since its birth decades ago (Kuratko & Morris, 2018), in spite of time and resources so far expended on it. Previous research has indicated that making entrepreneurial inclination a reality is a major challenge (Iwu, Ezeuduji, Eresia-eke, & Tengeh, 2016). Hence, entrepreneurial redundancy in Nigeria remains on the increase (Okeke *et al.*, 2016).

Ahiamadu and Allen (2020) suggested that some facilitators are needed to increase the number of emerging entrepreneurs, including a user-friendly business environment, supportive government policy, and accessible financial support. These enablers need to be appropriately tackled, but their absence and many more, have been itemized as some of the reasons for entrepreneurial redundancy in Nigeria (Adeniyi, Maffo, Omotoso, & Shobanke, 2014; Eneji, Mai-Lafia, & Weiping, 2013). While the current entrepreneurial passiveness challenges in Nigeria is worrisome, the severity of the unpleasant economic condition has resulted into mass retrenchment in different sectors, most especially in the financial sector (Eme, 2014). From the perspective of developing countries and specifically sub-Saharan Africa, a large percentage of the population lives below the poverty line (Alkire, Jindra, Aguilar, & Vaz, 2017). Hence, raising budding entrepreneurs might end up as mere wishes. As such, unconventional inhibitors have continued to exacerbate the plight of these young graduates, and this requires reflection.

Moreover, in resolving graduate unemployment challenges, individual's role in entrepreneurial event has been shown to be very crucial (Hermansen-kobulnicky & Moss, 2004), as such entrepreneurial intentions and traits have been explored extensively, yet challenges of graduate unemployment still persist among Nigerian university graduates. The rate of graduate unemployment by the end of 2015 and 2016 were 10.4% and 14.2% respectively, but this worsened to 18.8% by the end of third quarter in 2017 (Marshal & Solomon, 2017; NBS, 2017).

It can therefore be logically inferred that entrepreneurial development through entrepreneurship education has not produced the expected results. It is therefore necessary to study entrepreneurship education and student inclination towards entrepreneurship. Nigeria is in dire need of nascent entrepreneurs, and the university as citadel of knowledge is expected to raise potential entrepreneurs, but previous studies showed the need for further research to substantiate such claims (Jones, Matlay, Penaluna, & Penaluna, 2014; Watchravesringkan *et al.*, 2013). Regardless of what the outcome has been, initiating ways of increasing nascent entrepreneurs seems expedient (Hinks *et al.*, 2015), most importantly in a developing economy like Nigeria. The failure of entrepreneurship education to prepare undergraduate students for entrepreneurial activities after graduation is a grave threat to society. In fact, as shown by prior studies, graduate unemployment could lead to criminal activities,

poverty, low productivity, low life expectancy, psychological and physical ill-health (Adeniyi *et al.*, 2014; Eneji *et al.*, 2013).

Consequently, the will to tackle this problem goes well beyond education. Firstly, this is necessary for the realization of the 2030 Agenda (Sustainable Development Goals), which is still on-going. Secondly, for transition from an emerging economy to a developed economy, establishment of firms that can grow into large firms are required and this demands innovative entrepreneurs (Arshi & Burns, 2018). Thirdly, crime and insecurity in the country can be traced back to capable but inactive youth, and this can be curbed by gainful employment (Olorundare & Kayode, 2014). Although graduate unemployment is a worldwide problem, it is a growing phenomenon on the African continent that has become of great concern to everyone. Fields (2014) provided an insight into a report that shows that people create employment out of desperation, especially in Sub-Saharan Africa where extreme poverty makes people (including graduates) to work hard and yet remain poor. However, Jones *et al.* (2012, p. 816) stated that “the growing attachment to entrepreneurship education as a cure for current and future economic renewal is most likely seriously misplaced”, and this assertion is thought provoking indeed. Similarly, Johansen (2014, p. 310) asked a pertinent question: “if future assessments continue to indicate that the promotion of entrepreneurship education ... does not seem to be as fruitful as the policy discourse implies, what can be done?”. Therefore, following the assertions of Jones *et al.* (2012) and Johansen (2014), it is obvious that entrepreneurship education calls for repositioning. Furthermore, this supports the view of Xie (2014) that nurturing potential entrepreneurs requires an integrative model, and not just a single trait. Thus, in order to change the current phenomenon of ineptitude towards entrepreneurship education, this dissertation seeks possible views on the moderating effects on entrepreneurship education and students’ entrepreneurial inclination, which has been under-researched as noted by past researchers (Ahmad & Buchanan, 2015; Olorundare & Kayode, 2014; Ahmad, 2013).

It is equally expedient to fill this gap as this study argued that it will be a launching pad for the graduates in the South-West geo-political zone of Nigeria in particular and Nigeria in general, especially for the entrepreneurially inclined that will probably become entrepreneurs, either through new innovations or building on an existing paradigm. In addition, studies of entrepreneurship education in Nigeria are few in number compared with other countries in the world, and the available studies lack strong empirical depth.

The inability to meet research standard as a result of flexible research methodology (Matlay, 2005) and absence of moderators (Roy & Das, 2016; Fayolle, 2013) have been identified as flaws in some studies. To forestall such flaws, past studies showed the need for future researchers on entrepreneurship education to include moderator variable (Martin *et al.*, 2013). Therefore, this study examined the moderating effect of biopsychosocial factors on entrepreneurship education

(entrepreneurial attitude, entrepreneurial knowledge, venture creation skills) and entrepreneurial inclination with a prospect of enhancing our understanding of entrepreneurship education as well as encouraging improvements in the pedagogical approach to entrepreneurship education in Nigerian universities.

It is apparent from the above discussions that unemployment among graduates of Nigerian universities is increasing. There is the need to do a thorough empirical examination of entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and biopsychosocial factors among undergraduates with respect to entrepreneurial inclination. It is important to understand how best to motivate undergraduates to make them become entrepreneurially inclined in order to rout out the issue of graduate unemployment in Nigeria by the government and other stakeholders. This study is also in response to Martin *et al.*'s (2013) suggestion that moderators should be used to examine the benefits of entrepreneurship education and Xie's (2014) conclusion that venture creation can be clarified, and probably be practiced by combining both the individual and the environment.

1.4 Purpose of the Study

The purpose of this dissertation was to examine the influence of biopsychosocial factors on entrepreneurship education and students' entrepreneurial inclination in Nigerian universities. The study used human capital theory, self-efficacy theory and social cognitive theory that relate entrepreneurship education (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills) to entrepreneurial inclination.

The independent variable (entrepreneurship education) is defined as providing students with targeted educational guidance and experiential learning for the development of latent entrepreneurs. On the other hand, the dependent variable (entrepreneurial inclination) is defined as the readiness to seize every opportunity to create venture by integrating contextual factors with passionate longing, innovativeness and resilient determination. The moderator variable (biopsychosocial factors) is defined in this study as the set of dynamics that includes biological, behavioral, psychological and environmental factors. To the best of the researcher's knowledge, there is no known investigation that has moderated biopsychosocial factors with entrepreneurship education as exogenous variables (attitude, knowledge and skills) and entrepreneurial inclination as endogenous variable. Therefore, it is necessary to study how biopsychosocial factors may have an impact on entrepreneurial outcome.

1.5 Objectives of the Study

The main objective of the dissertation is to examine the moderating impact of biopsychosocial factors on entrepreneurial education and entrepreneurial inclination with specific focus on how

entrepreneurship education has affected the students' attitude, knowledge and venture creation skills.

To achieve a realistic and achievable goal, the study has the following specific objectives:

- i. To determine the relationship between entrepreneurial attitude and students' entrepreneurial inclination.
- ii. To determine the relationship between entrepreneurial knowledge and students' entrepreneurial inclination.
- iii. To determine the relationship between venture creation skills and students' entrepreneurial inclination.
- iv. To examine the moderating effect of biopsychosocial factors on the relationship between entrepreneurial attitude and entrepreneurial inclination.
- v. To examine the moderating effect of biopsychosocial factors on the relationship between entrepreneurial knowledge and entrepreneurial inclination.
- vi. To examine the moderating effect of biopsychosocial factors on the relationship between venture creation skills and entrepreneurial inclination.
- vii. To investigate whether students from Faculty of Management with entrepreneurship education are better positioned to become entrepreneurially inclined than those from other Faculties with entrepreneurship education.

1.6 Research Questions

Based on the research objectives set out above, the following research questions are carefully selected to build and establish a sound research foundation.

- i. What is the relationship between entrepreneurial attitude and entrepreneurial inclination?
- ii. What is the relationship between entrepreneurial knowledge and entrepreneurial inclination?
- iii. What is the relationship between venture creation skills and entrepreneurial inclination?
- iv. What is the moderating effect of biopsychosocial factors on the relationship between entrepreneurial attitude and entrepreneurial inclination?
- v. What is the moderating effect of biopsychosocial factors on the relationship between entrepreneurial knowledge and entrepreneurial inclination?
- vi. What is the moderating effect of biopsychosocial factors on the relationship between venture creation skills and entrepreneurial inclination?
- vii. Are students from Faculty of Management with entrepreneurship education better positioned to become entrepreneurially inclined than those from other faculties with entrepreneurship education?

1.7 Justification and Significance of the Study

Entrepreneurship education is perceived as the trajectory to growth and development, therefore consideration of the influence of biopsychosocial factors on entrepreneurial education and entrepreneurial inclination seems significant and crucial for developing potential entrepreneurs among Nigerian graduates. Proper perception of biopsychosocial factors construct can cause attitudinal change by transcending from theoretical basis to practice oriented approach. In addition, entrepreneurial disillusionment among university graduates in Nigeria may be favourably addressed once the inhibiting factor is identified. However, to achieve this, it is necessary to channel all misconceptions about the capacities of young Nigerians and provide the conditions necessary to build a culture of entrepreneurship. Students' perceptions of their expectations and aspirations affect not just their learning, but their future commitments. Entrepreneurship education demands focus and direction for realistic growth and development in Nigeria as an entity and in each of the six geo-political zones in the country. The same is true of other countries in sub-Saharan Africa with characteristics similar to those in Nigeria. The research has both theoretical and practical implications.

This dissertation is significant in so far as the current economic situation in Nigeria, which includes poverty, graduate unemployment and unemployment-induced social vices, can be addressed. Entrepreneurial attitudes, knowledge and skills in business creation are central to the entrepreneurial orientation of university graduates. In addition, the incorporation of the phenomenal biopsychosocial factors into entrepreneurial education may rejuvenate positivity in the entrepreneurial spirit of graduates. Stakeholders and policy makers will be more proactive with regard to the time and resources devoted to the search for entrepreneurs. On the other hand, graduates of higher education institutions with an entrepreneurial predisposition, propensity and passion will be well placed before the end of their university program.

Moreover, the achievement of the 2030 Sustainable Development Goals requires an increase in emerging entrepreneurs, particularly in Nigeria and, by extension, in sub-Saharan Africa. Furthermore, potential entrepreneurs are expected to focus on locally manufactured goods to replace Nigeria's rising import rate. The market is broad and wide for Nigeria-made products to prosper. Currently, the consequences of the failure to recognize other vital interrelated factors in promoting entrepreneurial disposition have resulted in virtually everything being imported into a country of more than 180 million people. However, a comprehensive view of this research should lead to growth and development in Nigeria as graduate unemployment will become indistinct in a short time.

Another significance of this dissertation is the contribution to the field of entrepreneurship education by addressing an issue that has remained inconclusive, which is the process of multiplying the entrepreneurially inclined students for national economic growth and development. Moreover, this research is indisputably compelling for stakeholders because time and resources being spent on

creating awareness can be refocused on those who have preference for entrepreneurial activity to be well positioned during and after their study. In addition, the study is relevant to stakeholders because some are eager to transfer their business empire to their children without taking into account their readiness for entrepreneurial activities. Furthermore, this dissertation shows that a broad view of the term entrepreneurial inclination is being misconstrued as mere intention and this subsequently necessitates a reorientation in order to channel a novel path to a directional policy, which is paramount in raising nascent entrepreneurs, and for economic growth and development, especially in a developing economy like Nigeria.

Based on theoretical perspective, this study integrates the human capital theory, self-efficacy theory and social cognitive theory as theoretical models for entrepreneurial inclination to reduce graduate unemployment among Nigerian university graduates. Moreover, this research aims above all to explore the use of biopsychosocial factors to moderate the relationship between entrepreneurship education and the entrepreneurial inclination of students. Therefore, this research may complement the body of knowledge based on the empirical study of biopsychosocial factors as a moderator of the relationship between entrepreneurship education and the entrepreneurial inclination of students. Another theoretical significance is the search for fundamental concepts and underlying axioms which can be compelling in the whole body of knowledge, and more importantly, in the area of entrepreneurship.

1.8 Scope and Limitation of the Study

The scope of this dissertation lies within the limits of biopsychosocial factors in moderating entrepreneurship training and the entrepreneurial inclination of students in Nigerian universities. Studies on entrepreneurship inclination in Nigeria are few (Okeke *et al.*, 2016); besides, none has examined it with biopsychosocial factors as a moderator. Scholars have advocated the need to include moderator variables in the investigation of entrepreneurship education (Martin *et al.*, 2013). This dissertation, therefore, puts to test the extent to which biopsychosocial factors can influence the level of entrepreneurial inclination of management and non-management students in order to refocus both human and capital resources for greater productivity.

The study is limited to the South-West geo-political zone of Nigeria, which is home to every ethnic group in the country. Further, the intense passion for knowledge and hospitality within the zone has made it home for students of other geo-political zones to pursue their university degrees. Consequently, the population of the study was limited to final-year students from some universities, both private and public, in the Southwest geo-political zone. Entrepreneurship, as a course, is mandatory for all higher institution students in Nigeria, as such, the respondents are expected to have attended entrepreneurship courses designed for the undergraduates by their universities as required by

the National Universities Commission. This sample represents potential graduates from the six geopolitical zones that will be released to the labour market earliest. They are expected to practice what they have learned in their entrepreneurship courses, on or before their National Youth Service Corps (NYSC). The NYSC is a mandatory one year service to the country by every university graduate in Nigeria. Furthermore, since unemployed graduates are the focal point of stakeholders when discussing youth unemployment issues, the core of this dissertation is indeed appropriate and timely.

1.9 Definition of Key Terms

Biopsychosocial factors (BSF):

This is a set of dynamics that embrace biological, psychological, behavioural and environmental or contextual components which are requisites for raising potential entrepreneurs.

Entrepreneurial attitude:

This can be defined as deep motivation for business engagement and earnest longing towards entrepreneurial activity.

Entrepreneurial/Entrepreneurship education:

This is defined as providing students with purposeful pedagogical guidance and experiential learning with the goal of developing potential entrepreneurs.

Entrepreneurial inclination:

This is defined as the readiness to seize every opportunity to create venture by integrating contextual factors with passion, innovativeness and resilient determination to succeed.

Entrepreneurial knowledge

This is the acquisition of prerequisite know-how by potential entrepreneur via entrepreneurship education.

Venture creation skills

This is the fundamental expertise needed by potential entrepreneurs for efficiency and effectiveness in entrepreneurial activities.

5WsH

This is the making and raising of the entrepreneurially inclined based on what, why, where, when, who and how.

1.10 Organization of the Study

This dissertation is presented in the following six chapters.

Chapter One: Introduction

This chapter comprises introduction and background perspective to the study, which covers issues in entrepreneurship, current disinclination trend, perception of entrepreneurial inclination and biopsychosocial factors. This is followed by the problem statement, purpose of the study, objectives of the study, research questions, justification and significance of the study, scope and limitation of the study as well as the definition of key terms.

Chapter Two: Nigeria and Entrepreneurial Development

The chapter addresses the political and ethnic structure of Nigeria with an emphasis on its historical background. The road to economic decline arising from military intervention in the political life of the nation and the lack of transformational leadership were also discussed. This chapter also discusses the impact of leadership ineptitude on entrepreneurial inclination, drawing on Nigeria's comparative advantage, and the link between agribusiness and entrepreneurial inclination.

Chapter Three: Literature Review

Chapter three presents a brief historical account of entrepreneurial origin and a review of entrepreneurial inclination on two continents (Africa and Asia). The review emphasizes the meaning of students' entrepreneurial inclination, findings on demographic factors, personalities, contextual factors, the level of entrepreneurial inclination (African and Asian perspectives), and the emerging trend among youths. The chapter also enumerates the creation of an entrepreneur by emphasizing the entrepreneurial trend based on 5WsH. The chapter also discussed the line of demarcation between entrepreneurial intention and entrepreneurial inclination, which encompasses the definition, rationale, scope, view, passion, vision and entrepreneurial activities. In addition, it considered the in-depth literature on entrepreneurship education and entrepreneurial inclination as well as the chronicle of biopsychosocial factors. Moreover, it clarifies the relationship between disease and graduate unemployment and the need for biopsychosocial factors as well as the demand for moderating variables. The chapter also discusses the theoretical underpinning of existing literature, the conceptual framework and the development of hypotheses. The underpinning theories include human capital theory, self-efficacy theory, social cognitive learning theory, and the general system theory.

Chapter Four: Research Methodology

Chapter four presents the philosophical theories, research traditions and methodological issues, the types of research, the design of the research adopted and the justification of the research approach. This chapter also discusses the study population, sampling methodology, data collection procedure, choice of data analysis, methodological hypotheses and ethical standards.

Chapter Five: Data Analysis and Findings

Chapter five presented an in-depth data analysis and results which contains the following: preliminary data analysis with parametric assumptions, demographic profile of the respondents, and analysis of measurement model as well as structural equation modelling. Next, is the test of hypothesis of the study which employed software such as IBM Statistical Package for the Social Sciences (IBM SPSS version 23) and Analysis of Moments Structure (AMOS) (version 24) and results of the main findings.

Chapter Six: Summary, Conclusion and Recommendation

This chapter discusses the summary, conclusion and recommendation based on the result presented in chapter five. It also analysed the summary of the study as well as the relationship between entrepreneurial attitude, knowledge, venture creation skills and entrepreneurial inclination. The discussion also included the moderating influence of biopsychosocial factors, differences between management and non-management students, research implications, limitation of the study and upcoming research, conclusion and detailed recommendations.

1.11 Chapter Summary

Chapter One introduced the theme of this dissertation; delved into the background with focus on precise and extant issues on entrepreneurship as it affects university students' entrepreneurial inclination. From this researcher's perspective, entrepreneurship education and entrepreneurial inclination among Nigerian graduates need further investigation. This stemmed from the present graduate unemployment predicament in Nigeria as revealed in the problem statement. The study further clarified the purpose and objectives as well as explicit significance and scope of the study, definition of key terms, and organization of the study.

CHAPTER TWO

NIGERIA AND ENTREPRENEURIAL DEVELOPMENT

2.1 Introduction

This chapter centres on Nigeria as a country by discussing the historical background and factors that have led to graduate unemployment and how graduates could be inspired to become entrepreneurially inclined. As this dissertation considers a growing economy, it is of utmost importance to examine Nigeria's socio-economic activities at the national terrain in order to make an informed judgment of the study and its relevance to the economy. Moreover, to answer the research questions with regards to entrepreneurial attitude, entrepreneurial knowledge and venture creation skills necessitate an insight into the past, present as well as an anticipated view of the future of Nigeria with a reflection on social, economic and political status. However, its impact on entrepreneurial inclination is emphasized.

First and foremost, the chapter presents Nigeria at a glance, followed by population and the historical perspective of entrepreneurial inclination. The chapter delves into discovery of oil well, leadership cum followership woes, Nigeria's development index and past government support for entrepreneurial activities. It further illustrates the goals of entrepreneurial education, inspiration for entrepreneurial activities among Nigerian youth and a purposeful consideration for agribusiness – the nation's comparative advantage.

2.2 Nigeria's Ethnic Composition

Nigeria comprises six geo-political zones (Fawole & Ozkan, 2017); which are South-East (SE), South-South (SS), South-West (SW), North-Central (NC), North-East (NE) and North-West (NW). South-East has five States: Enugu, Anambra, Ebonyi, Abia and Imo. South-South has six States: Akwa-Ibom, Bayelsa, Cross-River, Delta, Edo and Rivers. South-West has six States: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo. North-Central has six States: Benue, Kogi, Kwara, Nasarawa, Niger and Plateau. North-East has six States: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe. North-West has seven States: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara, making thirty-six States altogether. However, Abuja, the Federal Capital Territory (FCT) is governed as a separate entity. In addition, the thirty-six States and FCT are subdivided into 774 Local Government Areas (Beetseh, 2018).

Nigeria is a secular nation, being a multi-religious and multicultural society, there is freedom of religion; however, Christianity, Islam and Traditional religions are predominant. In addition, Nigeria is a conglomerate of hundreds of ethnic settings, as noted by Sklar (1967) that there are about 400

ethnic groups in the country. However, the presence of the 'big three' are well-pronounced; that is, the Yorubas in the West, the Igbos in the East and the Hausa-Fulanis in the North (Fayomi, 2017; Akhuemonkhan *et al.*, 2013). These three are accorded more recognition politically than other numerous minority ethnic groups. To corroborate this, Sklar (1967, p. 535) stated that "the so-called minority tribes have not been satisfied with the political structure of pre-coup Nigeria". However, the demise of President Musa Yar'adua in 2010 paved way for Dr Goodluck Ebele Jonathan from one of the minority ethnic groups to become the president of Nigeria in 2010 (Ekpo, Chime, & Enor, 2016). This was indeed historical, because, out of the three prominent ethnic groups, the seat of power has been mostly rotating between the Yorubas and Hausa-Fulanis since independence.

In addition, Nigeria is delimited politically; the zones are extremely diverse as Davis and Kalu-Nwiwu (2001, p. 6) stated that Obafemi Awolowo said "Each of them is a nation by itself", and that "There is much difference between them as there is between Germans, English, Russians and Turks". Similarly, the authors indicated that the first Prime Minister at independence, Abubakar Tafawa Balewa, noted in 1947 that since the 1914 amalgamation, Nigeria has existed as a nation on paper. Unfortunately, that distinctiveness still exists culturally, socially and politically, more than a century after amalgamation. Consistent with the foregoing, Achebe (1984) revealed that this diversity has not dwindled, rather, tribalism is becoming more pronounced even decades after amalgamation.

Consistent with the identity of the three major ethnic groups, the Yorubas occupy the South-West with an estimated population of 32.5 million people. Moreover, in the South-West geo-political zone, there is an ideal blend of Christians, Muslims and Traditional religion that permits intermarriages between Christians, Muslims as well as the Traditionalists, composing a peaceful and hospitable atmosphere in the zone.

In addition, the unique attribute of respect for elders has become a notable feature among the Yorubas; and this rich culture is cherished as a legacy, making them nobler than the other groups. Respect for elders is a cultural norm a child learns from the parents or the siblings in the family. The different religious groups within the zone have been indoctrinated by inculcating this age-long belief, which is cherished by all and sundry, either at home or abroad. Furthermore, religious observances are deeply rooted among the Yorubas; as such, religious and traditional leaders as well as heads of the family are accorded due respect. On this premise, the father cares and provides for the home, although, due to the present economic challenges, mothers are compelled to work and earn income to support the home economically.

Another remarkable feature worth noting about the Yoruba ethnic group is their quest for western education. Literature revealed that the level of education in this zone seems higher than the other regions in Nigeria (Obembe, Odebunmi, & Olalemi, 2018). The reason for this could be because Lagos has the principal port in the country, which gave a strong support for the people to access early

western education in the zone. This is consistent with the submission of Coleman (1958) that the Yorubas are a distinct people from the other groups. To attest to this, the first university in Nigeria; University of Ibadan was established in 1948 during the Colonia era at Ibadan, a city in the South-West geo-political zone. The zone has continued to build on this heritage. In 2015, University of Medical Sciences was founded in Ondo State; the third specialized medical university in Africa and the first in Nigeria to be accredited by the National Universities Commission. The belief is that for anyone to exit poverty trap, such individual must be educated, thus, children are greatly catered for by their parents, with the ultimate focus on their education on which they accord high premium.

Unfortunately, after graduation some of these graduates remain in the labour market in search for jobs. As at 2016 it was disclosed that the South-West geo-political zone has the second largest population of unemployed youth in Nigeria with 21.56% (Onuma, 2016). This further justifies the choice of this zone as the location for this dissertation. Therefore, to validate the theoretical content set forth, the survey was conducted in five universities in the South-West geo-political zone of Nigeria, with the final year students from both public and private universities as the target population.

Another prominent ethnic group is the Igbo people that are mainly Christians and also cherish western education. They dominate the South-East and part of the South-South geo-political zones, but they are widely spread all over Nigeria due to their interest in commerce and business acumen. Coleman (1958) affirmed that as early as the fifteenth century a notable trading system known as *Aro* was in place in most Igbo land and till date, the Igbos still maintain the culture of providing financial support to their trainees after the successful completion of their apprenticeship.

On the other hand, the Hausa-Fulani people are predominantly Muslims and less educated. They comprise the majority ethnic group in the North-East and North-West geo-political zones with a good mix of other minority groups. They are politically savvy in terms of their political activities in Nigeria. However, the *almajurai* system that allows the children (boys) to only enrol in the Islamic Koranic schools without any formal western education has become the breeding ground for the present insurgency and security challenges in Nigeria.

2.3 Nigeria's Security Challenges as a Nation

In terms of population, Nigeria has an impressive and unbroken record in the continent of Africa, and is notable in the world's population size, as the country ranks seventh in the world, and first in Africa. It has one of the largest economies in sub-Saharan Africa (Okonjo-Iweala & Osafo-Kwaako, 2007; Kambou, 2018). Although, Nigeria has the largest economy in Africa, the following are ubiquitous; increase in population, high rate of unemployment, upsurge in hardship and occasional outbreak of diseases in some regions (Oloruntoba, Folarin, & Ayede, 2014). All these according to Nigeria Centre for Disease Control (NCDC) (2016) could be linked to poor hygiene, absence of environmental

health orientation and in some cases non-compliance with Codex Alimentarius Commission guidelines for street food control in Africa as indicated in the findings of Nurudeen, Lawal, and Ajayi (2014). In spite of numerous challenges confronting the nation, continual increase in population still subsists.

The uncontrolled increase in population has brought certain social ills to the fore. These social ills have in no small way dampened the resolve of the youth to engage in entrepreneurial activities as they consider their security to be of utmost importance. Nigeria at present is plagued with an array of social ills such as kidnapping, cultism, armed robbery, drug abuse and child trafficking (Gbadamosi & Afolabi, 2017) and some of the perpetrators are energetic youth. Added to these societal challenges is the emergence of new and scary challenges (Eme, 2014) which are *Boko Haram* insurgency and Fulani herdsmen hassle. *Boko Haram* refers to the activities of the terrorist group in the North-East geo-political zone with the dogma and philosophy that condemns Western education as noted by Akpomera and Omoyibo (2013). They revealed that this insurgency now accounts for thousands of deaths including foreigners and it is more worrisome as victims are more of Christian religious communities in the North-East geo-political zone of the country. Eneji *et al.* (2013) submitted that this sect has destroyed many lives and properties, while countless others have become homeless and jobless, and this has continued to promote poverty, unemployment and entrepreneurial disinclination among the people.

Besides the on-going self-inflicted *Boko Haram* mayhem in the Northern part of the country, is the issue of Fulani herdsmen. Sadly, these herdsmen have suddenly metamorphosed to gunmen and kidnapers. It is creditably reported that the Fulani herdsmen crisis has rendered thousands of people homeless or displaced, and some others cruelly murdered, leaving the Middle Belt (North Central Zone) of Nigeria worst crunch (Beetseh, 2018). Moreover, government's abysmal failure to curtail these incessant attacks to life and property of helpless citizens has raised concerns from different ethnic groups in the country (Adamu & Alupsen, 2017). This insinuation is made more germane as agitation to break away from Nigeria is becoming more pronounced from different ethnic groups, especially the Igbos and Yourbas that are calling for Biafra and Oduduwa republics respectively. The agitations led to the convocation of National Conference by President Goodluck Jonathan in 2014 to address the problem of the National Question.

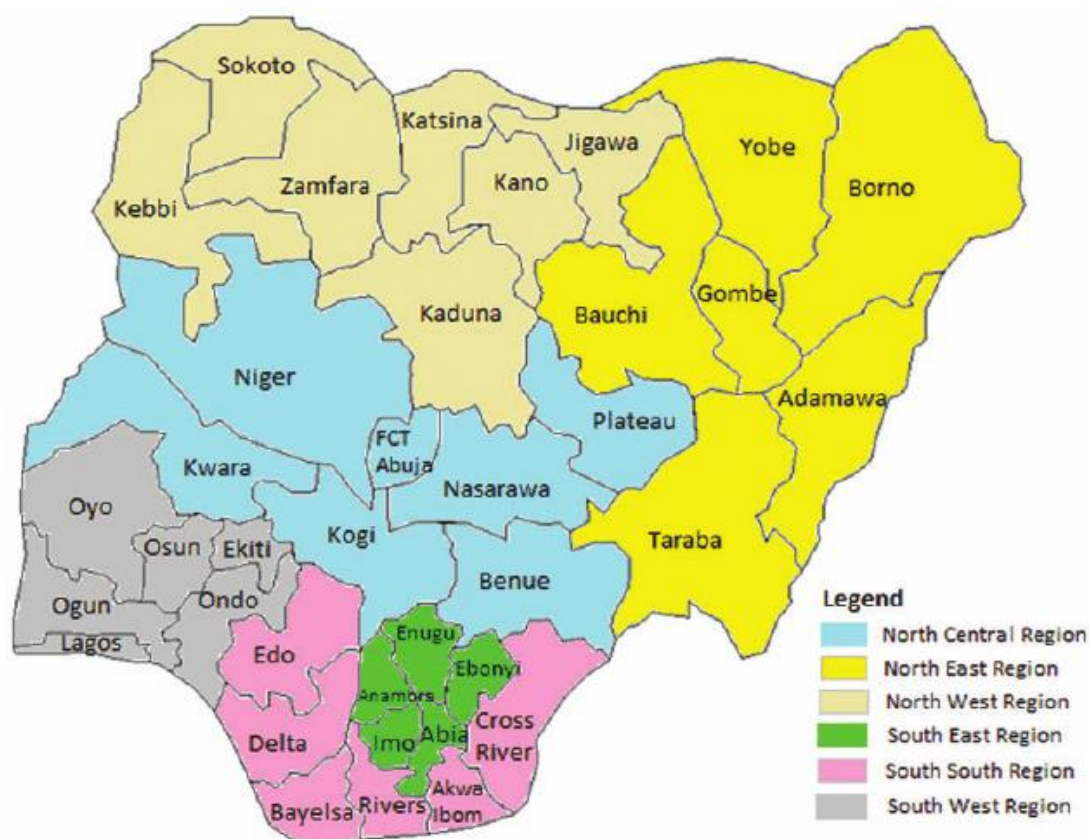


Figure 2-1: **Map of Nigeria**

Source: https://www.researchgate.net/figure/Map-of-Nigeria-showing-the-36-states-and-Federal-Capital-Territory-FCT-Abuja_fig1_260023562

Furthermore, the calculated attacks by the Fulani herdsmen and their activities have become a major threat to the peaceful coexistence of Nigeria as a nation (Ajibefun, 2018). The Christian communities in Northern Nigeria are the most affected (Adamu & Alupsen, 2017) as the multiplication and worth of cattle now seems to count more than human lives. Unlike Boko Haram that is confined to a specific region, Fulani herdsmen conflict cuts across every region in Nigeria; this has brought social and economic consequences upon the entire populace (Ajibefun, 2018). The Federal Government at a time affirmed that they were foreigners and not Fulanis, yet their barbarous acts keep escalating without any decisive action from the security agencies whose duty is to protect lives and property (Beetseh, 2018). This main lapse is being capitalized upon by these herdsmen and the resultant effect has continued to generate doubts and fears on the permanence of the nation's bond of unity, as the insecurity of life has further endangered growth and development. Thus, Nigeria is now associated with hunger, poverty, and entrepreneurial redundancy coupled with incessant violence, which has become a cause for concern among international observers.

2.4 The Historical Perspective of Entrepreneurial Development in Nigeria

Entrepreneurial pursuit had long existed in Nigeria within every segment or locality before the arrival of the colonialists (Shuaibu *et al.*, 2018; Akhuemonkhan *et al.* (2013), though entrepreneurial activities existed in the past with different aspirations than in the present form. For example, entrepreneurial activities were limited to indigenous culture; with the primary aim to basically empower and promote self-employment early in life (Akhuemonkhan *et al.*, 2013). Though subsistence farming was the main occupation in Nigeria, the focus differs in all the regions. In the investigation of integrating entrepreneurship and technical education, Shuaibu *et al.* (2018) asserted that varieties of items were well cultivated based on geographical dimension of each region - not only for sustenance but as a means of generating foreign earnings.

Therefore, every geographical setting in Nigeria was productively engaged before independence; whether major or minor ethnic group. For instance, the Western zone was notable for farm produce such as yam, cocoa, cassava and fruits. The Eastern zone was remarkable for oil palm plantations, while the Northern zone was prominent in the production of vegetables, groundnut and grains (Akhuemonkhan *et al.*, 2013).

On this premise, teenagers and youth of those days learned through informal education from their parents and peers. Acquisition of knowledge and skills through practice preceded gainful employment before adulthood (Okoli & Allahna, 2014). Besides, necessary supports were provided for start-ups, making disposition towards self-reliance synonymous to maturity. Thus, the influence of biopsychosocial factors was ultimately inherent as informal training instilled confidence and courage to become self-reliant without fear of uncertainties.

During these early times, unemployment and criminalities were unwholesome in almost every community, and hunger was rare. This could be inferred from the fact that both young people and adults were gainfully employed, though majorly in subsistence farming, as was the practice in other African countries (Arko-Achemfour, 2012). In addition, Nigeria's economy was in the upward turn as a result of export of the agricultural products (Kehinde & Agwu, 2015; Cowell, 1981). The agricultural sector was significant in every region, as all the regions specialized on where they had comparative advantage (Cowell, 1981). It was obvious that before the discovery of oil, Nigerians survived largely on agricultural produce which was a good source of livelihood as well as export base and foreign exchange earnings (Cowell, 1981). However, the crave for western education that could have helped in developing entrepreneurial inclination was limited to reading and writing that eventually diminished entrepreneurial activities (Okoli & Allahna, 2014). The resultant effect is a paradigm shift in entrepreneurial attitude among Nigerian youth.

2.4.1 The Discovery of Oil Well and its Impact on Entrepreneurial Inclination

The smothering of entrepreneurial engagement was compounded with the subsequent oil boom (Kehinde & Agwu, 2015) that seemed to encourage paid employment at the expense of prior indigenous entrepreneurial endeavour (Cowell, 1981). Oil wealth became a major focus for economic survival and development which led to a change in perception and attitude to work (Duru, 2011) as well as craving for wealth without stress among youth. Villages were deserted for cities like Lagos and Kano by youth in order to partake in the 'national cake'. To support this assertion, Eme (2014), documented that the 2012 National Baseline Youth Survey Report revealed that Lagos and Kano has the highest number of youth in Nigeria.

Moreover, having emerged as the Giant of Africa and one of the largest exporters of crude oil (Organization for Economic Cooperation and Development (OECD), nd), the dividend of the amalgamation seems to make much sense, as implied in the words of General Olusegun Obasanjo in 1979 that "Nigeria will become one of the ten leading nations in the world by the end of the century" (Achebe, 1984, p. 9). This expectation remains a mirage till date. Achebe (1984) noted that providence bequeathed billions of dollars on Nigeria between 1972 and 1982. As a result, Nigerians' hope was heightened and the thought of rising to the middle-rank of the developed nations was aglow, although without visible development. However, Nigerians at home and abroad relished in a country highly endowed with wide-ranging human and natural resources of about 37 solid mineral types (Anger, 2010; Sanusi, 2010). The people were beaming with high expectations that with the inherent potentials, becoming one of the world's powers and an advanced nation, possibly in the year 2000, was achievable (Achebe, 1984). However, this was devoid of adequate preparation in terms of developing youth with entrepreneurial mind-set. The result at present is the churning out of entrepreneurially disinclined university graduates that has become a great burden on the society.

Moreover, given the nation's diversity, her citizenry largely grouped as Yorubas, Igbos and Hausas as previously discussed (Numan, Idris, Zirahei, Amaza, & Dalori, 2013) work and mix freely without trepidation and fear. Furthermore, during Nigeria's golden era, the youth only aspired to travel abroad to further their education because home coming goes with a lot of prestige. Besides, there were inherent employment opportunities back at home, not only for the educated few from abroad, but the home grown inclusive (Akhue-monkhan *et al.*, 2013). At that time, increase in population was not considered a threat to a better future and it was without inkling to suffering. At that time, more hands were required in the non-oil sector as it continued to thrive considerably (Kehinde & Agwu, 2015), as cash crops were cultivated for exports (Cowell, 1981). Evidences showed that "when Nigeria became independent from Britain in 1960, its agricultural products were the prime source of export earnings and subsistence farming fed many" (Cowell, 1981, p. 001003). Unfortunately, prior research indicated that as soon as oil wealth outbalanced non-oil produce, some of these non-oil sectors were neglected

(Kehinde & Agwu, 2015) in spite of their productivity, and this made way for the present entrepreneurial insensitivity.

Report revealed that in the 1970s Agriculture accounted for 64.5% of export earnings, but there has been a significant decline of such earnings because of a drastic swing to petroleum exploration (PricewaterhouseCooper (PWC), 2016). Previous studies confirmed that since the discovery of oil, Nigerian government has relied primarily on oil revenue, but without significant development, unlike other oil producing nations of the world (Agri *et al.*, 2017; Ogbojafor, Akpoyomare, Olayemi, Okonji, & Olayiwola, 2011). This serves as an affirmation of Obafemi Awolowo's observation that the dwindling growth and development in Nigeria could be attributed to the nation's leadership bane (Ogoma, 2014). Thus, there was money without good managers, as the Holy writ puts it more wittily that "where there is no vision the people perish" (The Holy Bible, Proverbs 29:18).

In addition to the infrastructural deficits, oil boom resulted into uneconomic expenditure and distortion in Nigerians' entrepreneurial disposition to work (Emeh, 2012; Duru, 2011). This eventually bred otiose youth whose aim and aspiration was quick riches via all sorts of crimes and other societal ills (Adebayo, 2013). Gradually, Nigeria embarked on a sliding journey of retrogression and misgovernment due to the absence of transformational leadership that could inspire vision and passion for entrepreneurial culture and national development (Arshi & Burns, 2018).

The colonial educational system, which was lop-sided and anti-entrepreneurial, grounded the existing entrepreneurial traditional culture (Akhuemonkhan *et al.*, 2013). The colonial government offered a misdirected educational system, which was primarily to meet job specification as clerical officers. With the absence of entrepreneurial activities in the school curricula, there were no dreams and aspirations for venture creation skills other than minimal oriented learning (Okoli & Allahna, 2014; Davis & Kalu-Nwiwu, 2001). Consequently, neglect of entrepreneurial disposition stems from educational methods that is limited to developing graduates notable for stipulated jobs and absence of business-friendly culture.

Scholars have observed that Nigeria's woes can be linked to over-dependence on oil revenues as well as perils of some visionless front-runners. Consequently, the once oil rich-nation as perceived by Litwack, Joseph-Raji, Babalola, and Kojima (2013) is currently operating under a 'resource curse'. Though Nigeria is one of the highest exporters of crude oil in the world as well as holder of the largest gas reserves in Africa (Olotu, Salami, & Akeremale, 2015), her ever increasing citizenry relics in abject poverty and hunger. Her youth are characterized with fraudulent practices, prostitutions and other societal ills (Marshal & Solomon, 2017; Nageri, Gunu, & Abdul, 2013) due to joblessness. Subsequently, Nigeria's governance has remained at the verge of recuperating years after independence (Okoli & Allahna, 2014) and her youth are now reaping from seed sown by past leaders that lacked passion and vision for entrepreneurial activities. This trajectory came to an abrupt end as it

ushered in the peril of paucity of good governance, extreme need, graduate unemployment, abject poverty, bad roads, ailing hospitals, paralytic electricity supply and cold lifestyle (Adekola *et al.*, 2016; Adeniyi *et al.*, 2014; Olorundare & Kayode, 2014). This leads to the next section, causes of disinclination in entrepreneurial activities among Nigerian youth.

2.5 Leadership cum Followership: The Causes of Disinclination Trend in Entrepreneurial Activities.

Past studies suggested that certain indicators have contributed negatively to the high rate of graduate unemployment, poverty, and the disinclination trend in entrepreneurship in the country. Some of these critical indicators, underpinned by scholars, were bedevilled by leadership failure, as indicated by Etodike *et al.* (2018). These indicators might likely have significant adverse effect on students' entrepreneurial inclination. These include devastated military era, economic mismanagement cum widespread corrupt practices, policy inconsistencies, overpopulation, absence of transformational leadership and students' deprivation of basic necessities (Asogwa & Onyezere, 2018; Shuaibu *et al.*, 2018; Longe, 2017; Eneji *et al.*, 2013). These are now considered in turn.

2.5.1 Devastated Military Era

The unconstitutional era of the military in Nigeria (Eneji *et al.*, 2013), which spanned from 1966 to 1979 and 1983 to 1999, has been argued by scholars as characterized with economic stagnation, increase in poverty level, deterioration of public institutions, misgovernment, graduate unemployment and foundational corruption (Ekpo *et al.*, 2016; Oloruntoba & Akinfolarin, 2018; Fawole & Ozkan, 2017; Sanusi, 2010). The military era contributed immensely in dispiriting every Nigerian, including the youth. Therefore, the deterioration of the economy, perhaps, might have led to the dwindling entrepreneurial inclination among the youth. Ogoma (2014) noted that the current developmental setback was orchestrated by past Nigerian leaders (more importantly the military regime) that lacked vision and foresight that Awolowo demonstrated during his tenure as the Premier of the old Western Region in Nigeria.

2.5.2 Economic Mismanagement and Widespread Corrupt Practices

Some scholars opined that overt and covert corruption built on economic mismanagement is the real challenge behind graduate unemployment in Nigeria (Shuaibu *et al.*, 2018; Longe, 2017; Adekola *et al.*, 2016; Ekpo *et al.*, 2016), and by extension, the decline in entrepreneurial inclination (Ogoma, 2014). For instance, in the study by Chris (2015) on graduate unemployment and economic growth, the findings revealed that corruption plays a significant role in graduate unemployment in Nigeria. In

addition, corruption has become rooted in every stratum in Nigeria both in private and public institutions leading to negative multiplier effects on the economy. To corroborate this, Adekola *et al.* (2016) acknowledged that corruption has continued to heighten unemployment, resulting into decrease in national development. Similarly, Nageri *et al.* (2013) concluded that the reason for the current stunted growth in the country stems from developmental pursuit embedded in endemically corrupt practices.

On this premise, the consequences of corruption in Nigeria has led to dwindling entrepreneurial inclination, absence of venture creation, lack of state of the art infrastructure, abject poverty, under-employment as well as disgruntled working poor, criminally minded and berserk youth. All these have resulted into raising youth without inkling for entrepreneurial inclination. It therefore becomes glaring that growth and development would be far from any nation that is embedded with corrupt practices (Adedeji, Lawal, & Simon-Oke, 2017; Onodugo, 2015). Hence, the anti-corruption measures taken by government at different times ought to have been pursued resolutely to save the nation from further economic degradation. Unfortunately, the nation remains entrenched in more sophisticated pervasive corruption, embarrassing public sector expenditure especially at the political arena leading to a prolonged economic ineptness (Longe, 2017; Adekola *et al.*, 2016; Eme, 2014) and lack of entrepreneurial inclination by the youth.

2.5.3 Policy Inconsistencies

Policy inconsistency has been identified as another cause of reduction in entrepreneurial attitude, and in essence, a leading trigger of graduate unemployment in Nigeria. Chukwu and Igwe (2012) argued that government programmes lack continuity due to policy inconsistencies occasioned by political rivalry and conflict of interests. Chinua Achebe, in his book “The trouble with Nigeria” revealed that “lasting change must be followed up with ... at least a well-conceived and consistent agenda of reform, which Nigeria stood, and stands, in dire need of” (Achebe, 1984, p. 1). Some developmental programmes ceased prematurely because those initiatives lacked continuity due to policy inconsistencies and lop-sided approach as well as absence of solid footings in educational system (Chukwu & Igwe, 2012). In addition, the role of government policies in favour of entrepreneurial activities has been underplayed, leading to increase in poverty, graduate unemployment (Agri *et al.*, 2017) as well as disinclination in entrepreneurial culture.

The absence of enabling business environment occasioned by inconsistency in government policies has affected Nigeria’s economy negatively (Adekola *et al.*, 2016), and by extension students’ entrepreneurial inclination. Perhaps, some of the unusual rules, stringent bureaucratic requirements coupled with detrimental business policies may have weakened home industries cum entrepreneurial attitude and venture creation in favour of importation of essential commodities (Abbas, Agada, &

Kolade, 2018; PWC, 2016; Vanghan, Afolami, Oyekale & Ayegbokik, 2014i; Eneji *et al.*, 2013). This is disadvantageous for a nation like Nigeria whose comparative advantage is agribusiness. As a means of encouraging local production of goods Etodike *et al.* (2018) suggested a strong political will to maintain the ban on importation of goods as locally made goods would invigorate entrepreneurial inclination among young graduates. Sadly, weak government policies have made the ban on importation a mirage; as such it has continued to increase simultaneously with population growth. Thus, there has been a continual increase in importation and decrease in both foreign reserves and job opportunities. A further view on the contributory factors in shaping students' entrepreneurial inclination is overpopulation that is discussed in the next section.

2.5.4 Overpopulation

According to Akhuemonkhan *et al.* (2013), increase in population has been at a geometric rate while employment remains at an arithmetic progression. Thousands of graduates roam the streets on a daily basis in search of well-paid jobs. Moreover, the authors argued that the nation's educational system has failed to mitigate the challenge of graduate unemployment due to excess supply of manpower and upsurge in population. However, in spite of high population in the 1960s, Nigeria had strong economy, because at that time, it was natural to be entrepreneurially inclined as support for start-ups and favourable government policies were put in place.

In the study conducted by Adekola *et al.* (2016) to investigate the impact of growing population on graduate unemployment, secondary data were drawn from Population Reference Bureau, United Nations Annex Table, International Monetary Fund and National Bureau of Statistics. The results of the comparative analysis of population and graduate unemployment structure of Nigeria, China and USA indicated that there are other factors responsible for graduate unemployment in Nigeria other than population growth. Additionally, they documented that despite growing population in China and USA, graduate unemployment is low; however, in Nigeria, both population and graduate unemployment are growing simultaneously. Contrary to the common belief that population is perceived to be disadvantageous in Nigeria; China is using her population to take a place of pride in the world. Hence, a school of thought points out another critical factor to be considered.

2.5.5 Absence of Transformational Leadership

Absence of transformational leadership has been recognized by scholars and a general consensus exists nationally that inability to tackle this problem has weakened every structure in Nigeria including entrepreneurial attitude, leading to rising graduate unemployment (Adekola *et al.*, 2016; Emeh, 2012). Ogoma (2014) argued that sustainability, growth and development being enjoyed in developed nations today came with sacrifices on the leadership

corps, which is lacking in Nigeria. The author affirmed that education was part of Awolowo's philosophy on the premise that right education will instil discipline, eradicate corruption, hence, making growth and development inevitable. The author noted further that Obafemi Awolowo strategically embarked on developmental activities, which were conceived to forestall future economic ignominy and many of them became utile especially in the Western Region. These undertakings grew rapidly and made the region's achievements and progress became role models in Nigeria, and by extension, in Africa. The question now is, is it true that besides Awolowo, Nigeria has always been governed by visionless leaders that care less for future generation?

The government has little or no programme for educational fund unlike other countries. Hence, most of the students in higher institutions of learning in Nigeria go through untold hardships to attain their desired level of academic pursuit. It is possible to infer therefore, that social economic environment will depict whether students will be entrepreneurially inclined or not (Oguntimehin & Olaniran, 2017). Moreover, some parents live below poverty line, making it challenging or near impossible to obtain loan for any child's education. Many of them cannot afford three square meals a day, no wonder some students go through their educational career hungry and angry with the terminology "0-0-1" or "1-0-1" meaning no breakfast, no lunch, supper only; or, you take a breakfast without lunch then, you take supper, respectively.

More disheartening is the dilapidated buildings and infrastructure in many of the universities cum archaic equipment being imported for students use in the science-based courses. How on earth can Nigerian university students compete favourably with their counterparts who have everything at their beck and call? The situation is indeed '*actionable*' on the part of the leadership of this nation, and perhaps, the stakeholders too.

Moreover, with the multidimensional factors highlighted above, it seems obvious that to unlock the keys fastened against growth and development in Nigeria (Emeh, 2012), reflecting on the influence of biopsychosocial factors on entrepreneurship education and students' entrepreneurial inclination could be the leeway. Without raising potential entrepreneurs from the universities in Nigeria, the pursuit to become a developed nation may be a mirage. This is evident from the Human Developments Indices and indicators, where emerging nations are those thriving in entrepreneurial activities.

2.6 Nigeria's Development Index and Comparison with Other Emerging Economies

According to Human Developments Indices and indicators: 2018 statistical update (United Nations Development Programme (UNDP), 2018a), there are 15 key indicators for global assessment and the countries are categorized into four. First, are those with very high Human Development Index, next, are those with high Human Development Index; followed by those with medium Human Development Index and the last category are those with low Human Development Index. Nigeria is in the fourth category of low Human Development Index and this could be as a result of some of the setback indicators discussed earlier. To corroborate this, a former governor of the Central Bank of Nigeria (CBN), Sanusi (2012) noted that countries that were far behind Nigeria in the 1970s have emerged as world leaders and are now well advanced ahead of Nigeria. He further noted that the genesis of Indonesia becoming the largest economy in Southeast Asia could be attributed to the initiation of different pro-poor and pro-employment reforms, which eventually led to her growth and development. Although there had been several government interventions at reducing unemployment and advance entrepreneurial activities in Nigeria, sadly, none has yielded the anticipated outcome.

2.7 Past Government's Support on Mitigating Entrepreneurial Redundancy in Nigeria

The economic performance of Nigeria remains vulnerable and it has continued to degenerate despite the high-level of natural endowments in her domain. Though joblessness is still threatening the developed countries, nonetheless, the rate of entrepreneurial redundancy is high in sub-Saharan Africa (Salami, 2013). Despite the intensity of entrepreneurship education at all levels, low entrepreneurial activities, poverty and dwindling economy still subsist in Nigeria (Okoli & Allahna, 2014). Several government initiatives have been embarked upon in the past as a response to the plight of the masses. The list of these initiatives is contained in Table 2-1.

Table 2-1: Analysis of Past Initiatives (Programmes) in Nigeria

Year	Regime	Challenges	Palliative Measures
1962-1968	Sir Abubakar Tafawa Balewa	First National Development Plan after independence	Accelerated growth, training of high-level and intermediate manpower
1970-1974	General Yakubu Gowon	Second National Development Plan after the civil war	Reconstruction and rehabilitation of infrastructure
1975	General Yakubu Gowon	Third National Development Plan after the civil war	Same as above
1970s	General Yakubu Gowon	Poverty alleviation	National Accelerated Food Production Programme (NAFPP) and Nigerian Agricultural Cooperative Bank (NACB)
1977	General Olusegun Obasanjo	Poverty alleviation	Operation Feed the Nation (OFN)

1980	President Shehu Shagari	Poverty alleviation	Green Revolution Programme (GRP)
1986/ 1987	General Ibrahim Babangida	Electricity, good roads, safe drinking water, skill & financial training for rural women	The Directorate of Food, Roads and Rural Infrastructural (DIFRRI)
1986	General Ibrahim Babangida	Poverty alleviation	National Agricultural Land Development Authority (NALDA)
1986	General Ibrahim Babangida	Reassessment of spending pattern	The structural Adjustment Programme (SAP)
1986	General Ibrahim Babangida	Entrepreneurship training and reduction of mass graduates unemployment	The National Directorate of Employment (NDE)
1987	Mrs Maryam Babangida	Skill acquisition and healthcare for rural women	Better Life for Rural Women (BLRW)
		To boost practical and entrepreneurship skills	Student Industrial Working Experience Scheme (SIWES)
1989	General Ibrahim Babangida	To encourage savings and credit facilities for the underprivileged	People's Bank of Nigeria (PBN)
1990	General Ibrahim Babangida	To provide banking facilities for rural dwellers and micro enterprise in urban areas	Community Banks (CB)
1994	Mrs Maryam Abacha	Health care delivery, child welfare and youth development	Family Support Programme (FSP)
1998	General Sanni Abacha	Credit facilities in support of cottage industries in rural areas	Family Economic Advancement Programme (FEAP)
2000	President Olusegun Obasanjo	For high purchasing power, quality education, affordable housing and reduction in graduates unemployment.	Poverty Alleviation Programme (PAP)
2001	President Olusegun Obasanjo	To boost practical and entrepreneurship skills of undergraduates in science-based discipline	National Poverty Eradication Programme (NAPEP)
2003	President Olusegun Obasanjo	To reduce poverty and hunger, and for socio-economic growth	National Economic Empowerment and Development Strategy (NEEDS)
2007	Alhaji Musa Yar'adua	Transformation of Nigeria	Seven-Point Agenda National Poverty Eradication Programme
2011	President Goodluck Ebele Jonathan	Diversifying Nigeria economy	Economic Transformation Agenda

2016	President Muhammadu Buhari	Job creation and youths empowerment	N-Power Programme and Trader Money Scheme
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Sources: Oloruntoba & Akinfolarin, 2018; Akhuemonkhan *et al.* 2013; Ogbuabor, Malaolu, & Elias, 2013; Anger, 2010.

In spite of all these numerous reforms, including the recent financial aid being granted to the youth by the present administration headed by President Muhammadu Buhari (Etodike *et al.*, 2018), it still remains difficult to state categorically its impact on the youth in terms of entrepreneurial activities. The question is, from the first national development plan of 1962 to date, which of the initiative programmes has improved the standard of living of the citizenry? Okoli and Allahna (2014) concluded that concerted efforts being made by the government to make these programmes effective, as far back as 1969, seems unsuccessful with the current rate of unemployed youth. Subsequently, Nigeria is currently battling with social, economic and political uncertainties (Duru, 2011). Moreover, since the return of the country to democratic governance in 1999, religious intolerance, ethnic rivalry, poor infrastructural facilities and political imbalance had further dimmed the prospect of growth and development (Shuaibu *et al.*, 2018). As a result, ethnicity and political bigotry have paralyzed lofty dreams, exterminated visions and entrepreneurial initiatives of some well-meaning Nigerians (Eneji *et al.*, 2013).

Nigeria has remained socioeconomically unstable and to emerge out of being a developing country demands the presence of potential entrepreneurs, most especially amidst university graduates. However, for a developing nation like Nigeria (where development is off the track) to thrive in today's globalized world and advance to becoming a developed nation, calls for charismatic and visionary leaders (Sanusi, 2012) that could pursue sustainable policies in a logical way (UNDP, 2016). What is the way forward?

2.8 The Goals of Entrepreneurial Education

One of the current global glimpse on 2030 agenda is to foster growth and development (bin Mahajar & Yunus, 2012), and this is being pursued universally by supporting multiplication of entrepreneurs. Entrepreneurship education was designed into the curricula with the possibility of increasing nascent entrepreneurs as well as mitigating graduate unemployment (Olorundare & Kayode, 2014). Although Onuma (2016) documented a significant relationship between entrepreneurial education and self-employment in Nigeria, the results so far seems unimpressive.. The primary aim of National Universities Commission in the advancement of entrepreneurial education includes the following:

- Empowerment of the people (students),
- Creation of employment,

- Diversification in business, and
- Individual confidence.

The focus is to encourage venture creation and lessen the search for white collar jobs among university graduates. However, the entrepreneurially inclined students with needed skills must be identified and supported (Agri *et al.*, 2017). Thus, Ahiamadu and Allen (2020) inferred that without intense support for potential entrepreneurs, students' inclination towards entrepreneurship will not climax into business creation. Entrepreneurship that can impact the populace requires '*the best and brightest*'; however, without a favourable business environment, raising high growth start-ups may remain a mirage. To substantiate this, the findings of Oguntimehin and Olaniran (2017) indicated that entrepreneurial education had influence on entrepreneurial intentions. The question is how many of these teeming youth are equipped for productive entrepreneurial activities? Embarking on dynamic entrepreneurial activity requires entrepreneurial attitude, knowledge and skills and these are expected to be honed via entrepreneurial education at the university. In addition to curriculum content and pedagogical methods, the findings of Aboho *et al.* (2016) on inclination among undergraduate students in Nigeria showed strong support for internship programme as it has positive impact on entrepreneurial inclination. Conversely, Koloba *et al.* (2015) reported that in spite of high innovativeness and risk tolerance, graduate unemployment still remains an issue in South Africa. The authors concluded that students' entrepreneurial inclination requires certain factors which could not be examined within the scope of their research. Ahmad and Buchanan (2015) identified challenges facing entrepreneurship in Malaysian universities to include financial support, teaching and assessment methodology. They concluded that an in-depth research on entrepreneurial inclination is needed in order to determine attitude of graduates towards personal business.

In order to raise viable entrepreneurs, a reflection on emergent literature revealed that entrepreneurial attitude, entrepreneurial knowledge and venture creation skills are germane (Iacobucci & Micozzi, 2012). Therefore, these key competencies were selected based on the fact that entrepreneurial behaviour could be best explained using these constructs which have been examined by prior researchers (Watchravesringkan *et al.*, 2013). In spite of criticism on the impact of entrepreneurship education, it has not ceased to receive attention as a career option globally (Pihkala, Ruskovaara, & Hytti, 2016). Hence, stakeholders have continued to advocate for effective educational curricula to be designed in favour of self-reliance, entrepreneurial culture and supportive government policy for potential entrepreneurs to evolve.

With this understanding, the literature showed that research on entrepreneurial inclination is perceived as essential in predicting entrepreneurial behaviour and that the university students could be the backbone for nurturing competent entrepreneurs (Sandhu, Jain, & Yusof, 2010). However, with the mandatory entrepreneurship courses at all institutions of learning (Oguntimehin & Olaniran, 2017), it

appears that Nigerian youth have not imbibed entrepreneurial mind-set. This is evident as the level of unemployment has remained relatively high compared to other countries with growing population (Adekola *et al.*, 2016). However, this should not be perceived as insurmountable. In order for the current economic challenges in Nigeria to be resolved, it should be considered that raising the entrepreneurially inclined youth as potential entrepreneurs demands a different approach.

With all the negative indices, the economic state of Nigeria seems dicey, though scholars unanimously agreed that the country is among the most favoured country globally, well-endowed with human, natural and economic resources. In addition, opportunities abound in tourism, fertile land for agriculture with good climate, manufacturing and automobile; yet Nigeria is under-industrialized and one of the poorest in the world (Agri *et al.*, 2017; Ogoma, 2014; Nageri *et al.*, 2013). On this premise, considering the entrepreneurially inclined on the basis of Nigeria's comparative advantage as suggested by Eneji *et al.* (2013) becomes imperative for Nigeria to soar like other developing countries. Therefore, repositioning her comparative advantage could be an added value that will positively impact students' entrepreneurial inclination and ultimately lead to economic progress and development. Moreover, a decisive plan to plough her fertile land will not only eliminate hunger, it could be an avenue for foreign earnings (Madu & Terwase, 2014) and by extension reduce entrepreneurial redundancy.

2.9 Inspiring Entrepreneurial Activities in Nigeria through Comparative Advantage

Although entrepreneurial disinclination in Nigeria is multifaceted, one of the reasons could be attributed to the dependency on crude oil as the main source of revenue at the expense of other non-oil sectors. One of the neglected non-oil sectors is agribusiness due to the archaic methods of operation that is labour intensive with attendant low profitability that renders it unattractive to the younger generation. In contrast, China's tremendous growth can be ascribed partly to favourable policies for agribusiness (Adeniyi *et al.*, 2014). Countries like China, USA, Brazil, India and Thailand seem to underscore the Biblical principle which says, "be ye fruitful and multiply; bring forth abundantly in the earth, and multiply therein" (Genesis 9:7). Investments in this non-oil sector remain underdeveloped or unexplored in Nigeria, in spite of being a producer of many agricultural commodities (PWC, 2016). However, reviving the non-oil sector becomes inevitable as the resultant effect of the instability in crude oil prices continues to negatively affect the country's economy. In lieu of this, the CBN launched Anchor Borrowers' Program (ABP) in support of developmental roles in the country and one of its core objectives is to create a new generation of farmers / entrepreneurs and employment (Onuka, 2017).

Unfortunately, agriculture has been relegated to the background in Nigeria, and is seen as less-productive compared to other sectors. And Nigerians continue to import all sorts of agricultural

products like wheat, rice, fish, vegetables and fruits, dairy, sugar, oil and oil seeds. Yet, Nigeria has ample fertile land that is good for agriculture and abundant human resources (Onuka, 2017). Table 2-2 indicates that agribusiness is indispensable in the Nigerian economy, where potential entrepreneurs should explore and maximize the accompanying benefits.

Table 2-2: Comparative Agric-Related Features of Originating Countries and Nigeria

Feature	Nigeria	USA	Thailand	India	Brazil
% of population farming	70	1.6	41.5	51.5	17
Arable land(mil.Ha)	74	163	153	158	61.2
% cultivated	43.0	44.0	38.5	60.7	31.2
No. of tractors/100 ² km	6.56	272.81	N/A	186.9	172.51
Fertilizer uptake (km/Ha)	2.12	109.45	118.94	167.21	125.05
Average Holding (Ha)	0.75	180	3.6	1.33	73.1

Source: Adapted from Vanghan et al. (2014)

2.9.1 The Link between Agribusiness and Entrepreneurial Inclination

In the 1960s, agricultural products were the key source of export earnings in Nigeria. Onuka (2017) documented that foreign exchange earnings on agricultural export cut across every region prior to oil boom. However, this was discarded as oil revenue increased. The findings of Fawole and Ozkan (2017) indicated that majority of Nigerian graduates from different disciplines are eager to be involved in agribusiness if the government could create enabling environment. Moreover, the willingness of young graduates to create jobs via agriculture will have spiral effects on the Nigerian economy if they are given the needed government support.

The benefits that may likely accrue to the country through agribusiness are numerous. Firstly, employing innovativeness in home-grown businesses will provide opportunities for entrepreneurial activities in diverse ways. Secondly, agricultural product is not limited to what is produced as it includes processing, packaging, storage and service farming systems that are currently lacking. Thirdly, with favourable geographical conditions for agriculture this comparative advantage could be maximized in the following areas: farming (commercial cultivation of cassava, wheat, rice, maize, groundnut), processing and packaging of organic fruits, round the year production of vegetables, cocoa and oil palm plantation (Kehinde & Agwu, 2015; Eneji *et al.*, 2013). Lastly, importation will be substituted with locally made goods that can impact other sectors of the economy positively. All these can be achieved through creative innovation.

Although Nigeria can be among global inventors, Agri *et al.* (2017) suggested that Nigeria must first choose industries according to her comparative advantage. Small and Medium Enterprises can emerge stronger and better by building on those locally produced items via technological innovativeness,

which will serve as a starting point for economic growth. Meanwhile, research has shown that excessive importation is having negative impact on Nigeria's economy (Abbas *et al.*, 2018; Vanghan *et al.*, 2014). Products of a developing economy must be able to compete locally and internationally. For instance, a look at importation of rice revealed that it has indisputably become a staple food in Nigeria (Madu & Terwase, 2014), however, high quality production, processing and packaging remain an unexplored area for business investments. Spill over effects from opportunities in agribusiness include finance, insurance, building of different modern equipment and information technology. It is expected that all these will have positive impact on the country's Gross Domestic Product (GDP) if entrepreneurial attitude, knowledge and venture creation skills with entrepreneurial inclination are properly harnessed.

2.10 Chapter Summary

The focus of this chapter is on Nigeria as a country and discussion centres on her ethnic composition, security challenges, historical perspective with emphasis on the past oil boom, population, and the present leadership woes. The sections which are interrelated were considered one after the other, by evaluating, comparing and contrasting the past with the present state of the nation. It considered Nigeria's comparative advantage and how entrepreneurial inclination can make positive impact on the future of Nigeria. It finally contains a discourse on the connection between agribusiness and entrepreneurial inclination.

The next chapter of this study contains the literature review with emphasis on the overview of entrepreneurship education and students' entrepreneurial inclination, the role of biopsychosocial factors as well as the supporting theories and research framework.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The previous chapter discussed Nigeria and the development of entrepreneurial activities and showed the essence of the research in time like this. This chapter begins with entrepreneurship at the beginning, and entrepreneurial inclination is considered, as it relates to entrepreneurial intention in Nigeria and the making of an entrepreneur. Next, is the overview of entrepreneurial education which comprises of entrepreneurial attitude, entrepreneurial knowledge, and venture creation skills. This is followed by the comparison between entrepreneurial redundancy and disease, the moderating role of biopsychosocial factors, and supporting underpinning theories and research framework were also discussed. Next is the development of hypotheses and concludes with summary of the chapter.

3.2 Entrepreneurship at the Beginning

The word “entrepreneur” dates back to the 14th century, and it is known to originate from the French word ‘entreprendre’, but became pronounced through Richard Cantillon, a French man and one of the foremost writers on entrepreneurship that closely associated entrepreneur with state of uncertainty (Kim, Eltarabishy, & Bae, 2018; Hebert & Link, 2011). However, the coinage of the word “entrepreneur” from the French word ‘entreprendre’ is rooted in an impression of ‘between-taker or go-between’ (Makhbul & Hasun, 2011). In addition, Bygrave and Zacharakis (2011) asserted that Norman Macrae, a journalist, generated strong awareness for entrepreneurial activities and the term entrepreneur became predominantly established in history (Hebert & Link, 2011).

However, before it gained prominence in the 20th century, Drucker acknowledged Joseph Schumpeter as one of the foremost economist that envisioned entrepreneur’s capability on the economy (Drucker, 1985). Meanwhile, Hebert and Link (2011) submitted that research centre for entrepreneurial history was established by Arthur, while the early assumption was that entrepreneurship was championed by Schumpeter (Croitoru, 2017) and it has since continued to gain rapid prominence in educational institutions.

Prior researchers affirmed that entrepreneurship education came with the euphoria of being the nostrum to issues of reducing graduate unemployment, increase in firm growth through creative innovation and economic development (Ahiamadu & Allen, 2020; Mustapha & Selvaraju, 2015). It is now the responsibility of stakeholders to take initiatives on how to influence and strengthen students’ entrepreneurial inclination among university graduates to enable them make meaningful contribution to national growth and development. Entrepreneurship education is expected to help learners through

their mentors to acquire requisite skills and knowledge, think deep, and generate ideas that will invariably lead to self-reliance. Further, focus on opportunity development as well as discovering and exploring untapped talents can create avenue for the entrepreneurially inclined to rout fear and uncertainties associated with business formation.

Past studies provide evidence that some institutions of higher learning have continued to adopt different strategies to inspire entrepreneurial inclination among students by offering entrepreneurship education either as an elective or a compulsory course (Dabale & Masese, 2014; Ossai & Nwalado, 2013). However, institutionalization of entrepreneurship education as a field of study went a step further in Nigeria in 2007 when the government rolled out a new policy in favour of entrepreneurship education (Onuma, 2016). On this premise, an unending campaign began by governmental and non-governmental organizations to further promote entrepreneurial activities as the role of entrepreneurs in economic development has become germane (Stough, 2016).

Moreover, the recognition of who an entrepreneur is makes firm to crave for creative individuals who are proactive in innovativeness (Hitt, Ireland, & Hoskisson, 2009). The intense desire to multiply entrepreneurs not only at the managerial level, but at all organisational levels has led to the emergence of entrepreneurship education as a field of study. Entrepreneurship education has now become an established domain (Maziriri, Letshaba, & Maramura, 2019) and seen as the panacea to current global graduate unemployment challenges. Thus, a study on students' entrepreneurial inclination is essential to promote entrepreneurial activities among young graduates.

However, scholars have been unapt to establish certain issues in entrepreneurship, which are worth noting, because they have remained consequential till date. The on-going debate centres on the following: the agreed frame of term or concept as its definition, most effective teaching and learning methods, instruments of measurement, mode of assessment, its impact and effectiveness, entrepreneurial know-how and entrepreneurial know-who and many more (Nabi *et al.*, 2017; Bridge, Hegarty, & Porter, 2010). Consistent with other researchers, Baptista and Naia (2015) opined that a plausible reason for the varied perception on these issues, most importantly on definition, could be traced to the fact that entrepreneurship is an interdisciplinary field, and that researchers equally originate from different academic backgrounds. For example, Bygrave (Physics), Reynolds (Engineering), Hisrich (Marketing), Audrestch and Davidsson (Economics) have all become notable researchers in the field of entrepreneurship (Sassmannshausen & Gladbach, 2011).

Therefore, entrepreneurship as a field of study may not be able to operate on a solo voyage due to its peculiarities; as Hisrich, Langan-fox, and Grant (2007) maintained that entrepreneurs are found in every profession, which include education, law, medicine and psychology. In support of openness of entrepreneurship studies to other professionals, Bygrave remarked (Sassmannshausen & Gladbach, 2009, p. 1137), "We do not want to erect a wall around our field We need a fuzzy boundary

around the field that posted with welcome signs for scholars who share our beliefs and want to join us and labour in the field of entrepreneurship”

In the light of this, entrepreneurship has been examined by numerous researchers from different disciplines who offered it differing meanings (Okoli & Allahna, 2014; Ahmad, 2013; Anderson, Dodd & Jack, 2012). For instance, Okoli and Allahna (2014, p. 253) conceptualized entrepreneurship as “individual’s ability to transform ideas into profitable action”. This is consistent with the notion of Sansone, Battaglia, Landoni, and Paolucci (2019) that creation of venture hinges on the ability of entrepreneurs to change concept or knowledge into lucrative business.

Consequently, scholars have noted that entrepreneurial education entails preparing students to be entrepreneurially inclined (Jones *et al.*, 2014), which might be beyond just a twist in pedagogical approach, rather, a new trajectory of connecting individuals with environment for a stronger business network (Xie, 2014).

Table 3-1: Research on Venture Creation

	Individual-based research	Environment-based research
Main ideas	Identifying distinctive individual characteristic leading to venture creation.	Emphasising the role of the environment in shaping individuals’ decision to create a venture.
Approaches and key variables	Trait approach: risk taking; tolerance for ambiguity; need for achievement and locus of control. Demographic approach: gender; age; education; social economic status and past experience. Cognitive approach: schema, scripts, observation, knowledge, skills, beliefs and attitude.	Immediate context: role model (in the family or workplace). Broad context: political or legal; economic; cultural; support institutions.
Implications	Variables at the individual levels are not sufficient to explain venture creation.	Variables at the environment level help explain venture creation, but the role of the individual cannot be neglected.

Source: **Adapted from Xie (2014)**

3.3 Differences between Entrepreneurial Inclination and Entrepreneurial Intention

The meaning of entrepreneurial inclination has been misconstrued, as past studies have conceded that researchers have used both entrepreneurial inclination and entrepreneurial intention interchangeably in their studies (Parveen, Kassim, & Zain, 2018; Aboho *et al.*, 2016; Edirisinghe & Nimeshi, 2016; Ranwala & Dissanayake, 2016). Hence, in entrepreneurship research existing researches have divergent views with regard to its definition (Edirisinghe & Nimeshi, 2016; Koloba *et al.*, 2015; Keat *et al.*, 2011; Ali *et al.* 2009). Certain flaws as well as absence of theoretical grounding are noticeable in some of these researches, which could be based on the fact that there are few studies on entrepreneurial inclination. In the face of lack of clarity it becomes imperative that having a concise definition becomes inevitable in order to establish a relationship between entrepreneurial education and entrepreneurial inclination.

However, this study perceives a line of confusion between inclination and intention, which should be clarified, as Faggio and Silva (2014) opined that partial impairment exist on the subject of entrepreneurship definitions. Moreover, there could be discrepancies in the technique and manner a concept is defined (Lackeus, 2015; Okoli & Allahna, 2014), and it could be argued that the way it is expressed in the context of the study could motivate potential entrepreneurs concerning venture creation. This is consistent with the position of Fayolle, Landstrom, Gartner and Berglund (2016) that definition incorporates wide-ranging positions, goals, techniques and methodologies. Hytti (2002) confirmed that it may be difficult to consider a field of study without reflecting on its meaning, which is the basis for the phenomenon under consideration (Mwasalwiba, 2010). Tiftik and Zincirkiran (2014) suggested that inconsistent definition can make theoretical discussions become a difficult task. This authenticates the reason for taking definition into account in this review.

Past studies have not shown the difference between intention and inclination (Aboho *et al.*, 2016; Koloba *et al.*, 2015; Asamani & Mensah, 2013; Sandhu, Sidique, & Riaz, 2011), however, the distinctiveness of these two constructs should be maintained from theoretical and practical standpoints. Although, the two concepts are closely related, they should not be considered as the same. The argument of this research is that definitions of both terms (entrepreneurial inclination and entrepreneurial intention) should be differentiated. Though, entrepreneurial inclination and entrepreneurial intention seems to focus on a similar trajectory, both concepts differ. To corroborate this, Okeke *et al.* (2016) admitted that the definition of entrepreneurial inclination is apparently missing in previous studies unlike intention, by implication, both terms should be defined differently. Moreover, it is obvious from past studies that researchers' inability to distinguish between these two concepts informs their switchable use in the literature, which necessitates further clarity as posited in this dissertation. Therefore, to shed some light on this distinction, the information contained in Table

3-2 is addressed sequentially. This includes: the definition, rationale, scope, view, vision, risk level, and conclusion. To begin with, definition is considered as the foundational stage of every concept.

Table 3-2: Distinction between Entrepreneurial Intention and Entrepreneurial Inclination

Capacity	Intention	Inclination	Remark
Definition	WordWeb dictionary defines intention as an anticipated outcome that is intended or that guides your planned actions .	WordWeb dictionary defines inclination as an attitude of mind especially one that favours one alternative over others.	Intention and inclination differs based on this definition.
	There are various definitions and is almost impossible to find the same definition on this concept. It lacks an agreed definition by scholars.	It has only been defined specifically in three articles (though in different context) out of the journal articles selected in this review.	Definition is crucial in understanding research context.
Rationale	To examine level of interest and create awareness.	To establish level of passion and create jobs.	Interest can be compromised but true passion remains despite daunting challenges.
Scope	It has been over-researched by scholars and emerging researchers.	It has been researched sparingly.	Scholars and emerging researchers should explore entrepreneurial inclination.
View	Mere intention differs from strong persuasion to persevere.	Raising potential entrepreneurs goes beyond interest it requires certain impetus.	There should be paradigm shifts in raising potential entrepreneurs in the developing countries.
Passionate vision	Intention may remain passive, with low commitment.	An individual with strong inclination and passion will be ready to persevere and be more committed.	Vision begets grit and perseverance. A passionate individual remains undeterred (KFC, Eistern Albert).
Evidences	Entrepreneurial intention has not increased entrepreneurial activities as predicted	Entrepreneurial inclination cum biopsychosocial factors is being suggested in this dissertation.	The desire of stakeholders to nurture potential entrepreneurs could be achieved.
Conclusion	Though intention has been widely studied, there is disinclination in entrepreneurial activities.	The aim of entrepreneurial inclination to create jobs may be realized if this research is underscored.	Stakeholders should consider entrepreneurial inclination that embraces biopsychosocial factors for a paradigm shift.

Source: **Author's concept**

3.3.1 Intention or Inclination: The Definition

The definition of a concept may be broad or narrow (Lackeus, 2015; Okoli & Allahna, 2014), however, definition in the context of a study can be valued as its operationalization. While entrepreneurial intention and inclination originated from entrepreneurial education, their objectives may be perceived as parallel. However, the meaning adjudged to both determines the direction as well

as the application. The Wordweb dictionary defines intention as an anticipated outcome that is intended or that guides your planned actions. In other words, it can be referred to as purpose, aim and design. Rauch and Hulsink (2015, p. 194) described entrepreneurial intention as “the extent individual seriously considers becoming an entrepreneur”. While Bae, Qian, Miao, and Fiet (2014) defined entrepreneurial intention as yearning to own or commence a business. Similarly, Thompson (2009) expressed that entrepreneurial intention is an individual’s conviction that he or she has a deliberate plan to start a new venture at a specific time in the future.

On the other hand, inclination, otherwise known as tendency, disposition, proclivity and preference, is defined by Wordweb dictionary as “an attitude of mind especially one that favours one alternative over others”. Researchers that endeavoured to define entrepreneurial inclination as a concept include Ali *et al.* (2009; p. 4) who stated that “entrepreneurial inclination is the tendency of prospective teachers to pursue entrepreneurial career”. In turn, Okeke *et al.* (2016, p. 15) viewed entrepreneurial inclination “as the degree to which an individual is predisposed to taking up entrepreneurial activities”. They further noted that entrepreneurial inclination is expressed as the feeling or possibility of becoming self-employed in future. Accordingly, Bolcic (1997) described entrepreneurial inclination as the willingness to undertake entrepreneurial action. In addition, Tiftik and Zincirkiran (2014, p. 182) submitted that entrepreneurial tendency is “primarily a composition of the individual and environmental factors and represents the desire and determination of the individual for running his or her own business”.

Based on the aforementioned definitions, similarities and differences could be fixed between entrepreneurial intention and inclination. Firstly, they both originate from entrepreneurial education whose mission or targets are to: raise potential entrepreneurs, increase job creation and subsequently promote economic growth and development. Secondly, both concepts are controlled by entrepreneurial traits or characteristics such as innovativeness, tolerance, perseverance and self-confidence, which have been examined by past scholars (Aboho *et al.*, 2016; Edirisinghe & Nimeshi, 2016; Koloba *et al.*, 2015). Moreover, similarities could be found from the definitions given by most scholars (Okeke *et al.*, 2016; Rauch & Hulsink 2015; Bae *et al.*, 2014; Ali *et al.*, 2009). More explicitly, it may be argued that since both entrepreneurial intention and entrepreneurial inclination seek to multiply entrepreneurs, differences do not exist.

This, to an extent, could be true, as it has always been used as synonyms, however, definition should be the compass that provides the direction in any study and in entrepreneurship such definitions should be action oriented. Moreover, definition determines relevance; it either increases or reduces the scope of application as well as the understanding of the phenomenon. A critical reflection on the definitions of Okeke *et al.* (2016) and Ali *et al.* (2009) could explain why a general definition of a given variable in a scientific research could not be rationalized. Though an appropriate definition of

entrepreneurship is still debatable, definition in the researcher's context will direct operationalization as well as measurement. Moreover, a real assessment of the level of students' entrepreneurial inclination will be difficult without a given definition. In the perspective of Tiftik and Zincirkiran (2014), interest or desire to start a venture will remain theoretical without the interaction of other factors. Thus, after examining other researchers, this dissertation expands the definition put forward by Tiftik and Zincirkiran (2014) as well as the research view of Xie (2014) to give a concise definition that incorporates individual-environment factors.

Therefore, in this study, the concept entrepreneurial inclination is defined as the readiness to seize every opportunity to create venture by integrating contextual factors with passion, innovativeness and resilient determination to succeed. This leads us to the next step, which is the rationale.

3.3.2 Intention or Inclination: The Rationale

The major rationale for entrepreneurial education at the university level, and by implication, in Nigeria is its design to end the perpetual attachment to the government for paid employment and to create stepwise increase of nascent entrepreneurs. With regards to the rationale behind these two concepts (entrepreneurial intention and entrepreneurial inclination), the outcome is to own a business (Iwu *et al.*, 2016; Storen, 2014), and this may be perceived as the same. Liñán (2004) suggested that entrepreneurial education can be categorized basically into four: entrepreneurial awareness education, education for start-up, education for entrepreneurial dynamism and continuing education for entrepreneurs. In terms of theory, entrepreneurial education has significantly influenced consideration for entrepreneurship, as a partial fulfilment of its mission. However, in practical terms, creating a new venture goes beyond mere interest and wishes without thoughtfulness on other factors.

Lorz (2011) indicated that education for start-up is meant for individuals that intend to practice their entrepreneurial knowledge. There is an adage that says 'if horses were wishes, beggars will ride'. Wishful thinking does not automatically culminate into action. The missing link therefore, is that entrepreneurial intention seems to flow along with Liñán (2004) first objective, "entrepreneurial awareness education", while it gets stuck on the second phase, "education for start-up".

Though, the rationale for entrepreneurial education is obvious, as researchers have succeeded in validating the fact that students of higher institutions of learning can no longer feign ignorance of the anticipated outcomes of entrepreneurial education (Gafar, Yusoff, Kasim, & Martin, 2015; Ahmad, 2013). However, from the stakeholders' point of view, the expected results are yet to be actualized among Nigerian students (Ibrahim & Lucky, 2014), as graduate unemployment continues to grow per diem. This study argues that the rationale for teaching entrepreneurial education is to raise entrepreneurially inclined students who will establish viable ventures born out of passion and determination, and should therefore go beyond intention. However, to experience this entrepreneurial

dynamism demands certain impetus as hypothesized in this dissertation that the influence of biopsychosocial factors could act as the moderator between entrepreneurial education and entrepreneurial inclination. This leads to the third step, which is the scope.

3.3.3 Intention or Inclination: The Scope

Although, scope generally can vary based on the type of study, by scope here, we mean the extent to which entrepreneurial inclination and entrepreneurial intention have been examined. Several studies have been carried out on entrepreneurial intention (Marques, Valente, & Lages, 2018; Nabi *et al.*, 2018; Oguntimehin & Olaniran, 2017; Law & Breznik, 2017; Iwu *et al.*, 2016). This includes personality traits, venture creation skills, gender, family background, institutional capacity and organizational growth. Moreover, researchers have consistently carried out studies on entrepreneurial intention (Nabi *et al.*, 2017; Liñán & Fayolle, 2015; Bae *et al.*, 2014), compare to a few studies on entrepreneurial inclination.

Thus, entrepreneurial inclination, as a concept, has been studied by a few researchers (Aboho *et al.*, 2016; Edirisinghe & Nimeshi, 2016.; Okeke *et al.*, 2016; Olomi & Sinyamule, 2009), and of these number, none has explored biopsychosocial factors as a moderating variable. It shows that the existing research in entrepreneurial inclination is limited in scope, and as such, there is a wider scope for further research for a better understanding of entrepreneurial inclination. Next is scholars' view on entrepreneurial inclination and intention.

3.3.4 Intention or Inclination: The View

Promoting entrepreneurial education has no doubt increased the awareness and intention for venture creation (Gafar *et al.*, 2015), nonetheless, entrepreneurial action has not been influenced as expected by stakeholders (Álvarez *et al.*, 2015; Gielnik *et al.*, 2015). This study argues that the entrepreneurially inclined student duly equipped with resources, knowledge and skills that could perceive opportunities where none seems to exist, who also adheres to the guiding rules of success, would definitely become a business venture creator. Past studies indicated that much has been said about entrepreneurial intention, however, studies revealed mixed results on its impact with regards to business creation (Marques *et al.*, 2018; Nabi *et al.*, 2017; Ahmad & Buchanan, 2015; Bae *et al.*, 2014; European Commission, 2012b). The view of following a specific set of traits or behaviour for venture creation have been emphasized rather than the combination of other factors (Kim *et al.*, 2018). This leads to the next discussion on vision.

3.3.5 Intention or Inclination: The Passionate Vision

Another aspect on the differences between intention and inclination is passionate vision. Vision begets grit and perseverance. Vision has the tendency to electrify the brain and illuminate passion. Strong inclination will broaden one's vision and perception. However, by comparison, intention can be categorized as a wish that can be influenced or compromised by '*pull or push syndrome*' (Adekola *et al.*, 2016; Tiftik & Zincirkiran, 2014). The level of disposition or predilection for an act (Hermansen-kobulnicky & Moss, 2004) will be determined by the level of vision, because vision can inflame passion. For instance, the Skill Acquisition and Entrepreneurship Development program for the NYSC members negate vision because these young graduates are engaged in activities without thinking through on their passion.

In addition, passion has the capacity to influence mental attitude, which can dominate an individual's entire being. For example, enduring several hours a day of persistent work, while the team ate and slept in the office for weeks at a time during the formative years of internet (Bygrave & Zacharakis, 2011) could not be described as mere interest. This is rather a build-up of strong inclination empowered by passion, vision and perseverance. From this perspective, inclination can further be differentiated from intention. In the same vein, the entrepreneurially inclined, obsessed with passion and vision, will dare the consequence of failure, and then, explore the possibility of sacrificing quality time on what makes 'life worth living', as documented by Vallerand *et al.* (2003).

Consequently, adopting mandatory entrepreneurship courses in most higher institutions of learning have not culminated into venture creation because implementable strategy cannot evolve from visionless minds (Rauch & Hulsink, 2015). Intention seems to be on the path of accumulating knowledge to create awareness. Storen (2014) asserted that graduates who had entrepreneurial education and those that do not are the same in terms of job creation. According to the Holy Bible, "where there is no vision the people perish" (Proverbs 29:18). Duckworth (2013) acknowledged that integration of passion and perseverance are strong pillars for achievers. Furthermore, Vallerand *et al.* (2003, p. 756) stated that "passion is a strong inclination toward an activity that people like, that they find important, and in which they invest time and energy". They equated passion with strong inclination. In addition, the authors viewed passion as what makes 'life worth living'. Based on the above, the entrepreneurially inclined can be sorted through their passion for what they believe is worth living for and predisposition towards venture creation. Therefore business engagement with the interplay of varied factors will foster entrepreneurial mind-set. This study argues that longing towards personal inclination can move beyond the natural realm because it dominates the entire being: spirit, soul and body. The next discussion is evidences of entrepreneurial activities.

3.3.6 Intention or Inclination: The Evidences

Prior research indicates that starting a new venture is risky because of the attached inherent uncertainties (Shahriar, 2018), especially, when introducing a relatively new product or service to the market. However, readiness to take risk depends on individuals and their level of self-efficacy. Individuals manage risks differently; the findings of Sarooghi, Libaers, and Burkemper (2015) indicated that a certain level of risk is required for any novel idea to become functional and realistic. Entrepreneurship programmes cannot eliminate individual's risk factor; however, risk taking complements genuine inclination cum passion. Self-efficacy builds on the premise that an individual holds what it takes to complete a task successfully (Dabale & Masese, 2014), and as such, the individual will remain undaunted even at the time of crisis.

Conversely, without passion and inclination, there will be a dysfunctional interest, which will either erode the level of risk or make such student become risk averse. Moreover, entrepreneurial inclination and passion will drive willingness to take risk. For example, an individual that is entrepreneurially inclined, and also, characterized by passion for an engagement, will possess great propensity to take risk. Moreover, past research has shown that certain variables have been identified as important for inspiring entrepreneurial risk-taking and include: age, education, and family background (Wang & Poutziouris, 2010). Nonetheless, without the combination of all the varied factors, influencing entrepreneurial inclination and raising competent entrepreneurs at the university could be an illusion.

In conclusion, different views have been considered by prior researchers on entrepreneurship education and the motives underpinning the varied opinions are numerous. However, from previous studies, entrepreneurial intention and inclination have been considered as synonyms, and as such, have been used interchangeably in the literature. Moreover, it is obvious that entrepreneurial intention has created more awareness and has not really increased entrepreneurial activities, as expected from entrepreneurial educators.

Furthermore, with the distinctions highlighted above, this study argues that the difference between intention and inclination need to be re-examined. Moreover, intention ends at promoting entrepreneurial interest, while inclination inspires entrepreneurial passion. It is obvious that increasing potential entrepreneurs necessitates greater emphasis on a diversity of factors, as pointed out earlier. A deeper understanding is required to know how to nurture competent entrepreneurs through the combination of varied factors. Moreover, as a strong foundation is requisite to having a lasting building; so also, entrepreneurial inclination rooted in vision and passion cum enabling environment may likely facilitate better entrepreneurial perspective.

Having discussed the differences between entrepreneurial intention and entrepreneurial inclination, the next stage reflects on how entrepreneurial inclination can thrive among university students by considering the making of an entrepreneur.

Table 3-3: Summary of Journals on Inclination: African Perspective

S/No	Author(s)	YOP	Journal Title	Variables	Setting	Respondents	Remark
1.	Aboho, R., Aleru, G. E., & Danladi, S. A	2016	Knowledge Review	Demographic data entrepreneurship inclination, entrepreneurship curriculum content, the pedagogical approaches, internship programme, university's role to promote entrepreneurship and supportive environment	Nigeria	330 undergraduate students from two Nigerian universities	Moderately inclined
2.	Okeke, M., Okonkwo, G., & Oboreh, J.	2016	Arabian Journal of Business and Management Review	Demographic variables and direct measures of entrepreneurial inclination	Nigeria	90 undergraduate students from two universities in Imo state	Moderately inclined
3.	Koloba, H. A., Dhurup, M., & Radebe, P.	2015	African Journal for Physical, Health Education, Recreation and Dance	Innovativeness and risk-taking	South Africa	173 sport students from two universities	Moderately inclined
4.	Asamani, L., & Mensah, A. O.	2013	European Journal of Business and Management	Gender, programme of study, age, achievement attitudes, risk-taking attitudes and leadership attributes	Ghana	520 undergraduates from university of Cape Coast	Highly inclined
5.	Chenube, O. O., Saidu, R. F., Chiedu, O. F., & Omomoyesan, M. B.	2011	Ife Psychologia	1) Demographic characteristics and direct measures of entrepreneurial inclination	Nigeria	193 undergraduate students from two universities in Delta state	Highly inclined

Source: Author's Concept

Table 3-4: Summary of Journals on Inclination: Asian Perspective

S/No	Author(s)	YOP	Journal Title	Variables	Setting	Respondents	Remark
1.	Chaudhary, R.	2017	Education and Training	Demographic factors, social personal disposition on entrepreneurial inclination	India	274 business and non-business students from two universities in India	Low inclination
2.	Edirisinghe, D. S., & Nimeshi, S.	2016	IOSR Journal of Business and Management	Need for achievement, locus of control, risk-taking propensity, self-confidence and innovativeness	Sri Lanka	240 undergraduate students of the university of Kelaniya	Moderately inclined
3.	Mustapha, M., & Selvaraju, M.	2015	Kajian Malaysia	Personal attributes, family influences, ee and entrepreneurship inclination.	Malaysia	178 accounting students from three public universities in Klang Valley	Moderately inclined
4.	Tiftik, H., & Zincirkiran, M.	2014	Journal of Management Research	Entrepreneurship tendencies and levels of entrepreneurial inclination	Turkey	Students of Economics and Administrative Sciences at a foundation university	Highly inclined
5.	bin Mahajar, A. J., & Yunus, J. M.	2012	Journal of Global Business Management	Demographic characteristics, working experience and entrepreneurial inclination	Malaysia	181 undergraduates from Universiti Pendidikan Sultan Idris	Low inclination
6.	Ahmed, I., Nawaz, M. M., & Ramzan, M.	2012	InTech	Family support, political instability, terrorism, occupational intentions	Pakistan	200 business and non-business students	Moderately inclined
7.	Lim, Y. M., Lee, T. H., & Cheng, B. L.	2012	The South East Asian Journal of Management	Entrepreneurial characteristics, entrepreneurial inclination, birth order and family influence, entrepreneurial skills, motivating factors and barriers for start-ups	Malaysia	100 business administration students and 100 accounting students from a private university in Malaysia	Low inclination

S/No	Author(s)	YOP	Journal Title	Variables	Setting	Respondents	Remark
8.	Md Yasin, A. Y., Nik Mahmood, N. A. A., & Nik Jaafar, N. A.	2011	International Education Studies	Demographic variables, entrepreneurial intent, perceived behavioral control, self-efficacy, perceived barriers, perceived support factors and attitude towards entrepreneurship	Malaysia	65 technical and non-technical students	Moderately inclined
9.	Sandhu, M. S., Sidique, S. F., & Riaz, S.	2011	International Journal of Entrepreneurial Behaviour and Research	Aversion to risk, fear of failure, lack of resources, lack of social networking and aversion to stress and hard work	Malaysia	267 postgraduate students from various Malaysian universities	Highly inclined
10.	Keat, O. Y., Selvarajah, C., & Meyer, D.	2011	International Journal of Business Sciences	Demographic characteristics and family business background (3) Role models	Malaysia	417 undergraduate students from the northern region of the Peninsula Malaysia	Moderately inclined
11.	Sandhu, M. S., Jain, K. K., & Yusof, M.	2010	Unitar e-Journal	Demographic characteristics, family background and type of programme	Malaysia	234 undergraduate and postgraduate students of UniTAR	Highly inclined
12.	Ali, A., Topping, K., & Tariq, R. H.	2009	New Horizons in Education	Entrepreneurial inclination, locus of control, entrepreneurial motivation, self-efficacy, entrepreneurial intentions, instrumental readiness, subject norms	Pakistan	516 Master of education students from seven Pakistani public universities	Moderately inclined

Source: Author's Concept

3.4 The Making of an Entrepreneur

The importance of nascent entrepreneurs and the necessity of raising the entrepreneurially inclined in fostering economic growth and development cannot be overemphasized. This is desirable because entrepreneurship cuts across every faculty, and assuredly, its applicability in almost every discipline is yet to be countered. However, venture success does not evolve in a jiffy, sometimes this could be very complex (Edirisinghe & Nimeshi, 2016). It takes time, hard work, passion, perseverance, resilience and patience to achieve the desired success. Therefore, to develop entrepreneurially inclined graduates equipped with relevant skills, vision and passion demands favourable business environment (Ahiamadu & Allen, 2020). Moreover, it is obvious from the literature that some individuals are more entrepreneurially inclined than others, which accounts for reasons why there are diverse views on how to build potential entrepreneurs.

For instance, Jeff Bezos of Amazon.com; Anita Roddick of The Body Shop and Ely Callaway of the Callaway Golf are exceptional cases that made incredible successes without previous industry experience (Bygrave & Zacharakis, 2011). However, different schools of thought exist on the approach for nurturing potential entrepreneurs, especially at the university level (Nabi, Walmsley, Liñán, Akhtar, & Neame, 2018; Kyrö 2015; Olorundare & Kayode, 2014). Some scholars observed that personality traits should be considered, while others debunk it and argued that without favourable business environment, traits will remain inactive (Edirisinghe & Nimeshi, 2016; Liñán & Fayolle, 2015; Storen, 2014; Kobia & Sikalieh, 2009).

On the contrary, some scholars advanced the view of Ajzen that the Theory of Planned Behaviour is central to the making of an entrepreneur (Verheul, Thurik, Grilo, & van der Zwan, 2012). Similarly, family background and mentoring have been prominent in entrepreneurial studies, and scholars have suggested that they are germane in entrepreneurial activities (Chaudhary, 2017; Bygrave & Zacharakis, 2011). This rests on the fact that those with entrepreneurial upbringing may become entrepreneurially inclined, if such relations have success pedigree. Furthermore, some people presumed that the making of an entrepreneur has changed in this modern era and that advancement in technology has changed the way people think or act in every aspect including the business arena.

Therefore, Sandhu *et al.* (2011) argued that social networking is an essential factor for start-ups in an emerging economy, and that the promising business environment existing in Asia could be attributed to effective social network. In addition, past research showed that readiness to exploit business opportunities could be connected to the level of economic growth and development of a nation (Kobia & Sikalieh, 2009). Perhaps the high rate of start-ups in China's growing economy is closely linked to the ever-growing global export (Fields, 2014), which is rising steadily and strongly in almost every facet, and this is with a strong support system and governmental participation (Zhou & Xu, 2012). The argument here is that in this era of social network, nascent entrepreneurs also need early business

network to stimulate innovative ideas, create access to financial support, open doors to wider market and probable acquisition of knowledge from experts.

Networking encourages sharing of ideas with others, and individuals within the group think differently and they can be inspired in various dimensions. Students can network starting from idea generation within the institution by forming a group of seven or more. In a single group, some can convey their ideas in writing convincingly, while others can virtualize and draw perfectly to bring new ideas. Based on these diverse inspirations and insights, something novel could emerge from such collaboration (United Nations, 2017; Farny, Frederiksen, Hannibal, & Jones, 2016).

Furthermore, work experience and government policy have been examined as important constructs in entrepreneurship domain. Previous authors have argued that work experience (Iwu *et al.*, 2016) and government policy incorporated into biopsychosocial factors seem to add impetus to nurturing entrepreneurial inclination. There is the consensus that entrepreneurs are significant in economic development, more importantly, in a growing economy. However, raising the entrepreneurially inclined with early business networks demands individuals with diverse skills as well as supportive business environment. This may likely enhance budding entrepreneurs to emerge in a developing economy like Nigeria

However, Xie (2014) indicated that over the years, lots of researchers have attempted to delineate an entrepreneur in various ways (Devi, Panigrahi, Maisnam, Alyani, & Bino, 2019), nonetheless evidence suggests that underpinning a unified assertion of who an entrepreneur is has been a subject of debate in entrepreneurship domain. Numerous theories have been associated with reasons why some people are entrepreneurially inclined while others are not (Rae, 2004; Markman & Baron, 2003). Therefore, defining an entrepreneur has been based on individual's context and background. In this light, this dissertation considers the entrepreneurially inclined based on 5WsH: what, why, where, when, who and how of entrepreneurial inclination.

3.4.1 Entrepreneurially Inclined: The 'What?'

What does it mean to be entrepreneurially inclined? Fregetto (2006, p. 12) viewed the entrepreneurially-inclined as those "students who are highly inclined towards entrepreneurial behaviour". However, his findings revealed that stakeholders have not fully realized that high motivation for entrepreneurship courses does not culminate into readiness for venture creation. Levie and Hart (2014) reported in GEM that negative attitude towards entrepreneurship can impede the launch of a sustainable business. Furthermore, a high percentage of the non-entrepreneurial respondents interviewed by GEM perceived that fear of failure could be a major impediment in spite of perceived business opportunity. To be entrepreneurially inclined, therefore, implies an individual's

readiness to engage in entrepreneurial activities rather than paid employment. It therefore becomes evident that positive entrepreneurial mind-set is paramount to business creation.

3.4.2 Entrepreneurial Inclined: The ‘Why?’

Why should an undergraduate be entrepreneurially inclined? Entrepreneurship education is crucial in the quest for economic development and it should be adequately supported for entrepreneurial activity to increase (Rigby & Ramlogan, 2013). Subsequently, entrepreneurship education attendees are expected to midwife new ventures not only to substantiate the acquired skills, but to validate stakeholders’ view on the relevance of their programme. Shuaibu *et al.* (2018) acknowledged that teaching entrepreneurial education in higher institutions of learning as the trajectory to increasing entrepreneurs cannot be overemphasized. However, the authors indicated that the impact is not being felt due to various challenges in Nigeria, which can also be found in other developing nations. The emergent of entrepreneurs from Silicon Valley as well as world top universities such as Harvard University and Stanford University can possibly be established on supportive business environment (Bygrave & Zacharakis, 2011), as such, creating room for more entrepreneurs to evolve. Therefore, the task of producing budding entrepreneurs at the university could be a mirage without entrepreneurial proclivity, since this is fundamental in mentoring nascent entrepreneurs. Furthermore, it is argued that less developed and developing nations have remained astonished with the challenges of economic stagnation, which could be as a result of the absence of nascent entrepreneurs.

3.4.3 Entrepreneurially Inclined: The ‘Where?’

Studies have shown that entrepreneurship has been widely recognized as needful in global business environment (Co & Mitchell, 2006), and that it could reshape the economy of the less developed and developing nations if prioritized (Akhuemonkhan *et al.*, 2013). Nonetheless, the role of institutions in raising graduate entrepreneurs cannot be overemphasized. Co and Mitchell (2006) opined that higher education institutions can invigorate entrepreneurial proclivity of young adults by making their teaching pedagogy relevant to local development. Therefore, the entrepreneurially inclined should be developed at the institutions of higher learning. However, educational system might not be able to shoulder this responsibility without adequate funding and support from stakeholders.

3.4.4 Entrepreneurially Inclined: The ‘When?’

In the quest to enhance potential entrepreneurs, the Nigerian government came up with the concept of mandatory entrepreneurship courses in all higher institutions of learning in the country with the objective to build skilful graduates that could employ self and others (Nwekeaku, 2013; Eneh, 2008). The purpose is to mitigate the present graduate unemployment challenges and again, to seek palliative

measures to the current dwindling economy through job creation. Since there is no specific period or age when entrepreneurial spirit can manifest, the ideas and passion for entrepreneurial activity can be honed at any stage of life.

For instance, there is an eminent personality in Nigeria who studied law to fulfil her parents' wishes. Immediately after graduation she got financial assistance from her family to start her dream business (The Punch Newspaper October 21, 2017). Similarly, the number one business mogul in Nigeria commenced trading when he was in elementary school, and he later proceeded to the university to study Business Administration. After graduation, he continued his entrepreneurial mission, following his passion; rather than seizing the privilege of seeking paid employment as a young graduate. Motivated by his entrepreneurial passion and readiness to launch to the world of business, he secured start-up capital from a relative to commence his entrepreneurial career, which has turned out to be a success story indeed (Vanguard Newspaper Special Report March 22, 2014).

3.4.5 Entrepreneurially Inclined: The 'Who?'

Who are the entrepreneurially inclined students? Are all university graduates entrepreneurially fit? Or are some bored by the word 'business venture'? The fact is that every student cannot become an entrepreneur. Blundel and Lockett (2011, p. 6) submitted that "entrepreneurs are those persons who seek to generate economic and social value through the creation or expansion of social activity, by identifying and exploiting opportunities for new products, processes, markets, and for meeting outstanding social and environmental needs". On the other hand, Bygrave and Zacharakis (2011, p. 15) gave Schumpeter's definition of an entrepreneur as "a person who destroys the existing economic order by introducing new products and services, by introducing new methods of production, by creating new forms of organization or by exploiting new raw materials". In addition, Shuaibu *et al.* (2018, p. 61) submitted that, "an entrepreneur is anybody who coordinates other factors of production and bears the risk of uncertainty by investing his resources in business ventures accordingly

Hence, it behoves us to have goal-oriented curriculum, not only at the higher institutions, but from high school. Exposure to entrepreneurship education from high school will be a solid footing for those who will be entrepreneurially inclined, and remain disposed to it in spite of the inherent risks. The expectation is that entrepreneurial inclination should grow from individual's tenacity and determination, which could be the trajectory to raising individuals with unbiased feasible entrepreneurial mind-set (Kuratko & Morris, 2018) as well as increasing budding entrepreneurs. Some inventions were conceived to solve immediate problems, which eventually became employment creation. For example, Coca-Cola is ubiquitous irrespective of race and religion (Ger & Belk, 1996), yet, Coke as a drink, came into limelight at the period the founder was thinking of solving a problem and this eventually led to a greater discovery that made him to emerge as an entrepreneur of repute.

Therefore, what are the qualities to be possessed by would-be entrepreneurs? The would-be entrepreneur is considered unique, thus, in nurturing potential entrepreneurs, possessing certain attributes should be underscored. Consideration should not only be given to what is taught, and how it is taught, but also, on who is taught. Sandhu *et al.* (2011) acknowledged that certain features are visible in entrepreneurs that can distinguish them from non-entrepreneurs. Moreover, various researchers have considered who can probably be an entrepreneur and emphasis has been on different criteria such as personality characteristics, demographic factors, environmental factors (Murnieks, Cardon, Sudek, White, & Brooks, 2016; Sanchez, 2013; Sandhu *et al.* 2011) and others had actually delved into intentions, impacts, skills, etc. (Marques *et al.*, 2018; Storen, 2014).

Consequently, some had studied government policy as the most important, while institutions had equally been viewed as the way forward. While these could be true to some extent on each of these studies, however, success-oriented entrepreneurial inclination cannot be examined in isolation. Studies revealed that entrepreneurship, which has been considered as the trajectory to the reduction of graduate unemployment and poverty, hinges squarely on various factors such as financing ability, family background, schooling, market experience, attitudes towards risk and self-reliance (Earle & Sakova, 1999). Entrepreneurial perks, which include self-fulfilment, financial freedom, flexible schedule, independence etc., come for those that could endure the challenges of starting a business venture (Sherman, Randall, & Kauanui, 2016). These challenges include long, lonely hours of commitment, tenacity, courage and perseverance. Individuals without these notable qualities may find it difficult to become successful entrepreneurs, because only those who are passionate about their vision and calling can withstand such challenging times (Da Palma, Lopes, & Alves, 2018).

3.4.6 Entrepreneurial Inclined: The ‘How?’

How can a student possess entrepreneurial spirit and emerge as an entrepreneurially inclined individual? Over the years, the main focus of entrepreneurship education has been on how to translate theoretical knowledge to success oriented venture (Kuratko & Morris, 2018). Evidence showed that even with the numerous researches on entrepreneurial sphere, it is still obvious that there is a global challenge in transforming non-functional entrepreneurship education attendees to functional entrepreneurs (Bendixen & Migliorini, 2006). This is more complex in developing countries, it is therefore apparent that more effort is required in this aspect. However, Sanchez (2013) maintained that it may be difficult to make an individual another Branson, however, indispensable creative skills required to raise competent entrepreneur can be enriched via entrepreneurship programme. This assertion finds support in the study conducted by Ede, Panigrahi, and Calcich (1998) on African-American business students in South Eastern United States. The authors concluded that entrepreneurial education could enhance the chances of entrepreneurial success.

Xie (2014) suggested that those with knowledge and skills in a supportive business environment can quickly act on perceived opportunities. Nevertheless, all students cannot become entrepreneurs, as Fregetto (2006) noted that some students are highly motivated in learning entrepreneurship courses yet with little or no interest in being an entrepreneur. The author made it more explicit that in other courses such as marketing, finance and management, ambitious students are more focused in achieving the objectives of the lesson being taught; unfortunately, this contradicts the motives of some entrepreneurship attendees. Kyrö (2015) revealed that the problem in entrepreneurship education is leaving the ‘why’ question unanswered. This provides the logical explanation for why entrepreneurship education should be effectively and efficiently taught and learned in an emerging economy like Nigeria with the plethora of graduate unemployment.

Therefore, Lackeus (2015) concluded that there is the need for a better understanding of when, how and why in entrepreneurial education, and more importantly, how it will be done in practice by future teachers and related stakeholders. Breeding and nurturing students equipped as potential entrepreneurs at the university level is crucial in achieving entrepreneurial mission. The fact is, the ‘how’ is still missing (Kuratko & Morris, 2018). In the discursive approaches to entrepreneurial learning, as discussed by Rae (2004), using the framework of ‘what, how, why, who and in what conditions’ seems to have been critically examined and extensively researched, nonetheless, ‘the how’, which centres on raising home grown nascent entrepreneurs, is yet to be established in Nigeria.

Past studies indicated that Nigerian graduates are entrepreneurially inclined theoretically (Dakung, Orobia, Munene, & Balunywa, 2017; Aboho *et al.*, 2016; Okeke *et al.*, 2016), however, functional approaches to overcoming business creation barriers has been a major impediment to their entrepreneurial disposition. Similarly, Adeniyi *et al.* (2014) reported that without requisite support, entrepreneurial training will remain futile. On the other hand, Nwekeaku (2013) argued that Nigerian curricula lacks entrepreneurship drive due to feigned policy implementation, and as such, graduates of higher institutions have been unapt to pursue business opportunities.

In contrast, Xie (2014) acknowledged that weakness in technical and psychological preparedness, which are germane in venture creation, could inhibit voluntary business pursuit. The author further classified this as individual-based and environment-based that should be integrated for competent entrepreneurs to evolve as acknowledged in previous studies. In addition, individuals are grouped into four. This includes proactive professionals, conservative non-professionals, conservative professionals and proactive non-professionals. The author argued that business creation can be illustrated by combining both the individual and the environment. Moreover, evidence from the literature showed that research on entrepreneurial inclination has been more on individual variables without taking into consideration individual-environment synergy. Xie (2014, p. 29) argued that “the environment is also an inseparable part of the entrepreneurial process because it provides opportunity and support”. The

study emphasized that a favourable environment creates room for budding entrepreneurs, while knowledge and skills are requisite for opportunity to thrive. With the understanding of the challenges faced in a developing economy, this dissertation argues that priming potential entrepreneurs without the interaction of individual and environment (biological, psychological, behavioural and environmental factors) could minimize the impact of entrepreneurship education.

Moreover, to understand the ‘how’ in raising capable entrepreneurs; there is the need to align axiological philosophical concept with entrepreneurship education as suggested by Kyrö (2015). Axiology refers to the role of values (Creswell, 2003) and what we concede as valuable to human existence (ontology). For example, in the oriental world, precious metals such as gold, which are hidden metres away from the surface of the earth, are highly valued, as such, man has been able to dig it out because of the perceived values. Thus, to unearth gold takes perseverance, determination and grit. In the same vein, connecting axiological concept with students’ entrepreneurial inclination, Tiftik and Zincirkiran (2014) noted that in any culture where successful entrepreneurs seem significant and honoured, such environment will create room for budding entrepreneurs, unlike where they are less valued.

Kyrö (2015) indicated that the interaction of axiology with ontology and epistemology could be related to ‘how and what’ to learn and teach in entrepreneurship education. Nurturing potential entrepreneurs demands that all stakeholders should acknowledge that graduate entrepreneurs are valuable to economic growth and development. Therefore they should be given ultimate support to enhance entrepreneurship activities. In other words, stakeholders’ idea about young graduates and entrepreneurship should be positively-oriented. These are young minds that had been developed to add value not only to their lives, but to society at large. Therefore, acquisition of valuable entrepreneurial knowledge should position them in a way to become economically valuable.

With this in mind, the combination of the following seems logical; entrepreneurial attitude, entrepreneurial knowledge, and venture creation skills, along with biopsychosocial factors as the moderator. The moderator has four categorizations: biological, psychological, behavioural, and environmental. Wu and Zumbo (2008) and other scholars suggested that in selecting a moderator, certain characteristics, which include attributes (gender or ethnicity) (Ranwala & Dissanayake, 2016), personality traits (locus of control, independence and innovativeness) (Edirisinghe & Nimeshi, 2016), family background and environmental variables (parents’ level of education) should be considered (Ahmed, Nawaz, & Ramzan, 2012; Keat *et al.*, 2011).

Therefore, to determine the influence of biopsychosocial factors on entrepreneurial education and entrepreneurial inclination in this study, the following variables were chosen and operationalized as moderators: gender, work experience, family income, innovation, passion, and supportive government policy. Thus, from this research’s perspective, it is expedient to foster a successful strategy for

transformational venture creation approach. To accomplish this involves a new orientation, as the potential entrepreneurs must begin with resilient determination to become entrepreneurially inclined.

3.5 Entrepreneurial Inclination and Students' Standpoint on Entrepreneurship

Most African countries are identified as vulnerable globally (United Nations, 2015), that is, they are characterized with poverty, prolonged low growth and high rate of graduate unemployment (Kambou, 2018). While other continents are pressing towards 2030 agenda, African Union's agenda is 2063 (United Nations, 2015). International Labour Organisation (ILO) (2018) noted that Africa is the least developed continent in the world, where working poor and extreme poverty are on the increase. Sub-Saharan Africa is worse than others because it harbours a high percentage of the population living below poverty line. While the rate of graduate unemployment in developed economies is declining, it has been on the increase since 2014 in some emerging economies (ILO, 2018). For instance, studies from Ghana, Nigeria and South Africa (Aboho *et al.*, 2016; Okeke *et al.*, 2016; Koloba *et al.*, 2015; Asamani & Mensah, 2013; Chenube *et al.*, 2011) indicated that the level of entrepreneurial inclination of students from the aforementioned countries is moderately high (Kambou, 2018). Nevertheless, Oyebola, Irefer, and Olaposi (2015) revealed that certain factors are responsible for the unabated graduate unemployment in Nigeria.

It is of note that entrepreneurial exploits have contributed immensely to the growing economy in Asia. For example, the Asian tigers (Hong Kong, Singapore, Taiwan, and South Korea), the Asian cubs (Indonesia, Malaysia, Philippines and Thailand), China and Vietnam are experiencing economic growth by increasing production, besides domestic market, they equally export their products to different parts of the globe (Fields, 2014). Report showed that Asians, as a minority group in USA owned businesses more than other minority groups (Idris, 2011). Similarly, Malaysia is reported as having "numerous activities and incentives available for new start-ups" (Global Entrepreneurship Monitor (GEM), 2017, p. 35).

However, prior studies showed mixed results (Chaudhary, 2017), for instance, Mustapha and Selvaraju (2015) reported that Malaysian students are entrepreneurially inclined. Conversely, Ahmad and Buchanan (2015) reported that respondents preferred paid employment to self-employment. In Sri Lanka, Edirisinghe and Nimeshi (2016) found a positive relationship between curricula, pedagogical methods as well as corroborative university environs and entrepreneurial inclination. They concluded that students possess traits for entrepreneurial inclination but are not entrepreneurially inclined. The authors suggested the need for further research on factors responsible for the students' inability to become practicing entrepreneurs. Their disinclination in entrepreneurial activities contradicts the theory of self-efficacy which attests to the fact that when an individual possesses all it entails to

accomplish a given task (Dabale & Masese, 2014), motivation to persevere becomes stronger when such an individual receives optimal incentives” (Bandura, 1977, p. 194).

According to Kobia and Sikalieh (2009, p. 115) “entrepreneurial success is contingent on a combination of factors - the interaction between the individual, the opportunity and the environment”. Drawing from earlier discussion, it can be seen that African students are entrepreneurially inclined, but absence of entrepreneurial activities is an indication that more investigation is required on how to raise entrepreneurs in Africa, more importantly from Nigeria. In response to the call of some scholars that have requested further investigation on entrepreneurial inclination (Edirisinghe & Nimeshi, 2016), this research considers that the panacea to this entrepreneurial lethargy among undergraduates demand a paradigm shift. Therefore, to have attitudinal change and increase nascent entrepreneurs, the interplay of individual-environmental factors are the fundamental criterion as stated by Xie (2014) and Tiftik and Zincirkiran (2014). According to Cromie (2000), identifying the entrepreneurially inclined is more significant in fostering promising entrepreneurs. Thus, to identify the entrepreneurially inclined and subsequently raise viable entrepreneurs, Keane and Lyon (2005) suggested four steps, which include personalized learning methods, access to practicing mentors, exploring real skills needed by potential entrepreneurs to thrive, and collaboration.

Furthermore, Keane and Lyon (2005) asserted that the authenticity of students’ level of preparedness in terms of venture creation can be examined based on the following: the students’ specific new business interests, the industry and competitive environment in which that proposed business would compete, the potential resources available to that student (not limited to financial), and the depth of access to a support network. These four steps depict what Baptista and Naia (2015) suggested should be advanced in entrepreneurial teaching, and by implication, should be possessed by an entrepreneurially inclined student. These are entrepreneurial attitude, knowledge, needed skills, mentoring, sufficient financing, personalized programs and supportive environment, in order to achieve success. This is consistent with Johansen's (2014) classification of the aims of entrepreneurship education in Norway, which are identified as demonstration of personal qualities and attitudes, learning subjects and basic skills as well as understanding knowledge and skills required in business development stages.

Knowledge, skills, and attitudes have been categorized as cognitive factors (knowledge and skills) (Baron, 2007), which can be taught and assessed while the non-cognitive (attitudes) can be learnt through actual performance (Lackeus, 2015). In spite of the fact that acquisition of relevant skills and knowledge are fundamental to understanding the intricacies of venture creation (Verheul *et al.*, 2012), Onuma (2016) agreed that absence of these skills and attitude constitute part of the challenges confronting Nigerian graduates. It is therefore worthwhile to examine the moderating influence of

biopsychosocial factors on entrepreneurial education and students' entrepreneurial inclination to achieve desired goals in terms of venture creation.

3.5.1 Entrepreneurship and Education

Entrepreneurship has been shown to be the trajectory to social and economic development. Nonetheless, to achieve this, Davis and Kalu-Nwivu (2001) showed that the Greek Philosopher, Plato, affirmed that education is indispensable in state development. Thus, contemporary leaders such as Thomas Jefferson (USA), Mao Tse-Tung (China), Nelson Mandela (South Africa) and Julius Nyerere (Tanzania) have all underlined the need for education for a sustainable national development. However, education in the right direction is crucial, in this view, having a proper link between education and entrepreneurship cannot be overemphasized. Education is expected to impact entrepreneurial attitude, entrepreneurial knowledge and venture creation skills. However, without the integration of individual and supportive environmental factors raising the entrepreneurially inclined may be thwarted. As noted earlier, the mission of entrepreneurship education is to nurture practicing entrepreneurs whose activities will no doubt lead to growth and development which is needed in a developing economy like Nigeria. Moreover, there is the tendency that graduate unemployment will dwindle in any economy that enhances students' entrepreneurial inclination.

However, the impact of entrepreneurship education remains mixed in the literature. Bae *et al.* (2014, p. 241) concluded that "policy makers or program evaluators ought to identify other criteria for evaluating the effects of entrepreneurship education". The authors suggested that "entrepreneurial knowledge and skills, real behaviour, or performance would be better constructs...". This view finds support in prior studies that attitude (know-why), knowledge (know-what) and skills (know-how) are fundamentals for developing potential entrepreneurs (Lackeus, 2015), although divergent opinions exist (Martin *et al.*, 2013; Oosterbeek, van Praag, & Ijsselstein, 2010). Reasons for differing views perhaps can be linked to entrepreneurial attitude among entrepreneurship attendees. For instance, Zhou and Xu (2012) identified four strategic goals in entrepreneurship education meant to raise entrepreneurial mind-set in China to include creation of awareness, acquisition of knowledge, reduction in entrepreneurial risks and development of skills and abilities. Hence, the dynamic interaction between attitude, knowledge and skills are crucial in shaping entrepreneurial inclination, and these should be examined.

3.5.2 Entrepreneurial Attitude

Entrepreneurial attitude is a reflection on people's mind-set toward entrepreneurship, and this can be in form of opportunity recognition, start-up skills and supportive environments (Ács *et al.*, 2017). It has been acknowledged that entrepreneurial attitude is one of the required factors for acquisition of

skills and knowledge to blend (Okeke *et al.*, 2016). While knowledge and skills are essential, entrepreneurial attitude becomes a prerequisite for transforming passion into action (Alcaraz-Rodriguez *et al.*, 2014). Preparedness for entrepreneurial action can be determined or ultimately fixed by an individual's attitude. Robinson, Stimpson, Huefner, and Hunt (1991) concluded that in considering entrepreneurship as a concept, attitude is more plausible than personality. However, entrepreneurial attitude needs certain enablers such as environmental (political, economic, social), psychological (personal belief), behavioural (personal disposition, passion) and biological factors (family background) to influence it (Nabi *et al.*, 2017; Stough, 2016; Viinikainen *et al.*, 2016; Ramaswamy, 2013; Sanchez, 2013; Bygrave & Zacharakis, 2011; Von Graevenitz *et al.*, 2010; Chell *et al.*, 1991). These constitute factors or determinants through which entrepreneurial attitude can be shaped, either negatively or positively.

Levie and Hart (2014) on attitude towards entrepreneurship revealed that negative attitude can hinder the launch of a viable business. They documented that a high percentage of the non-entrepreneurial respondents indicated fear of failure attitude as a major impediment in spite of perceived business opportunities. By implication, positive entrepreneurial attitude is fundamental to business creation, and it can actually go a long way to determine nascent entrepreneur's attitude. A review of Hungarian entrepreneurial inclination from 1988-1996 by Lengyel (1997) indicated that few respondents were pessimistic, some were inclined, but a substantial number was undecided as per entrepreneurial action. This is because their becoming entrepreneurs hinged on favourable social conditions, which were obviously missing. However, the findings showed that entrepreneurial inclination of nascent entrepreneurs fluctuated with circumstance in 1988, 1990 and 1996 with rates of 25%, 44% and 16% respectively. The decline and change in attitude could be attributed to certain unfavourable conditions, which had affected many of them negatively.

Both theoretical and empirical studies suggested that entrepreneurial attitude can be formed based on various factors (Gielnik *et al.*, 2015; Rafferty, Jimmieson, & Armenakis, 2013; Sanchez, 2013). Similarly, attitude towards entrepreneurial inclination among Nigerian university students may require conditional stimulus for the entrepreneurially inclined students to be identified, sorted, sifted and probably become competent entrepreneurs. Iacobucci and Micozzi (2012) postulated that entrepreneurship pedagogy voids of students' entrepreneurial attitude should be discarded because entrepreneurship education is expected to prepare and strengthen entrepreneurial attitude among students. This is in congruence with Zimmerman's (2000, p. 84) claims that "self-efficacy judgments specifically refer to future functioning and are assessed before students perform the relevant activities". In sum, entrepreneurial attitude can be formed and invigorated through entrepreneurship education. However, positive entrepreneurial attitude without entrepreneurial skills may inhibit entrepreneurial success.

3.5.3 Entrepreneurial Knowledge

European Commission (2012b, p. 44) defined entrepreneurship knowledge as “having a broad understanding and knowledge of entrepreneurship including the role entrepreneurs and entrepreneurship play in modern economies and societies”. From another perspective, Ahmad (2013, p. 195) defined entrepreneurial knowledge as “the concepts, skills and mentality individual owners use during the course of starting up and developing their businesses”. Acquisition of entrepreneurial knowledge through entrepreneurship education hinges on the consensus that entrepreneurial abilities required for business venture can be learned (Johansen, 2014; Oguntimehin, 2016), and that knowledge is indispensable in discovering entrepreneurial opportunities (Solevik *et al.*, 2013).

The expectation is that knowledge gained in entrepreneurship education should impact positively on the attitudes of the attendees and increase their entrepreneurial behaviour, that in turn results into entrepreneurial action (European Commission, 2012b). Research has shown that practicability of the knowledge gained from entrepreneurship education by Nigerian universities graduates has remained problematic due to situational restraints (Kaegon & Nwogu, 2012). Perhaps, acquisition of this knowledge diminishes as the intensity or possibility of financial support weakens. However, Norway’s entrepreneurship education is primarily knowledge focused, and is set to equipping participants for entrepreneurship development (Johansen, 2014).

In the study of undergraduates at four American universities, Watchravesringkan *et al.* (2013) reported that entrepreneurial knowledge and skills moderated the relationship between students’ values and attitude towards entrepreneurship. Students who perceived they have acquired more knowledge and skills with regards to entrepreneurship were more entrepreneurially inclined than others. Similarly, Parveen *et al.* (2018) documented that entrepreneurial knowledge would be an added value to business creation, which implies by extension that entrepreneurs can constantly innovate and create values through acquisition of knowledge while those without extant knowledge may be bereft of new ideas. However, it is imperative to understand that venture creation skills are required in support of entrepreneurial attitude and entrepreneurial knowledge for new entrepreneurs to thrive.

3.5.4 Venture Creation Skills

Results now indicate that entrepreneurship education can be taught or learned (San Tan & Frank Ng, 2006), which negates the earlier school of thought that sees it as a myth (Olorundare & Kayode, 2014). Based on this premise, entrepreneurship training in higher institutions of learning is saddled with the responsibility of empowering and enhancing entrepreneurial activities (Okoli & Allahna, 2014). Unfortunately, studies showed that subsequent business creation after training is lacking, as Gielnik, Uy, Funken, and Bischoff (2017) documented that failure in mastering entrepreneurial skills will lower effectiveness and passion in venture creation. Therefore, promoting theoretical understanding as

mechanisms for achieving the ultimate goal of equipping students with specific skills appropriate for venture creation should be underscored (Jones *et al.*, 2012). In this light, European Commission (2012b, p. 44) delineated required skills as “the need to learn how to become an entrepreneur”. Acquisition of these skills becomes valuable to potential entrepreneurs, and to boost such skills entrepreneurship education can be explored.

These skills or competencies required by nascent entrepreneurs have been classified differently into technical skills (financial management skills, marketing skills), generic soft skills (interpersonal skills, communication skills), social skills (networking skills), and business skills (accounting, writing a business plan) (Meager *et al.*, 2011). Obschonka and Schiller (2016) submitted that researchers should do further examination into the needed skills to discover how such skills can invigorate entrepreneurial spirit in people. Similarly, Baptista and Naia (2015) claimed that resources are not limited to capital or finance, but rather includes entrepreneurial skills and traits. From the findings of Koloba (2016), relationship exists between entrepreneurial factors and venture creation while innovativeness and risk taking have been noted as part of the essential skills for entrepreneurial inclination. It is therefore evident from the foregoing that the literature is unequivocal that absence of fundamental skills could deter entrepreneurial success.

However, Bandura (1986) suggested that measuring psychological functions only are inadequate in predicting behaviour; rather, it requires information from varied sources. For instance, locus of control is regarded as an indispensable attribute in entrepreneurship, but some of these university students are compelled to opt for entrepreneurship courses as escape route from joblessness. For some others, it is persuasion for business venture without passion, making it difficult to have control as purposed. By and large, the need for achievement is another notable trait in entrepreneurship that has not been attained. While achievers such as Jeff Bezos, Elon Musk, Mark Zuckerberg and Bill Gates are celebrated all over the world, an entrepreneur cannot be identified using a single trait. Similarly, Schunk (1991, p. 209) submitted that “self-efficacy is not the only influence on behaviour”, but that other variables are highly essential. In spite of the obvious that prior studies have considered entrepreneurial attitude, entrepreneurial knowledge and entrepreneurial skills, the decline in students’ entrepreneurial inclination among Nigerian youths could be traced to the current undesirable societal factors affecting Nigeria’s economy. Hence, moderating the relationship between entrepreneurship education and entrepreneurial inclination could provide further insight in entrepreneurial studies.

3.6 A Chronicle of Biopsychosocial Factors

Entrepreneurs can originate from every profession, which includes engineering, architecture, law and medicine (Hisrich *et al.*, 2007). Raising entrepreneurs via exposure to entrepreneurship education from high school to higher institution without positive impetus may not be sufficient to initiate

entrepreneurial activities or foster potential entrepreneurs. This study therefore suggests that there will be positive outcome or significant changes in students' entrepreneurial inclination if biopsychosocial factors is employed as a moderator.

Biopsychosocial models have been identified as relevant components to be considered in complex medical cases (Engel, 1977). The word "biopsychosocial", in itself, may give reasons for cynicism, as it may perhaps be considered a phenomenon, either outside or recent, in entrepreneurship domain. Although, Biopsychosocial Model originated from medical science, Ghaemi (2009) claimed that it dates back to 1950s, and that, it was developed by Roy Grinker, a neurologist. The author submitted that Engel George applied this model in psychiatry, and equally published articles on it in 1970s (Douglas & Drossman, 1998). Karl and Holland (2015) argued that Engel proposed biopsychosocial model in an article in 1977, and since then, it has been embraced in medicine and specifically in psychiatry. Furthermore, Guillemin and Barnard (2015) agreed that Engel pioneered biopsychosocial medical curricula, however, they revealed that previous researchers affirmed that biopsychosocial model had been mentioned before 1970s. According to Guillemin and Barnard (2015), biopsychosocial model has become notable in many recent medical practice textbooks.

However, this model was popularized by Engel (1977) where he emphasized that human health challenges can be established on three dimensions, which are: biological, psychological and social. He opined that with the influence and interactions of these phenomena (biological, psychological and social) health issues may be tackled by developing "a rational program to treat the illness and restore and maintain health" (Engel, 1977, p. 132).

3.7 Entrepreneurial Redundancy and Underlying Relationships to Disease

3.7.1 What is a Disease?

According to Merriam-Webster dictionary, a disease is a "condition that prevents the body or mind from working normally". In addition, it is also known as "a harmful development (as in a social institution)". Douglas and Drossman (1998, p. 259) defined a disease "as the externally verifiable evidence of a pathological state". Engel (1977, p. 130) asserted that "disease par excellence exemplifies a category of natural phenomena urgently demanding explanation", and that a disease can originate from known and unknown causes. For instance, a patient that is suffering from (hypertensive malaitus), the cause can be traced to the parents (biological), unemployment (psychological), career ineptitude (behavioural) and insecurity (social). Diseases such as hypertension, diabetes and asthma, to mention a few, have been itemized as hereditary. Several factors can be responsible for offshoot of a disease and research reveals that three major factors can be identified: biological (hereditary), psychological (circumstance) and social (environment). The question that would appear needful could be; is entrepreneurial redundancy a disease? Yes! Entrepreneurial redundancy or unemployment is

typically a ‘chronic disease of the mind’, which demands urgent curative measures. Entrepreneurial redundancy is a state of joblessness where strong and energetic individual finds it hard to have a means of livelihood. It has become ‘a harmful development’ in society. Although, diseases and entrepreneurial redundancy may differ; yet certain inferences can be drawn based on biological, psychological and environmental factors.

3.7.1a Biological Factors

Multifactorial genetic inheritance includes heart disease, high blood pressure, diabetes and obesity. Genetic components inherited from biological parents from birth can go a long way to delineate an individual’s disposition, hereditary diseases and inherited traits. It is argued that stress can be the source of some of these diseases (Sowole, Hogue, & Adeyeye, 2018). Children whose parents are hypertensive can inherit this disease from either of their biological parents. Similarly, Oguntimehin and Olaniran (2017) showed that positive or negative parental attitude towards entrepreneurial activities can influence entrepreneurial inclination, while Chenube *et al.* (2011) indicated a contrary view. Hence, there is an understanding that a weak causal relationship subsists between a person’s genetic structure and their vulnerability to disease unlike the interaction between disease and environmental factors (Audretsch, Keilbach, & Lehmann, 2005).

3.7.1b Psychological Factors

Circumstances that surround an individual can affect the state of the mind psychologically, and then, culminate into a disease. Research reveals that poverty promotes ill-health; thus, societies with high income inequality are liable to diverse health challenges (Collins & Hoxie, 2015). An individual can become hypertensive due to unfulfilled dreams, occasioned by joblessness. Unemployment can have negative impact on an individual’s self-concept; unfortunately, the rate of graduate unemployment is on the increase in Sub-Saharan Africa (Salami, 2013) due to the absence of productive entrepreneurial activities in the region. For instance, GEM report showed that a significant number of workers in Nigeria can be graded as working poor. There is no gainsaying that poverty (which could emanate from prolonged unemployment) and disease are great obstacles to development.

Bandura (1994, p. 6) affirmed that “one route to depression is through unfulfilled aspiration”, and that “much human depression is cognitively generated by dejecting ruminative thought”. Achievement and success in one’s endeavour can pave way for a healthy and comfortable lifestyle, which can as well rout diseases. In the same vein, a virile individual can suddenly become vulnerable due to limitation, stagnation and disappointment in achieving life’s goal occasioned by joblessness. The author affirmed that perceived self-efficacy boosts health and shapes every facet of one’s life. However, lack of entrepreneurial motivation and weak self-efficacy can be attributed to the upsurge in suicidal actions

among youths who are now prone to self-pity and suicide at any slightest provocation on the social media (Mukherjee , 2013).

In addition, the unemployed remains dejected and depressed, not knowing when and how the challenge could be resolved, coupled with the erroneous assumption that it is the responsibility of the government to provide jobs for the teeming youths (Etodike *et al.*, 2018). However, Jones *et al.* (2012, p. 816) submitted that “the growing attachment to entrepreneurship education as a cure for current and future economic renewal is most likely seriously misplaced”. This assertion by some eminent entrepreneurship front runners could be true to an extent, despite the sizable body of knowledge based on entrepreneurship. Entrepreneurship education attendees without entrepreneurial mentality and integration of the whole system which includes the students, the government, educators, and society may lack the capability and competence required for maturing into competent entrepreneurs. Absence of this missing link towards entrepreneurship in Nigeria has led to a growing anxiety among the stakeholders. While some opined that many of the university graduates lack certain attributes such as psychological factors needed for business creation (Kuratko & Morris, 2018), others ascribed students’ inefficiency to teaching pedagogy that seems inadequate at the moment and unfavourable business environment (Aboho *et al.*, 2016).

3.7.1c Environmental Factors

The culture, social economic status, religious practices and societal influence can determine the way an individual reacts to issues such as frustration and stress. For instance, a person living in an environment that is prone to kidnapping, robbery, rape and incessant life-threatening attacks, making fear and anxiety a daily routine, can trigger secondary hypertension (i.e. hypertension due to a basic cause). Equally, being in an environment noted for illegal activities can foster a person’s perception negatively thereby developing actionable character. Therefore, both internal and external nature of one’s environment can impact destructively or constructively as Bandura (2001, p. 11) submitted that “human health is heavily influenced by lifestyle habits and environmental conditions”.

Consequently, one can liken the menace of unemployment to a critical ailment, which hitherto had defied cure, and the grave consequences on society had remained detrimental. Moreover, stakeholders had embraced entrepreneurship education as a platform for reducing entrepreneurial redundancy. Therefore, entrepreneurship education as a part of the curricula in all institutions of higher learning in Nigeria is aimed at revitalizing the anaemic entrepreneurial culture (Dabale & Masese, 2014; Ossai & Nwalado, 2013). Hence, there is the assumption that every university graduate has acquired certain technical skills to function well as an entrepreneur (Meager *et al.*, 2011). In addition, the government beliefs that much has been expended on entrepreneurship education, and as such, joblessness should have reduced drastically or that graduate unemployment should at most, be by choice. Conversely, the

unmet expectations of the unemployed had dampened the morale of stakeholders who could not critically examine fundamental reasons associated with unemployment.

However, eliminating the triggers of diseases with known sources can become curative measures. In addition, Engel's integrating view of treating disease and patient, stressed that handling a disease should not be in isolation, rather, the sufferer should be inclusive as human and not robot (Borrell-Carrio, Suchman, & Epstein, 2004). Patients' suffering could be multidimensional, which biomedical approach does not fully appropriate in the treatment of human ailments (Engel, 1977). Researchers have acknowledged that biomedical model is central in Western medical education and is guided by two philosophical concepts: reductionism and dualism. Reductionism presumes that human ailments can be reduced to a single etiology (physician is concerned with the treatment of disease); however, from dualism's point of view, health challenge can either be as a result of a functional disorder without pathophysiology or an organic disorder with etiology (Douglas & Drossman, 1998).

Considering the limitations of biomedical model, biopsychosocial model is being proposed to replace biomedical model, which some members of the medical society had been discontented with, in that, it is one-dimensional in providing diagnoses and treatment for patients. Engel (1977, p. 132) suggested that to restore and maintain health, "a medical model must take into account the patient, the social context in which he lives, and the complimentary system devised by society to deal with the disruptive effects of illness". Therefore, the philosophical belief of Engel is that the biopsychosocial model gives room to "patients' subjective experience as an essential contributor to accurate diagnosis, health outcomes and humane care" (Borrell-Carrio *et al.*, 2004, p. 576).

In this light, biopsychosocial factors could be considered as the missing link between entrepreneurial theoretical knowledge and practical action. Therefore, rather than concentrating solely on entrepreneurial behaviour, the combination of biopsychosocial factors would take into account the possibility of nurturing potential entrepreneurs, by the interactions of biological, psychological, behavioural and environmental factors, as a unit, and as a moderator. This is still missing in entrepreneurial domain, and this calls for further investigation, although some researchers have examined these factors in isolation, and not as a whole. For instance, Obaji and Uche (2014) examined government policy, passion, gender and innovation, but not as a moderator.

Thus, as restoring human health could be better perceived on biopsychosocial model, it is also suggested that entrepreneurial inclination can be influenced based on this model.

3.8 Reasons for Biopsychosocial Factors in Entrepreneurial Inclination

Efforts to invigorate entrepreneurial inclination globally have been on the increase; hence a developing nation like Nigeria needs to be prompt at different educational levels on how to enhance multiplication

of budding entrepreneurs. Therefore, growing potential entrepreneurs has provided an avenue for studying the moderating effects of biopsychosocial factors on entrepreneurial inclination. Moreover, it has become paramount to change the philosophy of participating in entrepreneurship education as a culture without embarking on entrepreneurial activity. In addition, entrepreneurial redundancy has become an epidemic that requires immediate attention; failure to tackle this anomaly headlong may continue to promote criminality, unrest and proliferation of miscreants.

In considering the requisites for an all-encompassing model for the study of entrepreneurial inclination, biopsychosocial factors becomes impressive. This is due to the limitations of other approaches; accordingly, the conceptual study of Xie (2014) noted that several authors have examined entrepreneurial behaviour using differing approaches, but without integrating individuals and the environment. Since nascent entrepreneurs are indispensable in economic growth and development, entrepreneurship education as a discipline whose main purpose borders on nurturing individuals who can be equipped to meet such task is required.

Rona-tas and Lengyel (1997) suggested that entrepreneurship can be examined in two realms; as opportunities as well as legacies, and they are rooted on the theories of social action. Opportunities' Theory presumes that people are future dividend-performers, motivated by future economic benefits. The underlying assumption is that opportunity recognition drives on strong market, which may be unrealistic without following the rules of success. On the other hand, legacies are controlled by past social complexity within the environs. Legacies' perception is that some are more endowed financially, socially connected, or not risk-averse. As a result, what have been acquired earlier could account for their entrepreneurial success. However, they found that legacy does not influence entrepreneurial inclination.

In this dissertation, biopsychosocial model of entrepreneurship is hereby defined as the set of dynamics, which embraces biological, psychological, behavioural and environmental factors. This is considered as a form of response to mobilizing nascent entrepreneurs. Nonetheless, a positive response from potential entrepreneurs demands that the required conditions are provided. Therefore, the dynamics of biopsychosocial factors is considered to correct the erroneous view that entrepreneurship education may not be the panacea to the current economic degradation, as stated by some scholars (Jones *et al.*, 2012). Although, biopsychosocial model originated from medical science, Obschonka and Schiller (2016) suggested that it is needful for entrepreneurial success. It is therefore necessary to empirically ascertain the authenticity of this model in entrepreneurship education. This dissertation, therefore, examines the moderating effect of biopsychosocial factors on the relationship between entrepreneurship education and students' entrepreneurial inclination in Nigerian universities.

However, operationalizing it as a moderator for empirical measurement in entrepreneurship is a bit difficult. The intensity of this difficulty seems enormous as it rises because literature on

entrepreneurial inclination as a concept is inadequate. In addition, biopsychosocial factors has not been used as a moderator in prior entrepreneurship studies. In spite of this, moderating the relationship between entrepreneurship education and entrepreneurial inclination with biopsychosocial model is crucial. To achieve the research objectives with the use of a moderator as stated in this study, a four-dimensional measurement approach was developed; this comprises of biological, psychological, behavioural and environmental factors. This approach is considered because it can easily be interpreted and understood. Thus, taking into account the impetus of this research, the study addressed the question: What is the moderating effect of biopsychosocial factors on the relationship between entrepreneurial education (entrepreneurial attitude, venture creation skills and entrepreneurial knowledge) and entrepreneurial inclination? The motivation for this study therefore, is substantiated by the absence of researches in this area, which was verified by search in journals' data bases.

Hence, it is operationalized as a combination of gender, previous work experience, family financial status, passion, government policy and innovativeness. The aforementioned variables form the composite variable (biopsychosocial factors) used as moderator.

3.9 Biopsychosocial Factors as the Moderator

A moderator is regarded as a third variable, which possesses the capability to effect a further and stronger perception of a causal relationship between an independent or predictor variable and a dependent or criterion variable (Wu & Zumbo, 2008; Baron & Kenny, 1986). It is a wrong notion to presume that a moderator and a mediator, as third variables, should be observed similarly or to think both serve the same purpose of understanding the impact of a third variable. Baron and Kenny (1986) refuted such opinion and asserted that moderator and mediator are two distinct variables. Hence the two cannot be used interchangeably. Moreover, it is argued that testing the same operationalized variable on both moderator and mediator simultaneously contradicts the theoretical view of using a third variable.

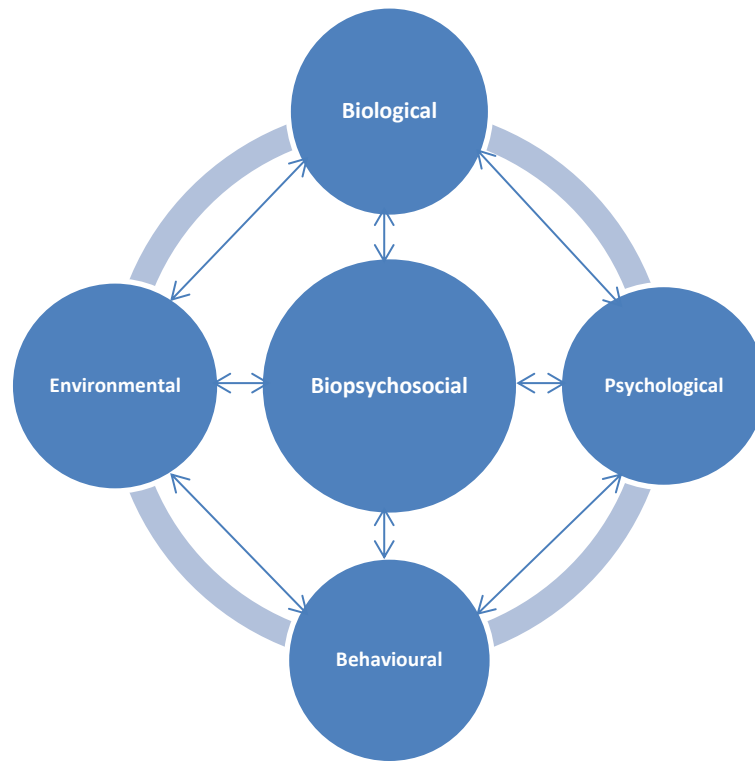


Figure 3-1: **Biopsychosocial Model**

Source: Author's concept

Consequently, in order to comprehend the strength of a causal relationship between entrepreneurship education and entrepreneurial inclination in this study, exploring the impacts of a moderating variable becomes crucial. It is quite possible that the relationship between entrepreneurship education and entrepreneurial inclination can either be positively strengthened or negatively weakened via a moderator. Existing literature propose that future research should consider moderators while investigating entrepreneurial behaviour to enhance the research outcome (Rauch & Hulsink, 2015). Demographic variables such as gender, work experience, parents' employment history and programme of study are often used in entrepreneurship studies to moderate for a possible effect on the dependent variable. However, in this dissertation, biopsychosocial factors was used as a composite variable and employed as a moderator. Though it has its origin in the medical science as noted earlier, Obschonka and Schiller (2016) have called for a further consideration of biopsychosocial factors in the entrepreneurship domain. The biopsychosocial factors cannot be reduced to the lowest levels, rather constructs for measurement within the individual levels can be found (von Bertalanffy, 1968). Thus, certain variables embedded in biopsychosocial models, which have been recommended for further research in past studies were considered (Nabi *et al.*, 2017; Stough, 2016; Viinikainen *et al.*, 2016; Ramaswamy, 2013; Sanchez, 2013; Bygrave & Zacharakis, 2011; Von Graevenitz *et al.*, 2010; Chell

et al, 1991). In the light of the foregoing, the influence of biopsychosocial factors which has not been examined hitherto is now examined as a moderator on the relationship between entrepreneurship education and students' entrepreneurial inclination.

3.9.1 Biological Factors and Entrepreneurial Inclination

It is a well-known fact that people differ biologically; and this infers the basis of comparison in numerous studies (Shahriar, 2018; Potter, 2017; Obschonka & Schiller, 2016). Family background has been explored by researchers and it has been examined with respect to gender, family income, work experience and religion (Liñán & Fayolle, 2015; Shepherd & Williams, 2015), which are classified as demographic factors. This research perceives that demographic factors such as programme of study, age, role models, marital status, income, ethnicity, nationality and birth order (Chaudhary, 2017; Mustapha & Selvaraju, 2015; Asamani & Mensah, 2013; bin Mahajar & Yunus, 2012; Keat *et al.*, 2011; Sandhu, Jain & Yusof, 2010) are needed for entrepreneurial inclination. This study defines demographic factors as a set of variables based on personal background, family background, gender and work experience (Edirisinghe & Nimeshi, 2016). From the wide array of possible indicators, we focus on the most prominent based on prior studies. Considering different perspectives of biological factors that influence entrepreneurial inclination among students in Nigeria, this research examines the following: gender, family financial status and previous work experience are part of biopsychosocial factors in moderating the relationship between entrepreneurship education and entrepreneurial inclination.

3.9.1.1 Gender

There seems to be a universal consensus that men are more entrepreneurially inclined than women on the premise that male entrepreneurs are greater than their female counterparts in the society (Turker & Selcuk, 2009). On the issue of gender diversities in entrepreneurship, Shahriar (2018) argued that the essentialists' school of thought believes that gender differences in entrepreneurial activities is biologically embedded, and it has therefore become a global issue. However, from social constructionist's perspective, having more men than women in entrepreneurship domain can be as a result of individuals' background. Although entrepreneurship is perceived to be male dominant, gender disparity could be linked to different factors.

Therefore, the premonition that women are less enterprising than men globally may not hold in all cases, rather, social constructionists believe that entrepreneurial activities depend on one's environment and upbringing (Shahriar, 2018). The focus of this section is to contribute to the current discussion on gender differences that has remained inconclusive. Therefore, to shed more light on this

phenomenon requires considering scholars' views on the issue of gender disparity and how the contrasting opinions can be well-positioned for a better understanding.

Essentialists believe that gender is universal since the disparity stem from biology and genetics, which implies that as unique being, gender differences must subsist. Therefore, they opined that men are most likely to be more entrepreneurially versatile than women across the globe (Shahriar, 2018). However, the findings of Shahriar (2018) negated essentialists' ideology, which assumes that gender gap is not only universal, but that women are less enterprising than men. Since the social constructionists, socio-biologists and evolutionists hold different views, gender has now become a relevant issue in entrepreneurial inclination discussions.

3.9.1.1a Gender Inequality

Gender inequality has been one of the major challenges in our world. According to UNDP (2018) report, it was identified as one of the major human development inhibitors and went further to state that it could take the next 200 years to end gender gap globally. Therefore, entrepreneurship, as a career path, is no exception in this brawl as the gender gap is still debatable. A further attempt on closing the gender gap issue came up in 2015. UNDP (2016) report showed that 80 world leaders met to deliberate on ending the age-long gender discrimination by 2030. Diversities in inequality issues are more apparent in emerging countries than the developed countries (Shahriar, 2018), and gender problem is more pronounced in the Middle East, East Asia and North Africa (UNDP, 2016). Moreover, previous research on gender consideration differs notably (Gurgel *et al.*, 2014; Rauch & Hulsink, 2015). However, more empirical evidences on gender differences are required, especially from developing countries.

Though, over the years and with advancement in technology and modernization, drawn lines on gender issues such as choices in career pursuit, aspirations in business, job satisfaction, interests in politics and child care have continued to wane, most importantly in developed countries. For instance, GEM (2012) indicated that in developed countries, men are likely to be more entrepreneurially dynamic than women. However, in US and France, there is a reported upsurge in female Total Entrepreneurial Activity (TEA) rates (Levie & Hart, 2014). This is consistent with the research carried out among prospective teachers in Pakistan, which showed that women displayed a higher entrepreneurial tendency than men (Ali *et al.*, 2009).

In another research, Harun and Mark (2014) found that in three out of the four countries studied, men and women differ significantly in their entrepreneurial tendency. Furthermore, in a comparative study of male and female trainees in Tanzania, Olomi and Sinyamule (2009) concluded that gender disparity exists in the interest to own a business. This was revealed in the survey of GEM 2012 that men and women in Florida and Ohio showed glaring differences, as men were twice entrepreneurially more

inclined than women (Kelley *et al.*, 2012a). Likewise, in the study conducted by Law and Breznik (2017) between engineering and non-engineering students, they found gender effect on attitude and innovation to be statistically significant.

In addition, Fernandez-Cornejo, Escot, Pozo-García, and Cáceres-ruiz (2018) asserted that gender gap subsists in entrepreneurship, and that empowering young women and promoting shared responsibility at the home front could be the panacea to gender differences in entrepreneurial domain. However, this contradicts the findings of Iwu *et al.* (2016) that found no statistical significant relationships between students' entrepreneurial intention and socio-demographic variables among university students in South Africa. It is paramount to seek ways of closing gender gap and probably eliminate gender inequality in order to enhance entrepreneurial inclination. This will ultimately boost the three dimensions of sustainable development; which are economic, social and environmental (United Nations, 2015).

3.9.1.1b Gender Roles and Entrepreneurial Inclination

Gender is one of the frequently used socio-demographic variables in entrepreneurial studies (Oguntimhin & Olaniran, 2017). Prior research showed that entrepreneurs are those with known characteristics such as innovativeness, self-confidence, need for achievement, independence, and the locus of control (Mohammed & Obeleagu-Nzelibe, 2014). Anecdotal evidence suggests that while these traits may fit perfectly in every male, all might not feature in every female. Some scholars opined that gender differences remain minimal in entrepreneurship, while others have the notion that it is still male dominated. Traditionally, societal norms assigned roles to male and female on the ground of human physiological make up, that is, masculinity and femininity traits (Sapuan, Yusof & Mohd.Nor, 2009).

With this understanding, domestic chores and child care are perceived to be feminism (little wonder that fatherless babies' home rarely exist). On the other hand, fending for the family upkeep as the breadwinner is considered a herculean task, which should be confined to men's arena. Past studies on the influence of gender on students' entrepreneurial inclination provide mixed results. For example, in the four countries investigated by Harun and Mark (2014), gender differences exist in terms of willingness to create new ventures, but it was insignificant for extrinsic motives. The authors revealed that there was no gender difference in China with regards to entrepreneurial disposition, but they documented male domination in US, Turkey and Belgium. Similarly, in a research based on the survey of university students from Spain and Iceland, Fernandez-Cornejo *et al.* (2018) maintained that the respondents showed gender disparity, as males were shown to possess higher entrepreneurial inclination than females.

However, the reasons for these disparity differs from one country to another, even in developed countries, studies have shown that female entrepreneurs are below 50% (Stough, 2016). Keat *et al.* (2011) documented that gender was statistically significant among Malaysian university students, and again, male students were more entrepreneurially inclined than their female counterparts. Findings from Nigeria (Akhuemonkhan *et al.*, 2013) revealed that a negative relationship exists between entrepreneurship education and gender equality. Additionally, Fellnhofner (2017) reported that an independent *t*-test provided evidence of a significant difference between entrepreneurial intention and gender. Therefore having gender disparity in prior research showed that gender should be underscored in entrepreneurship education. This is consistent with United Nations (UN) agenda wherein Gender equality and women empowerment are seen as vital for economic growth.

In contrast, Okeke *et al.* (2016) revealed that entrepreneurship inclination is not gender-specific with regards to Nigerian students. Consistent with Okeke *et al.* (2016), the findings of Chaudhary (2017) showed that gender has no relationship with entrepreneurial inclination among Indian students. This is similar to the report from Malaysia, which indicated an insignificant relationship between gender and students' entrepreneurial inclination (Mustapha & Selvaraju, 2015). The authors concluded that since gender is not a significant factor, it is therefore, not strong enough to influence the students choice of entrepreneurship as a career. This is consistent with the findings of Sandhu *et al.* (2010) which found no significant relationship between students' entrepreneurial inclination and gender.

Chenube *et al.* (2011) used a One-Way ANOVA to measure significant differences in the entrepreneurial inclination of some Nigerian students based on their demographic characteristics. Their findings indicated no significant difference exists. In addition, evidence from Ghana showed that age, gender and academic programmes have no significant effects on entrepreneurial inclination (Asamani & Mensah, 2013).

3.9.1.2 Previous Work Experience

Previous work experience has been recognized as one of the avenues for start-ups to generate new ideas, acquire skills for personal development (Meager *et al.*, 2011) and formation of analytic knowledge for growing business. In assessing work experience, different measures have been used such as period on the job, time spent on a given task and actual experiences garnered within a specified period (Quinones, Ford & Teachout 1995). Bygrave and Zacharakis (2011) reported that 80% of high-class entrepreneurs developed ideas from their prior experience. Similarly, Nair and Pandey (2006) concluded that work experience could enhance embarking on a business venture. Starting a business as a novice could be a challenging undertaking, as such, prior studies showed that work experience should be prioritized especially by young graduates who have no prior knowledge on

business venture before undertaking entrepreneurial activities (Mohammed & Obeleagu-Nzelibe, 2014; European Commission, 2012b; Peterman & Kennedy, 2003).

For example, in a survey of alumni of higher education institutions in Europe, many of the respondents who had participated in entrepreneurship programme agreed that acquisition of prior work experience before venturing into personal business is preferable (European Commission, 2012b). Keat *et al.* (2011), documented that students with previous work experience were more disposed to entrepreneurship than others. Furthermore, experience from previous work could act as success factor in self-employment as noted in prior studies (Buller & Finkle, 2013; Cooney, 2012; Stuetzer, Obschonka, Davidsson, & Schmitt-Rodermund, 2013). The grandness of experience makes it one of the variables used frequently in empirical research, but researchers have argued that measure for work experience has been inconsistent (Quinones *et al.*, 1995). However, much emphasis has been on entrepreneurship thinking and not on acting, therefore, the effectiveness on work experience remains a subject of debate.

Given the prominence of work experience it can be viewed as crucial for entrepreneurial inclination, Past studies showed that prior work experience could act as success factor in business creation (Buller & Finkle, 2013; Cooney, 2012; Stuetzer *et al.*, 2013). Stuetzer *et al.* (2013) documented that varied work experience is associated with higher entrepreneurial skills and entrepreneurial performance. In addition, as earlier discussed, Bygrave and Zacharakis (2011) reported that 80% of high-class entrepreneurs breed ideas from their previous experience. Similarly, Keat *et al.* (2011) documented that the relationship between entrepreneurship education and entrepreneurial inclination is stronger for work experience. In addition, they found that students with previous work experience could be more disposed to entrepreneurial activity than others. On the contrary, in the study conducted by bin Mahajar and Yunus (2012), the result indicated an insignificant relationship between working experience and students' entrepreneurial inclination. Drawing from the above discussions, Quinones *et al.* (1995) suggested that researchers should endeavour to distinguish between experience and knowledge. It is therefore obvious from these studies that there are contradictory findings on work experience in relation to students' entrepreneurial inclination, and this calls for further clarification.

3.9.1.3 Family Financial Status

Past studies showed that family background has been considered as one of the most prominent factors in raising potential entrepreneurs (Ahmed *et al.* 2012). The held opinion is that it offers informal experience and is self-motivating, more importantly when there is financial support for start-ups. Nigeria is a society where money is idolized, as such a lack of financial resources can be a strong limitation for the entrepreneurially inclined to thrive. On this premise, there is the mind-set that the financially equipped or wealthy individuals in the upper social strata can achieve their desired

entrepreneurial goals (Akinyemi & Ayo-Shobowale, 2012). On the other hand, the highly intellectual with high level of experience in the lower echelon may be unapt to accomplish such. Obviously, parents who are financially strong could empower their children; as such, it is therefore expected that having access to wealth may likely influence their entrepreneurial inclination. Hence, family financial status could impact optimally on the aspiration of the children to become venture creators. Moreover, families with successful business history can significantly influence their children in the pursuit of entrepreneurial activities, unlike those with business failure experiences. Keat *et al.* (2011) found that a relationship exists between entrepreneurial inclination, demographic and family business background, thus, providing support for the above submission.

In addition, Chaudhary (2017) documented that family background predicted students' entrepreneurial inclination; this is consistent with the survey conducted in Australia, with 784 Australian students ages 15-24. The findings showed that some of the students were influenced towards entrepreneurship by their parents, friends and teachers (Tiftik & Zincirkiran, 2014). Although researchers have suggested that no single variable could measure socioeconomic status, as such, education, income and occupation are inclusive. However, using measures related to the family income that is based on the family as an entity and not on either father or mother can reduce measurement error or biased information. Therefore, for the operationalization of the construct 'family financial status', family annual income was included under demographic factors. Thus, family income is identified as one of the essential characteristics that can be used to assess biological factors.

3.9.1.3a Household Income in Nigeria

Duncan and Magnuson defined household income as the sum of all sources of income received by all members of the family at a given period of time which could be either monthly or annually (as cited in Brese & Mirazchiyski, 2013). Brese and Mirazchiyski (2013) argued that income may be difficult to measure as it is unpredictable in some aspects of society where wages and other sources of income are unstable. Moreover, being such a sensitive issue, it is not uncommon to find some records of missing data due to participants' unwillingness to give concise answers as required. Furthermore, the authors reasoned that this could be a major problem when comparing family income at the international level rather than at the national level.

According to Fuentelsaz, Maicas, and Montero (2018), household income can be classified broadly into three segments: lower, middle and upper level. Many families in less developed and developing countries belong to the lower income level and some are poverty stricken to the extent they can hardly afford what the society characterized as the minimum (Alkire *et al.*, 2017). Evidence showed that Nigeria is characterized with high rate of graduate unemployment, political and economic instability, as well as the challenge of income inequality (Oyelola & Ajiboshin, 2013). Though income inequality

is not limited to Nigeria, keeping very large family without the wherewithal has been a problem in African setting. The agricultural sector, which is the mainstay in developing countries (ILO, 2018), is undervalued in Nigeria, making it difficult to generate sufficient income from the produce and rendering the efforts of these peasant farmers inconsequential. Moreover, most families are connected due to polygamous practices, therefore, the few working class are fraught with overly expenditures from the extended family members. In this light, those who are employed depend on loan and other means to generate more income to augment their insufficient earnings. Besides, some are branded as the working poor. Therefore, getting financial support is one of the issues potential entrepreneurs in Nigeria may have to brood over as this may hamper or facilitate entrepreneurial inclination.

3.9.1.3b Impact of Family Financial Status on Entrepreneurial Inclination

Makhbul and Hasun (2011) admitted that successful entrepreneurs can positively influence potential entrepreneurs through valuable information, good leadership, as well as formal and informal backing via community-based network. However, Marshal and Solomon (2017) argued that due to economic downturn in Nigeria, there is upsurge in the category of people living below poverty line. Hence, those in the lower echelon with business prospect may be unable to actualize their dreams early in life, because an entrepreneurial spirit with good business idea without resources or support remains inertia. In a study carried out by Md Yasin, Nik Mahmood, and Nik Jaafar (2011) in an institution in Malaysia, the findings indicated that absence of financial support could be a major inhibitor in starting a new venture. This is consistent with the suggestion of Eneji *et al.* (2013) that the unemployed graduates should be assisted financially, because without access to needed resources the entrepreneurially inclined would become vulnerable, even when opportunities abound.

Potential entrepreneurs are not only confined to tapping new ideas, it involves sourcing for fund either from venture capitalist or family members. Nevertheless, availability of financial resources may not culminate into venture success, though entrepreneurial event cannot be orchestrated without financial capability. Moreover, the fact that paternal or maternal grandparents bequeath a legacy of business empire might not suffice for entrepreneurial inclination, because business expertise in grandparents may not be hereditary (Anonymous, 2008). The question is, what role does family financial status play in venture creation of an entrepreneurially inclined student? Iwu *et al.* (2016) documented that most of their respondents were entrepreneurially inclined, nevertheless, 61% of them perceived lack of fund as a leading challenge in starting personal business.

Ramaswamy (2013, p. 182) found that “family income contributed negatively in predicting entrepreneurial orientation”. However, this contradicts the findings of Fernandez-Cornejo *et al.* (2018), which reported that family origin and parental financial status have positive impact on Spanish and Icelandic students’ entrepreneurial inclination. Their research established a statistically significant

relationship between students' entrepreneurial inclination and parental income. Consistent with this view, is the findings of Nair and Pandey (2006), which reported that families with higher financial capability could readily afford start-up capital without stress, this could heighten entrepreneurial mind-set. Low-income individuals may find start-up capital difficult to access, and an individual with a viable business plan without good financial support may remain stuck.

In order to assess the impact of family financial status on entrepreneurial inclination, the level of family income has been operationalized using yearly family income as a manifest variable. It is appropriate to note that inherited wealth might not be able to bridge the gap between business creation and entrepreneurial inclination. An heir to family business without the acquisition of fundamental skills, entrepreneurial knowledge and entrepreneurial attitude can hinder the growth and progress of such firm and its eventual failure may become inevitable. This leads to the next sub-section on psychological factors.

3.9.2 Psychological Traits and Entrepreneurial Inclination

Researchers from different fields have considered personality traits (Sapuan *et al.*, 2009), otherwise known as traits model, which include locus of control, risk-taking, innovativeness, tolerance for ambiguity, self-confidence and need for achievement (Chaudhary, 2017; Koloba *et al.*, 2015; Ahmed *et al.*, 2012; Gürol & Atsan, 2006) as requisites for potential entrepreneurs. Liñán and Fayolle (2015) maintained that though numerous criticism exists on the use of personality traits to distinguish entrepreneurs from non-entrepreneurs, researchers and scholars have continued to examine these traits (Edirisinghe & Nimeshi, 2016; Koloba *et al.*, 2015; Asamani & Mensah, 2013). Chaudhary (2017) examined six psychological traits, which include locus of control, risk-taking, innovativeness, tolerance for ambiguity, self-confidence and need for achievement. The author found that entrepreneurs possessed these traits more than non-entrepreneurs. Similarly, Koloba *et al.* (2015) documented that the influence of self-efficacy on students' entrepreneurial inclination indicates a positive relationship between innovativeness, propensity to take risk and students' entrepreneurial inclination.

Furthermore, Edirisinghe and Nimeshi (2016) employed both descriptive statistical technique and inferential tools to establish the relationship between entrepreneurial inclination and traits. The findings revealed the existence of a positive relationship between the variables. Past studies have paid attention to innovativeness, locus of control and risk-taking propensity, among other traits (Chaudhary, 2017; Edirisinghe & Nimeshi, 2016; Gürol & Atsan, 2006). Innovativeness has been identified as a catalyst to entrepreneurial behaviour (Gafar *et al.*, 2015), and a veritable tool for an entrepreneur to break new grounds (Drucker, 1985).

Despite the favourable outcome from past studies on the relationship between students' entrepreneurial inclination and personality factors, findings showed that a lot of students are not interested in entrepreneurial activities, as in the case of India and Sri-Lanka (Chaudhary, 2017; Edirisinghe & Nimeshi, 2016). Although graduate unemployment is a global issue, students from developing countries are expected to be more entrepreneurially inclined than those from the developed countries due to the prevalent economic challenges in their countries. For instance, Norwegian students agreed they would rather seek paid jobs than going into business creation (Storen, 2014), ditto in Germany where venture creation is documented to be less attractive (ILO, 2018), due to the low rate of graduate unemployment. From the foregoing discussion, there is a consensus that students have entrepreneurial mind-set (Xie, 2014; Kobia & Sikalieh, 2009), yet nascent entrepreneurs have not emerged as expected due to the absence of certain factors, such as sustainable economy, start-up capital and favourable business environment. Therefore, it can be stated that possessing personality traits is not synonymous to entrepreneurial readiness. Sassmannshausen and Gladbach (2011) acknowledged that research on entrepreneurship can be based on psychological factors while Tiftik and Zincirkiran (2014) maintained that increasing nascent entrepreneurs requires the combination of individual's willingness as well as an enabling business environment. Therefore, a venture friendly atmosphere is pivotal to nurturing potential entrepreneurs (Bendixen & Migliorin, 2006).

A study of six psychological traits was carried out by Gürol and Atsan (2006) in order to distinguish between potential entrepreneurs and non-entrepreneurially inclined students using a sample of 400 Turkish students from two universities. They documented that the entrepreneurially inclined students were found higher in risk-taking propensity, internal locus of control, higher need for achievement and innovativeness than the non-entrepreneurially inclined students. Personality trait was supported based on innovativeness, risk-taking propensity and locus of control more than other traits. Hence, this dissertation considers innovativeness as a psychological trait required for identifying the entrepreneurially inclined (Koloba *et al.*, 2015) and as part of biopsychosocial factors in moderating the relationship between entrepreneurship education and entrepreneurial inclination.

3.9.2.1 Innovativeness

Different authors at different times have offered different definitions for innovation. For example, Fuentelsaz *et al.* (2018, p. 3) stated that "innovation is broadly conceived to encompass both process and product innovation at the market level". Gürol and Atsan (2006, p. 28) noted that to define innovation comprehensively will include "to create new products or new quality, new methods of production, to get into a new market, to create a new source of supply, or to create new organization or structure in business". On the other hand, De Meyer, and Garg (2005, p. 12) stated that "innovation is the economically successful introduction of a new technology or a new combination of existing

technology in order to create a drastic change in the value or price relationship offered to the customer, and/or user”.

Another purpose of entrepreneurship education is bringing innovativeness to bear, at individual, firm and societal levels (European Commission, 2012b). Innovativeness has been connected to entrepreneurship in that there is an informed belief that it functions as a catalyst to entrepreneurial behaviour (Gafar *et al.*, 2015). Ács *et al.* (2017, p. 11) opined that “an entrepreneur is a person with the vision to see an innovation and the ability to bring to market”. Furthermore, they argued that ability to innovate distinguishes an entrepreneur from a self-employed individual or a necessity entrepreneur who merely replicates. On this premise, Drucker (1985) agreed that innovation is an indispensable tool an entrepreneur needs to advance, which can be learned and practiced.

In a study conducted by Storen (2014), one-third of the respondents agreed that participating in entrepreneurship education had fostered their innovative spirit. From the point of view of Stough (2016), China has continued to cruise the globe with imitative innovation since 1990, but it is now moving towards self-innovation based economy (Agri *et al.*, 2017). Moreover, China has become a home to notable world class innovation and has also emerged as the country with one of the highest GDP in the world. However, Sarooghi *et al.* (2015, p. 27) maintained that “entrepreneurs should not pursue innovative activities without taking context or contingency into account”. This understanding reveals that the heroic feat in China can be linked to an all-encompassing high-backed policies coupled with a supportive environment (Zhou & Xu, 2012; Adeniyi *et al.*, 2014). It can therefore be conceded that it is better to start at something than a mainstay at nothing, and this can only be enhanced through innovation. Starbucks, McDonald, and Uber employed process innovation to what have been in existence since ages. This requires knowledge, which is expected to be acquired through entrepreneurship education (Rauch & Hulsink, 2015).

3.9.2.2 Practical Offshoot of Innovation and Entrepreneurial Inclination

The obvious that America has a high rate of entrepreneurs with high-toned firms remains an indication that entrepreneurial inclination will thrive where culture, society, economic outlook and legal institutions are favourable to entrepreneurship and innovation (Bygrave & Zacharakis, 2011). These factors are prerequisites to enhancing entrepreneurial and innovative mind-set. A promising business environment will foster creative innovation as well as incubation, and this has earned America as the prime-mover in entrepreneurial activity in the world. Thus, the process of developing viable firms in advanced nations, precisely in the USA, revolves around four major sectors, which demands a better understanding (Adams, 2005). These sectors include: (i) high-impact entrepreneurs, (ii) large mature firms, (iii) governments, and (iv) universities. These are considered as entrepreneurial back-ups and innovative boosters.

While emerging economies desire to thrive on these sectors, scholars have indicated that integration of entrepreneurship and economic development should be considered (Stough, 2016). Moreover, in spite of the array of research on entrepreneurship, increasing potential entrepreneurs that could bring about innovative process seems limited. However, without innovative entrepreneurs, anticipated economic transformation will remain a mirage. Innovation seems to inspire entrepreneurial inclination, thus, De Meyer and Garg (2005) claimed that budding entrepreneurs could become innovative by drawing attention to four important practical steps. These are based on four strategic ideas:

- Information
- Innovative outlook
- Business feasibility
- Collaboration

3.9.2.2a Information

We live in an information age, which has become the epicentre in every sphere (Mukherjee, 2013); as such, information is now being used as one of the strategic tools for economic transformation (Kehinde & Agwu, 2015) and also a driver of entrepreneurial knowledge. Therefore, the quality of information an individual receives will enhance his or her entrepreneurial decision making. Moreover, access to relevant information, which can trigger opportunity recognition that is needed for venture creation, depends on the level of requisite knowledge at the disposal of a would-be entrepreneur. Álvarez *et al.*, (2015) examined the link between information and new entrepreneurial activities. The findings revealed that novel business ideas emerge as a result of access and alertness to relevant information. Similarly, Fuentelsaz *et al.* (2018) confirmed that opportunity recognition depends on prior information available to individuals.

Hence, innovative entrepreneurs need dynamic capabilities to decipher the general environment, which is embedded in useful information. While high-impact entrepreneurs have access to valuable information that is exclusively confined in scope, this may remain apparently elusive to a ‘conventional student entrepreneur’ without entrepreneurial inclination and communication skills (Odewale, Abd Rani, Migiro, & Adeyeye, 2019a). Therefore, the ability to sieve needed information from the volume of information available to a budding entrepreneur can act as stimulus to innovation. This requires readiness to invest time and resources in search of knowledge and relevant information. Meanwhile, positive output from theoretical knowledge entails access to basic information that is a prerequisite to innovative outlook and success in the competitive market (Maria *et al.*, 2015). However, it is expected that the entrepreneurially inclined student should possess the ability to process viable information out of the array of available information in order to become innovative.

3.9.2.2b Innovative Outlook

Like any psychological traits, innovation has been examined by different scholars across human sphere, and from research perspective, it is viewed as the game changer in the world of entrepreneurs (Drucker, 1985), hence, it has remained one of the most heralded among other traits (Fuentelsaz *et al.*, 2018). Research on the impact of innovativeness and attitude on entrepreneurial intention among engineering and non-engineering students concluded that male students are influenced by innovation to become entrepreneurs, while female students are influenced by attitudes (Law & Breznik, 2017). Jiang and Sun (2015) argued that innovative process in most universities in developing countries is a mere theoretical learning, which could only contribute minimally to students' entrepreneurial inclination. Innovation at a country level depends on conditions and inputs, which include economic freedom. Further, human capability to think will function well when in an attractive environment and in a good mood. Therefore, students can receive inspiration when in a positive mood and in a serene environment. The ability to ruminate on a piece of information to enact innovative ideas and readiness to dig deeper for inspiration entails a personal belief in one's capabilities and a supportive environment.

3.9.2.2c Business Feasibility

Business feasibility entails taking into consideration salient issues sequel to innovative spirit, which includes: political stability, business policies, laws and regulations, legal protection on property rights and easy access to financial capital (Etodike *et al.*, 2018). Taking entrepreneurship courses in an unfavourable economic outlook, devoid of proportionate market and encouraging political perception, may make students to have negative views about entrepreneurial inclination. Socio-economic and political factors are fundamental in terms of enhancing entrepreneurial inclination and creating business friendly environment. In fact, innovation demands an environment groomed in confidence, courage and tolerance. Strong and viable innovators cum entrepreneurs will emerge when stakeholders, government and policymakers are well positioned as pillars on which emerging business can recline. However, psychologists noted that the determinant of entrepreneurial attitude depends on individual's reactions to certain situation in the environment (Robinson *et al.*, 1991), which invariably could lead to innovative process.

3.9.2.2d Collaboration

It is the belief that collaboration will build up synergy cum informed learning that could initiate innovative ideas. However, the prevalent pedagogical approach in higher institutions of learning in Nigeria is the traditional classroom teaching technique, which often interdicts actual collaboration among learners (Fayomi, 2017), and by implication limits innovative process (Jiang & Sun, 2015).

Research provides support for the view that collaboration invigorates thinking skills and enhances better entrepreneurial capability and productivity (Kelley, Brush, Greene, & Litovsky, 2012b). Moreover, collaboration goes beyond students/tutors relationship. If the university stands aloof in the process of enriching entrepreneurial inclination for potential entrepreneurs to thrive, achieving entrepreneurship educational goals could be inhibited. Hence, collaborating with the university in terms of supportive government policy and funding will build positive image for entrepreneurship and also impact students' entrepreneurial inclination constructively.

Therefore, governmental support for entrepreneurship activities, more importantly, adequate financial backing, will synchronize institutional efforts, which will encourage collaboration in and outside the academic environment. Levie and Hart (2014) revealed that collaboration and networking can invigorate opportunity recognition by potential entrepreneurs leading to innovation and generation of new ideas as well as growing existing businesses. The report further indicated that collaboration and networking seem inadequate among women entrepreneurs who are mostly single founders. Consequently, innovative collaboration should be facilitated at the institutional level, to help aspiring women entrepreneurs to overcome this challenge (Kelley *et al.*, 2012b). However, this demands conscious involvement of all stakeholders. For example, manufacturing has been identified as giant strides to industrialization; however, would-be entrepreneurs need synergy and collaboration for both knowledge and capacity-building, more importantly, in an emerging economy like Nigeria before they can sustainably engage in manufacturing activities. Further, students' collaboration is a growing phenomenon globally, and this will create room for partnership, knowledge and cost sharing, as well as joint venture creation, which may likely evolve after graduation.

The challenge of integrating and applying these four steps (information, innovative outlook, business feasibility and collaboration) may prove complex; however, it requires perceived self-efficacy, which enriches life accomplishments. Bandura (1994) pointed out that successful functioning necessitates mastery, experiences, successful task management, social persuasion on one's capabilities and inference. However, creative and innovative leaders are capable of inspiring and motivating others into new frontiers of pragmatic progress.

3.9.2.3 Risk-taking and Entrepreneurial Inclination

Entrepreneurship is associated with risk and uncertainties, and a would-be entrepreneur cannot be risk averse; however, there is no consensus as to the extent an entrepreneur might want to take risk or avoid it (Cromie, 2000). An entrepreneur is recognized to be a risk taker that is significantly remarkable in economic growth (Bendixen & Migliorini, 2006). The idea of risks and uncertainties had been on since the 18th century, however, it was revealed that Richard Cantillon advanced the subject of risk taking in 1931 (Obaji & Uche, 2014). The view that risk taking is one of the

characteristics that distinguishes an entrepreneur from a non-entrepreneur could not be substantiated following the study of Macko and Tyszka (2009) on entrepreneurship and risk taking. The hypothesis that entrepreneurs are more risk prone than others was not supported. In addition, the authors found that there was no difference in the level of risk acceptance of entrepreneurs and non-entrepreneurs.

In contrast, Koloba *et al.* (2015) documented that students high in self-efficacy have greater propensity towards entrepreneurial behaviour, which is an indication of willingness to take risk. Consistent with Koloba *et al.* (2015), Asamani and Mensah (2013), using regression analysis, showed that risk-taking attribute had significant influence on entrepreneurial inclination. In another strand of literature, Fernandez-Cornejo *et al.* (2018) found a negative relationship between entrepreneurial inclination and tolerance for risk among Spanish and Icelandic students. Employing OLS regression, Solesvik *et al.* (2013) reported that students have increased risk-taking propensity, yet display lower interest for entrepreneurial action. Although, there is a general assumption that entrepreneurship is highly risky (Drucker, 1985), the result from empirical studies remains mixed. That leads us to the next sub-section on behavioural factors.

3.9.3 Entrepreneurs and Behavioural Factors

The Entrepreneur is a key factor in venture activities, and his behavioural leaning is imperative for successful venture. This can be shaped through positive attitude towards entrepreneurship, prior knowledge, feelings or passion and the level of exposure to information (Baron, 2007). The behavioural attitude at a given period could be the determinant of a specific outcome, and the prior research suggested that this behaviour can be influenced positively through training (Kluve, *et al.*, 2014). The soaring graduate unemployment has continued to invigorate entrepreneurial mind-set globally; however, nurturing business idea can be a pre-educational disposition from childhood to adulthood. For instance, one of the most recognized business moguls in Africa had a premonition of venturing into business from his elementary school days, which he later pursued at the university level (Vanguard Newspaper Special Report March 22, 2014). However, findings showed that men are more predisposed to starting ventures than women (Kriz, Eiselen, & Manahl, 2014). Evidence from research revealed that certain behavioural tendencies as clinical attention deficit/hyperactivity disorder can affect entrepreneurial motives (Gunia, 2018).

Passion can transform behaviour and this could stem from reading books on business venture and materials on a specific dream business (Bygrave & Zacharakis, 2011). Moreover, useful information, advice, entrepreneurial passion, motivation and inspiration can sprout from studying about successful entrepreneurs, such as their biographies and autobiographies (Blundel & Lockett, 2011). Hence, this research considers passion (Yitshaki & Kropp, 2016) as a behavioural trait required in identifying the

entrepreneurially inclined and this study examines passion as part of biopsychosocial factors in moderating the relationship between entrepreneurship education and entrepreneurial inclination.

3.9.3.1 Passion

3.9.3.1a The Etymology and Concept of Passion

Following the etymology of the word, passion is from the Latin word known as ‘passio’, which literally means, to suffer (Vallerand *et al.*, 2003), and in a way, it typifies Christ’s suffering on the cross. However, modern English seems to give it a different meaning that shows disconnect from its literal meaning. Hence, the word, passion, as it is being used nowadays, means: hunger, craving, urge, etc.; this study aligns towards the modern English meaning and usage.

Vallerand *et al.* (2003) claimed that passion can be subdivided into two: obsessive and harmonious, and both can be linked to strong inclination towards ones’ choice. Passion, as a concept, has been embraced in entrepreneurial education as pertinent for running a successful business (Fellnhöfer, 2017; Yitshaki & Kropp, 2016). It is regarded as an indispensable attribute for starting a new venture. For example, Murnieks *et al.* (2016) documented that angel investors are keen in connecting with passionate entrepreneurs.

Furthermore, Yitshaki and Kropp (2016, p. 215) stated that “the concept of passion includes the process of maintaining positive feelings towards entrepreneurship in the face of failure”. They noted that passion stems from three major sources: the need to do something meaningful, a desire for something challenging and a sense of belief; the trio serve as motivators even at the verge of despondency. Similarly, Bygrave and Zacharakis (2011) argued that to understand what you are passionate about, you must think through on what excites you, what you read, what you spend your leisure on and your pursuit. They maintained that in order to know more about yourself, what you value and your abilities, your family members and close associates are those to avow your real strengths and weaknesses.

Values have been a focal point in the social sciences (Schwartz, 2012), and they are used to delineate cultural settings, societies and to assess individuals’ attitudes and behaviour that can obviously raise desire or passion. The findings of Schwartz (2012) revealed that priorities of individuals differ, while societal hierarchical order seems similar. Moreover, the author suggested that one of the three demands of human nature is that people need motivation in order to invest time and efforts on a productive work. Motivation for one’s values depends on needs and goals of individuals. For example, motivation for entrepreneurial inclination can take different forms; such as favourable governmental policies, mentorship, access to start-up capital, parental influence, evidence of successful entrepreneurs, creative innovation, passion and promising business environment. Consequently, the entrepreneurially inclined needs vision and motivation to invigorate entrepreneurial passion.

On this premise, passion can be viewed as an axiological concept that is personally accepted to be valuable, that we assume is vital to us as humans. Passion seems to be closely connected with value when we consider past studies on passion, more importantly, from the standpoint of Vallerand *et al.* (2003). If passion is what makes ‘life worth living’, then, it must be highly valued. An individual cannot be passionate about an idea that seems worthless at its face value. In the theory of basic values, report indicated that people respond to ten different types of values (Schwartz, 2012), and third in the line is self-direction values. Even though behaviour grounded in this type of values is intrinsically motivated, it encourages creative innovation, and challenges are not perceived as obstacles but opportunities, hence, it can withstand adverse situations.

For instance, the founder of Amazon.com, Jeff Bezos started his company Cadabra Inc. (now Amazon.com) in 1995 and made no substantial profit until 2003. However, Forbes revealed that Jeff Bezos is not just one of the richest man on earth, but the first centi-billionaire in the world (Kroll & Dolan, 2018). One could therefore deduce that Jeff Bezos possesses this value (self-direction); as he operated for seven years without profit (specifically in 1999, he incurred \$323million losses, and this increased to \$1.4billion in 2000), yet he was undeterred. This is beyond having intention to own a business, it is more of strong inclination cum passion for ‘what is worth’ pursuing in spite of challenges. Jeff Bezos’ business failure was sufficient to halt further business investments, but perseverance, passion and grit saw him through the challenging periods. Today, he has become an icon that entrepreneurs now relish his success story globally. Sometimes, business failure may be inevitable (Baldegger *et al.*, 2013), in fact, for individuals that are only after intrinsic rewards, once-off business failure can degenerate to different health challenges. But an individual with entrepreneurial passion will remain resilient in the face of daunting business challenges.

Past studies provided evidence that entrepreneurial passion is one of the key components in assessing entrepreneurial behaviour (Gielnik *et al.*, 2017; Vallerand *et al.*, 2003). Gielnik *et al.* (2017) concluded that holding high passion subsequent to entrepreneurship training should ultimately translate into business formation. Hence, entrepreneurial education should focus on helping students to identify their areas of interest and passion early in life and pursue it avidly (Viinikainen *et al.*, 2016). For example, Facebook came into being through “passion for technology and computer programming” (Bygrave & Zacharakis, 2011, p. 216).

Murnieks, Mosakowski, and Cardon (2014) reported that empirical studies on ‘passion among entrepreneurs’ are few in number. Following this line of argument, extant findings showed mixed results, therefore, the impact of entrepreneurial passion calls for more investigation (Fellnhöfer, 2017; Yitshaki & Kropp, 2016). Vallerand *et al.* (2003, p. 766) concluded that “people’s lives can be most worth living ... by having a harmonious passion towards an activity”. Research has revealed a link between entrepreneurial passion and entrepreneurial behaviour (Murnieks *et al.*, 2014). Taking into

account the definition of Vallerand *et al.* (2003), this study links passion with entrepreneurial inclination, as earlier discussed. This is on the premise that entrepreneurship education is expected to foster entrepreneurial passion (Oyebola *et al.*, 2015). However, Nabi *et al.* (2017) submitted that this is under researched in entrepreneurship domain.

3.9.3.1b The Role of Entrepreneurial Passion in Entrepreneurial Inclination

Passion is one of the ingredients successful entrepreneurs savour (Fellnhöfer, 2017), and it cannot be undermined by nascent entrepreneurs in discovering and fuelling entrepreneurial behaviour (Mueller, Wolfe, & Syed, 2017). However, prior research showed that passion cuts across different disciplines (Murnieks *et al.*, 2014). For example, in the study by Fellnhöfer (2017) on the power of passion on entrepreneurship education, the proposition that entrepreneurial role models influence entrepreneurial passion was supported.

Prior research suggested that passion drives entrepreneurial endeavour, as such, it is argued that passion is germane to the success of venture creation (Warnick, Murnieks, McMullen, & Brooks, 2018). Moreover, Murnieks *et al.* (2016) posited that passionate entrepreneurs are highly treasured by angel investors, yet, empirical research on the role of passion in entrepreneurial inclination remains mixed. Obviously, the focus here is an answer to the call for more research on the power of entrepreneurial passion (Da Palma *et al.*, 2018). It is therefore essential to explore the relationship between entrepreneurial inclination and passion. This leads to discussion on environmental factors in the next section.

3.9.4 Entrepreneurs and Environmental Factors

Numerous studies have shown that environmental factors are pivotal to developing entrepreneurs and the literature provides evidence that it can be viewed as a bond connecting other factors (Obaji & Uche, 2014). They are regarded as fundamental mechanisms required in every human endeavour, especially in the shaping of an individual's attitude and behaviour. These include financial and physical resources (Middleton & Lundqvist, 2010) as well as social, economic and political aspects - government policy, supportive role models, access to finance, political stability and security (Chin & Yong, 2017; Adeniyi *et al.*, 2014; Eneji *et al.*, 2013). Therefore, the role of these externalities cannot be undermined in the formation of the entrepreneurially inclined. Unfortunately, Nigeria seems to be lacking in these factors as they have become barriers to business creation and development of skilled manpower.

Silicon Valley is regarded as an ecosystem made up of institutions with rich sources of venture capital, social capital, angel investors as well as stalwart entrepreneurial spirit. However, Bygrave and Zacharakis (2011) argued that the strength of flourishing high-tech in Silicon Valley lies in positive

environmental factors. The authors noted that support from stakeholders has continued to motivate young high-tech entrepreneurs to launch out into the world of business.

Hence, entrepreneurial inclination cannot be considered in isolation without reflecting on favourable environment as this is crucial in business formation. Ahmed *et al.* (2012) reported that in spite of political instability and terrorism, Pakistani students are very much inclined to entrepreneurial activities. This could be attributed to access to supporting information, start-up capital, good social network and family support (Ali *et al.*, 2009). The foregoing suggests that research gap in contextual factors demands further research. The next section discusses government policy as part of biopsychosocial factors in moderating the relationship between entrepreneurship education and entrepreneurial inclination.

3.9.4.1 Government Policy

There is the assertion that the economy is being reshaped by entrepreneurs globally (Obaji & Uche, 2014), yet, the less developed nations remain stagnant for lack of fledgling entrepreneurs that can stay vibrant in entrepreneurial activities. Previous studies acknowledged decisive factors of entrepreneurship development to include government policy, finance, market, technology, competition and entrepreneurial capability (Agri *et al.*, 2017). However, the ability of entrepreneurs to contribute positively to the economic development of a country through business creation may depend on proactive government policies and resources (Duru, 2011). These resources include everything a business needs to be healthy, however, lack of financial resources has been identified as a fundamental inhibitor to venture creation (Bygrave & Zacharakis, 2011).

Countries that are emerging out of stagnation and growing rapidly like China and South Korea offer all-encompassing support for entrepreneurs to thrive through technology transfer, articulated infrastructure and governmental influence via business-oriented policies (Agri *et al.*, 2017; Hisrich *et al.*, 2007). Evidence of effective and well-knit governmental support for entrepreneurship (Stough, 2016) indicates that the developed countries are years ahead in terms of futuristic growth and development.

Although, Nigeria has high-potential individuals, this is being hindered by odds such as absence of functional government policies which has been identified as primal to entrepreneurial inclination, which also acts as a lynchpin to other factors (Obaji & Uche, 2014). A look at the political terrain in Nigeria shows that decline has set in making things intolerable, regulation is unpredictable and inconsistent; then it becomes worrisome how potential entrepreneurs can successfully emerge under such unfriendly conditions. Obaji and Uche (2014) acknowledged that entrepreneurial success depends on policy implementation, supportive government policies and funding. The authors argued that

favourable government policies will ultimately build up nascent entrepreneurs. Divergent views still subsist on the relationship between government policy and entrepreneurship. Government policy has been identified as one of the variables for future research, especially as a moderator (Nabi *et al.*, 2017). Consequently, this study examines government policy as part of biopsychosocial factors in moderating the relationship between entrepreneurship education and entrepreneurial inclination.

3.9.4.1a The Role of Government in Entrepreneurial Inclination

Environment and entrepreneurial inclination are interwoven and should be viewed as entities that are inseparable in the process of nurturing would-be entrepreneurs; hence, favourable business environment is germane for developing entrepreneurs. However, when the perception of upcoming generation about the external environment of a nation is that of conundrum, perplexity and inappropriate for entrepreneurial start-ups, such would raise hope for fear and uncertainty.

Government policies, therefore, should rather be enablers for creative innovators and not inhibitors towards raising potential entrepreneurs. Parveen *et al.* (2018) suggested that the role of government on entrepreneurial inclination should be examined. Meanwhile, Iacobucci and Micozzi (2012) concluded that there has been an upsurge in the study of entrepreneurship, which necessitates policies and measures for sustaining it. Nigeria, as a nation, has been so articulate in policy formulations without implementation, sadly, it has run through different successive governments without a solution (Imoisi, Amba, & Okon, 2017). Therefore, invigorating passion towards entrepreneurship via governmental policies cannot be overemphasized. Tendering success oriented entrepreneurial ideas in an emerging economy without favourable governmental support could lead to entrepreneurial stagnation and failure.

3.9.4.2 Entrepreneurial Role Models

The influence of entrepreneurial role models on entrepreneurial inclination is yet to be fully established. Fellnhofer (2017) documented that role models occupy a conspicuous spot in developing potential entrepreneurs, as its findings indicated that observing an entrepreneurial role model positively influenced entrepreneurial start-ups. For example, Marc Benioff, the founder of salesforce.com, was privileged to participate in the making and launching of the first Mac by Steve Jobs. The opportunity of working with, and having someone like Steve Jobs as a role model enflamed innovative insight in him and this experience obviously invigorated his thinking that made him able to develop software as a teenager. Though, he was there as an undergrad, the benefit of learning by observing others, which is in congruence with social learning theory coupled with his readiness to explore and unravel new ideas, midwifed his early exploit (Dyer, Gregersen, & Christensen, 2011).

Furthermore, following Bandura's social learning theory, evidence showed that infants learn by observing their parents or siblings; this informal learning goes lengthways in modelling their attitudes and values later in life. In addition, a good number of researchers argued that having entrepreneurial relatives can make business impartation a possibility. In the same vein, increasing potential entrepreneurs could stem from watching or observing successful entrepreneurs as role models (Fellnhöfer, 2017). Past studies have revealed that having an inspirational leader or mentor could "activate the bilateral rostral inferior parietal lobule, *pars opercularis* and *posterior midcingulate cortex*"¹ (Nofal, Nicolaou, Symeonidou, & Shane, 2018, p. 17). For instance, Sanusi (2012) noted that the economic advancement in countries like China, Singapore and Malaysia could be ascribed to leadership prowess and vision.

3.9.4.2a Who is an Entrepreneurial Role Model?

Fellnhöfer (2017, p. 74) suggested that "entrepreneurial role models tend to be strong characters apt to observe when revising behaviour to achieve one's goals". Learning by observation is a powerful tool that can shape behaviour either positively or otherwise. An entrepreneurial role model is a key figure equipped with understanding, knowledge, expertise and practical skills required in mentoring start-ups. This could be deduced from their experiences and insight over the years. It is therefore expected that entrepreneurial role models would impact potential entrepreneurs positively.

Role identification theory shows that role models can have weighty influence on an individual's choice of career; and this is implied in entrepreneurial inclination. It is argued that the notion of becoming an entrepreneur may be through an overwhelming influence of an entrepreneurial role model (Fellnhöfer, 2017). Having visible successful entrepreneurial role models have been distinguished as one of the reasons why some parts of the world continue to multiply entrepreneurs with ease. Discussion, counselling and interaction with an established entrepreneur will unearth the challenges, pros and cons of the new ideas being considered by a potential entrepreneur. On this premise, an emerging entrepreneur can think through on potential barriers and weigh up the consequences before venturing into such undertakings.

3.9.4.2b Characteristics of Entrepreneurial Role Models

An entrepreneurial role model acts as a guide, instructor, motivator and pacesetter, and observing a role model on 'how it is done' is another sure path to doing it well. Hence, observation gives credence to brainstorming. In addition, ruminating on an idea in isolation, without further consultation with an expert, may truncate a laudable concept. However, role models are fortified as motivators, mediators and verifiable evidence of the possibilities inherent in entrepreneurial ambition. For instance, Silicon

¹ This is a medical term.

Valley has become a home to high-tech as a result of role models (Bygrave & Zacharakis, 2011). Furthermore, the perceived views of successful entrepreneurs in this community must have impacted their ability to become self-reliant. Moreover, Bygrave and Zacharakis (2011) asserted that entrepreneurial culture in Silicon Valley is strongly supported because motivation and mentoring for business formation spans from capitalists, bankers, lawyers, landlords to politicians. Lingelbach, Vina, and Asel (2005, p. 99) stated that “entrepreneurship is a lonely profession rendered more difficult without the benefit of mentorship and apprenticeship”.

In the study of action-based entrepreneurship education, Rasmussen and Sørheim (2006) showed that with the availability of role models and networking, more businesses emerged within a limited period. Furthermore, successful entrepreneurs are continuously in tune with market trends, policy regulations, and being updated on pitfalls and plusses; this keeps them from sinking funds into unprofitable ventures. To corroborate this, Meager *et al.* (2011) asserted that role models are important in the process of raising potential entrepreneurs.

Collaborating with role models who are successful entrepreneurs exposes a new entrant into real business engagements in addition to entrepreneurial knowledge that will generate creative ideas for new venture creation. This assertion finds support in bin Mahajar and Yunus (2012) that documented role models had significant impact on students’ inclination towards entrepreneurship. Fellnhöfer (2017) concluded that watching entrepreneurial stories via multimedia can enhance choice of entrepreneurship as a career path, most importantly, where successful entrepreneurs are inaccessible.

3.9.5 Conclusion

From the foregoing discussions it becomes evident that possessing a single factor alone is not sufficient for depicting successful entrepreneurs. It was in this line of thought that Tiftik and Zincirkiran (2014) asserted that developing budding entrepreneurs require the combination of individual’s readiness with business empowering environment. In the absence of this combination, it is likely that entrepreneurial inclination among undergraduates may be implausible. Though, Nigeria is beaming with opportunities in different sectors (Agri *et al.*, 2017), which can be tapped by these vibrant and energetic graduates, it requires that the highlighted factors should be underscored.

Moreover, it may be atypical to wrap up without reflecting on the critique of biopsychosocial model. This is normal with every model. Therefore, biopsychosocial factors is not exempted from such criticisms. It has been faulted that it has theoretical application and that applying it in real life may be an arduous task (Karl & Holland, 2015; Guillemin & Barnard, 2015). However, this dissertation posits that ‘entrepreneurial the how’ requires insight, innovativeness, inclination, and passionate drive on the part of students, while at the same time demands thoughtfulness, empathy, vision and all-round support from stakeholders.

3.10 Theoretical Framework

The essence of this section is to adequately justify the underpinning theories required for expounding the stated objectives in this dissertation, and how the theoretical framework of the study aligns with such theories as theory helps in validating the authenticity of a research. Hence, this research extends extant theories that are notably related to entrepreneurial trend and to further enlarge the growing body of work in this domain. Well-founded research must be anchored on grounded underpinning theory, although connecting a theory directly to entrepreneurial inclination is an arduous task. An examination of the literature shows that certain theories (human capital theory, self-efficacy theory and social cognitive theory) are strongly connected to entrepreneurial phenomenon (Koloba *et al.*, 2015; Bae *et al.*, 2014). In addition, general systems theory is considered in connection with biopsychosocial factors (Karl & Holland, 2015; Engel, 1977).

3.10.1 Theories in Entrepreneurship

The literature is replete with several theories on entrepreneurship, although, scholars noted that these theories are basically on diverse areas (Bhattacharjee, 2012; Sandhu *et al.*, 2010). Having a good grip on entrepreneurship theories will form a solid footing for students (more importantly, the PhD students) to fully comprehend the process of entrepreneurship and how to make new approaches possible (Fayolle *et al.*, 2016). In the process of strategizing on how best to understand entrepreneurs and multiply them, different researchers have come up with diverse models, and different theories have been employed in entrepreneurship studies, but the most prominent is Ajzen's Theory of Planned Behaviour (TPB). TPB was developed by Ajzen with focus on the impacts of behavioural attitude, social norms and behavioural control on entrepreneurial actions (Gafar *et al.*, 2015).

Rauch and Hulsink (2015) remarked that future researchers should consider other sources for predicting entrepreneurial intentions as the study of intention has remained theoretical. This finds support in the study of Kolvereid (2016), which indicated that the TPB is not sufficient to predict intention-behaviour relationship. Consequently, some of these models have succeeded in advancing entrepreneurship awareness and a lot of past studies have frequently remarked on the intention to start a business with a minimal recourse to the nitty-gritty of business creation. Hence, considering an integrative approach of both macro and micro views in developing and nurturing entrepreneurially inclined students synchronized with Xie's (2014) perspective, which centres on the individual-environmental factors becomes imperative.

3.11 Theoretical Anchor

The following are theoretical bedrock for this dissertation:

- Human capital theory

- Self-efficacy theory
- Social cognitive learning theory
- General System Theory

3.11.1 Human Capital Theory

Human Capital Theory predicts that possessing higher levels of key competencies (knowledge, skills and abilities or attitudes) will result into outstanding outcome or achievement (Martin *et al.*, 2013). The underlying assumption of Human Capital Theory remains that education has the capability to influence individuals, society and entire populace. Past research argued that educating and preparing people with the goal of entrepreneurial outcome demand development of theory (Rauch & Hulsink, 2015). In developing such theoretical view, Rauch and Hulsink (2015) postulated that Human Capital Theory and TPB are the notable approaches. In the quantitative review of the literature fixed on Human Capital Theory by Martin *et al.* (2013), they found a significant positive relationship between entrepreneurship education and training (EET) and entrepreneurship. Consistent with the postulation of the Human Capital Theory, Becker (1964, p. 25) concluded that “much is now known for many countries about the effects of education on earnings, occupation, employment, graduate unemployment of both men and women and various races and ethnic groups”. Researchers in different studies have found support for this theory, by testing the relationship between human capital and entrepreneurship outcomes (Martin *et al.*, 2013). Therefore, the underpinning theory supporting this research framework anchors on Human Capital Theory that puts to test the underlying variables, which include entrepreneurial attitudes, entrepreneurial knowledge and venture creation skills. Prior research provided evidence that the influence of educational accomplishment on entrepreneurial behaviour differs from country to country (Bygrave & Zacharakis, 2011).

Therefore, this study argues that for anyone to become entrepreneurially inclined, and subsequently be established as an entrepreneur requires purposeful pedagogical guidance and experiential learning as well as the interconnection of biological, psychological, behavioural and environmental factors. The right perception of these factors with the combination of key competencies (attitudes, knowledge and skills) becomes fundamental in raising the entrepreneurially inclined. This finds support in Human Capital Theory because the impact of the training or entrepreneurship education (knowledge, skills and abilities) should culminate into venture creation. Nevertheless, Martin *et al.* (2013) suggested that more and higher quality data are required to further authenticate the claims of Human Capital Theory.

3.11.2 Self-Efficacy Theory

Self-efficacy remains one of the well-known theories in social sciences research (Austin & Nauta, 2015), that has been widely used and acknowledged to expound the significant relationship found

between entrepreneurship education and entrepreneurial inclination (Koloba *et al.*, 2015). According to Schunk (1991), self-efficacy refers to individual's unique capability to execute an undertaking, and also being resolute in achieving set goals even at unequal terrains. Similarly, Bandura (1994, p. 2) stated that "self-efficacy beliefs determine how people feel, think, motivate themselves and behave". A person high in self-efficacy possesses self-confidence in accomplishing a given task and does not renege at negative responses, but rather leans on self-motivation. Even though, entrepreneurship is associated with risks and uncertainties (Hebert & Link, 2006), passion can stimulate motivation in individuals (Vallerand *et al.*, 2003).

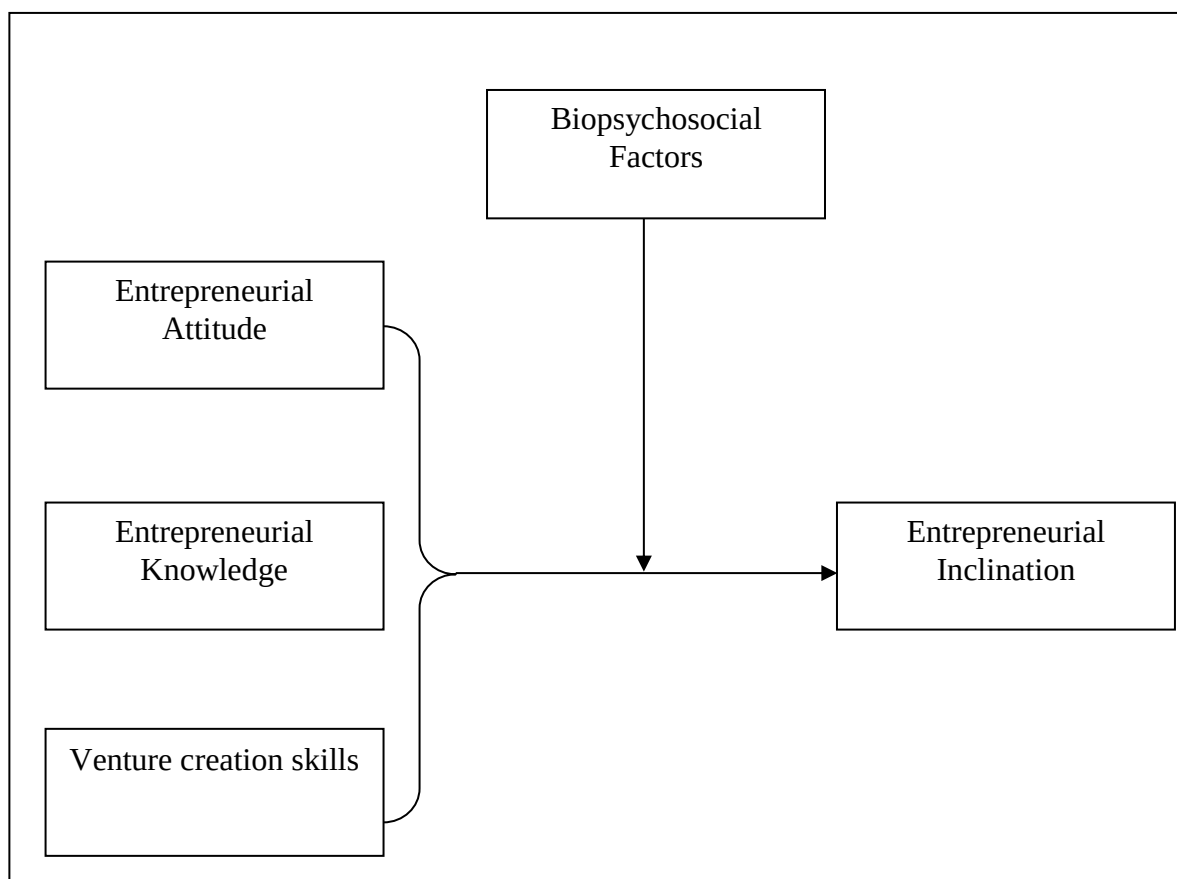
However, the motivation to persist becomes stronger when people are "given appropriate skills and adequate incentives" (Bandura, 1977, p. 194). This will cause people to become more passionate, leading to skills acquisition, which also enhances efficacy beliefs (Baum & Locke, 2004). Based on this premise, as the entrepreneurially inclined possesses required skills, their entrepreneurial self-efficacy could be influenced through supportive environment, which in turn could empower them for venture creation. Prior research showed that individuals high in self-efficacy reflect more confidence in their capability to perform a task and thus are able to venture into entrepreneurial activities (Baum & Locke, 2004). Consequently, enterprising people, including potential entrepreneurs, must possess courage and confidence to take action (Kobia & Sikalieh, 2009). On the other hand, individuals that are weak in self-efficacy tend to perceive difficulties, inabilities and obstacles when faced with challenges and thus have weak expectations (Bandura, 1977). Gielinik *et al.* (2015) viewed self-efficacy as one of the important qualities needed for entrepreneurial activities to flourish.

3.11.3 Social Cognitive Learning Theory

Self-efficacy is a major factor in social cognitive theory (Baum & Locke, 2004). Hamidi, Wennberg, and Berglund (2008, p. 308) defined social cognitive theory as "the individual's cognitive estimate of his or her capabilities ... courses of action needed to exercise control over events in his or her life". Bandura (2001) posited that cognitive factors are good predictors of human behaviour, as such, through observation, knowledge, skills, beliefs and attitude, it can be shaped. Since human behaviour and environment are interwoven, behaviour can then be moulded by both environmental and personal factors (Xie, 2014). For example, Silicon Valley is associated with hi-tech entrepreneurs based on explicit experiences in terms of high rate of venture success, which can be attributed to visible role models (Bygrave & Zacharakis, 2011). Inclination builds on social cognitive theory which predicts human behaviour basically by observing or imitating others (Oguntimehin & Olaniran, 2017).

3.11.4 The General System Theory (GST)

According to Engel (1977, p. 134), “general systems theory holds that all levels of organization are linked to each other in a hierarchical relationship so that change in one affects change in the others”. Business enterprise is regarded as a form of formal organization and the most significant way to study organization is studying it in the form of a system (von Bertalanffy, 1968). Combination of variables for further empirical evidence finds support in GST, which was coined by von Bertalanffy (Hofkirchner & Schafranek, 2011), who perceived that evidence of interrelationship subsists in every aspect of society, therefore, public challenges and issues should be studied and assessed as mutually dependent.



3.12 Hypotheses Development

There are a few studies on entrepreneurial inclination and a major objective of taking entrepreneurship education as a course in the university is to instil entrepreneurial tendency in the attendees. For the grandness of developing entrepreneurially inclined student, researchers have called for in-depth study on entrepreneurial inclination (Ahmad, 2013; Ahmad & Buchanan, 2015). Developing nascent entrepreneurs at the university level is not parallel to what the institution can offer through

entrepreneurship courses, because it is strongly connected to the readiness and willingness to imbibe entrepreneurial culture.

Moreover, to investigate the moderating effects of biopsychosocial factors on the relationship between entrepreneurship education and entrepreneurial inclination, respondents were divided into two groups: management and non-management students. Thus, undertaking an empirical research that links entrepreneurship education, entrepreneurial inclination and biopsychosocial factors as a single entity becomes imperative. To achieve this dissertation's objectives, hypotheses were introduced and developed to direct the investigatory process.

3.12.1 Entrepreneurial Attitude and Entrepreneurial Inclination

Bae *et al.* (2014, p. 218) defined entrepreneurship education as “education for entrepreneurial attitudes and skills”. Past studies argued that “inclination is one of the most important factors in determining entrepreneurship” (Rona-tas & Lengyel, 1997, p. 7). Following Human Capital Theory, education can impact positively on individuals and society. In addition, attitudes and behaviour of individuals can be channelled towards entrepreneurial inclination when favourable conditions are provided within the institutional environment. From research view point, the desire for entrepreneurial activities seems very high, but entry barriers include unfavourable business environment, inadequate government support, insecurity and unsupportive policy (Iwu *et al.*, 2016; Obaji & Uche, 2014). There is no gainsaying that all these identified barriers may have negative effect on entrepreneurial attitude, but may turn positive if properly managed. The pedagogical method of presentation in entrepreneurial courses will definitely have its impact on the students' attitude towards entrepreneurial inclination because the primary aim of entrepreneurship education is to develop students' interest in entrepreneurial activities. For example, Rauch and Hulsink (2015) documented that students' participation in the entrepreneurship education program increased their positive attitudes toward entrepreneurial activities.

Therefore, attitude and behaviour of core entrepreneurship courses attendees towards entrepreneurial activities is expected to be positive. Although, entrepreneurial inclination is an individual phenomenon, translation from a potential entrepreneur to a practicing entrepreneur demands a conducive environment (Kim *et al.*, 2018), hence, the interconnection between the individual and the environment cannot be undermined. Prior studies have revealed that factors such as environment, culture, family background and gender contribute to entrepreneurial attitude and behaviour towards venture creation. For example, Shinnar, Pruett, and Toney's (2009) investigation on entrepreneurship education (attitude across campus) showed that more than half of the students rated themselves on the high end of the entrepreneurial disposition scale. In addition, they found that non-management students are interested in entrepreneurship-related education. Similarly, the findings of Gary *et al.*

(2010) showed that entrepreneurship education has the capability of impacting students' attitude towards entrepreneurship positively. This is consistent with the findings of Ali *et al.* (2009) that prospective teachers indicated positive entrepreneurial attitude. To examine the relationship between entrepreneurial attitude and entrepreneurial inclination, this study hypothesizes thus:

Hypothesis 1a: There is a significant relationship between entrepreneurial attitude and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 2a: There is a significant relationship between entrepreneurial attitude and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 3a: There is a significant relationship between entrepreneurial attitude and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.2 Entrepreneurial Knowledge and Entrepreneurial Inclination

Past studies showed track record of Business Schools in American universities that they have been quite remarkable (Franke & Luthje, 2004; Keat *et al.*, 2011), and this has fostered entrepreneurial behaviour. Far beyond that, entrepreneurship education now cuts across every Faculty, and its perceived applicability in all facets is becoming global. This has led to its endorsement as a mandatory course in all institutions of higher learning in Nigeria. However, from the perspective of resources, increased nascent entrepreneurs as perceived output has been very minimal compared to the input (Okeke *et al.*, 2016; Storen, 2014). There is a general consensus that entrepreneurial knowledge can be gained through entrepreneurship education (Agri *et al.*, 2017; Iacobucci & Micozzi, 2012), and this is subject to individual preferences or dispositions.

One of the sure ways to overcome challenges in entrepreneurship education is to be passionate at the onset of opportunity recognition. Imitating others and building on it seems to be the 'rule of the game' (Rona-tas & Lengyel, 1997). For instance, Silicon Valley has been termed home of high-tech entrepreneurs (Bygrave & Zacharakis, 2011), but then, the role of experiential learning or learning-by-doing cannot be overemphasized. Rona-tas and Lengyel (1997), in their study on entrepreneurial inclination, documented that education is a predictor of entrepreneurial inclination in Bulgaria, Russia and Serbia. They concluded that accumulation of knowledge cum on-the-job experience can provide an edge for the entrepreneurially inclined students leading to business creation. For this reason and consistent with the Human Capital Theory, it is more likely that a transfer of the knowledge acquired in entrepreneurial education at the university may set the pace for strong inclination towards entrepreneurial activities, which in turn could produce competent entrepreneurs. Hence this study hypothesizes thus:

Hypothesis 1b: There is a significant relationship between entrepreneurial knowledge and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 2b: There is a significant relationship between entrepreneurial knowledge and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 3b: There is a significant relationship between entrepreneurial knowledge and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.3 Venture Creation Skills and Entrepreneurial Inclination

Entrepreneurial inclination is a prerequisite for starting a new venture; however, entrepreneurship education is the precursor for the entrepreneurially inclined to be grounded. Moreover, to be creative and innovative requires appropriate skills. In this light, entrepreneurship education at the university is saddled with the responsibility of enabling and inspiring potential entrepreneurs to enliven venture creation skills (Okoli & Allahna, 2014). Past studies showed that venture creation after graduation is minimal, as Gielnik *et al.* (2017) submitted that lack of entrepreneurial skills could negate venture creation. Moreover, having theoretical understanding without requisite support will weaken students' entrepreneurial inclination. Therefore, acquisition of these skills should be invigorated from high school to enhance potential entrepreneurs at the university. These skills include communication skills, management skills and technical skills. Martin *et al.* (2013) revealed that to succeed as an entrepreneur requires possessing excellent level of knowledge, skills and competencies which cannot be over-emphasized. In contrast, Oosterbeek *et al.* (2010) observed that entrepreneurial skills are not as important as people think. This necessitate considering the relationship between venture creation skills and entrepreneurial inclination. This study hypothesizes thus:

Hypothesis 1c: There is a significant relationship between venture creation skills and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 2c: There is a significant relationship between venture creation skills and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 3c: There is a significant relationship between venture creation skills and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.4 Biopsychosocial Factors and Entrepreneurial Inclination

Some indisputable components have been itemized as germane for would-be entrepreneurs to possess; which include demographic factors, psychological factors, behavioural factors and environmental factors. A good mix of these components is required for best possible results. In light of this, researchers propose a biopsychosocial framework of entrepreneurship that embraces biological, psychological, behavioural and environmental factors. These four cardinal dimensions are fundamental for potential entrepreneurs to thrive (Obschonka & Schiller, 2016). This is expressed in the study of Bolcic (1997) that for a better understanding of entrepreneurial inclination, studies on potential or

practicing entrepreneur should not be limited to behavioural or psychological perspective; rather, it should be the combination and possible interactions of all the factors which surround entrepreneurial inclination. Consequently, biopsychosocial factors is considered as the response to the call by scholars to reflect on the moderating factors that would influence entrepreneurial mind-set (Rauch & Hulsink, 2015).

3.12.4.1 The Moderating Effects of Biopsychosocial Factors on Entrepreneurial Attitude and Entrepreneurial Inclination

Favourable environment has been shown to be necessary for multiplying entrepreneurs (Xie, 2014), while explicit interactions of biopsychosocial factors will act as a catalyst in forming and inspiring entrepreneurial behaviour and subsequent venture creation. Individuals' preparedness coupled with promising environment will heighten the readiness to be entrepreneurially inclined (Gafar *et al.*, 2015). However, the absence of any of the biopsychosocial factors may impact negatively on the attitude and overall performance of the potential entrepreneurs and practicing entrepreneurs. In addition, scholars have identified individuals, environment and the process as key dimensions that must be considered in entrepreneurship domain if business creation is to be achieved (Bendixen & Migliorini, 2006). Studies also indicated that focus has been on either biological factors or psychological factors with an insignificant perception of the positive impact of environmental factors (Sowole *et al.*, 2018; Chaudhary, 2017; Corner *et al.*, 2017; Obschonka and Schiller, 2016).

This dissertation suggests that repositioning individuals and environmental factors seems necessary in arresting the entrepreneurial redundancy as suggested by Xie (2014) and Tiftik and Zincirkiran (2014). It is expedient to enhance entrepreneurial attitude which will in turn influence entrepreneurial inclination. However, an individual's attitude can be guided positively or negatively based on personal values and disposition towards entrepreneurial activities. Some students perceive absence of family financial support, governmental support through enabling environment, passion, and inherent business risk as grounds for unfavourable attitude towards entrepreneurial activities. For example, a student that is assured of financial support from the family after graduation from the university and has strong passion for entrepreneurial activities may likely develop a positive attitude towards entrepreneurial inclination. This is in addition to an enabling environment created by the government to encourage entrepreneurs through established legal framework that will not lead to policy summersaults. In a situation that any of these supposed enablers is missing, the impact on entrepreneurial attitude and entrepreneurial inclination could be negative. It therefore becomes imperative to examine the moderating effect of biopsychosocial factors on the relationship between entrepreneurial attitude and entrepreneurial inclination. On the premise of the preceding discussion, the following hypotheses are developed:

Hypothesis 4a: Biopsychosocial factors have significant effect on the relationship between entrepreneurial attitude and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 5a: Biopsychosocial factors have significant effect on the relationship between entrepreneurial attitude and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 6a: Biopsychosocial factors have significant effect on the relationship between entrepreneurial attitude and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.4.2 The Moderating Effects of Biopsychosocial Factors on Entrepreneurial Knowledge and Entrepreneurial Inclination

Importance of knowledge in every human endeavour cannot be overemphasized. This goes further in entrepreneurship domain where diverse and wide ranging entrepreneurial knowledge are needed to remain relevant in the competitive business world. In the review of Omerzel and Antoncic (2008) it was acknowledged that entrepreneurial knowledge is important for budding entrepreneurs to perform maximally. In considering the importance of entrepreneurial knowledge, prior study has considered the impact of entrepreneurial education on entrepreneurial knowledge. For example, Asamani and Mensah (2013) documented that Ghanaian students were keen at having high grades only with little or no interest in entrepreneurial activities. Therefore, entrepreneurial knowledge acquired via entrepreneurial education does not have significant effect on their entrepreneurial inclination. This is consistent with findings among Norwegian students (Storen, 2014).

Entrepreneurial knowledge obtained from entrepreneurship courses, especially for those in the Business Schools, should give them opportunity in starting their own enterprises more than those of other schools. The university as the epitome of cognitive abilities should be recognized as the centre for the entrepreneurially inclined to develop (Secundo, Mele, Sansone, & Paolucci, 2020). Consequently, the students can achieve their potentials in entrepreneurial activities as it is in other fields. This prior knowledge has not improved entrepreneurial activities as expected in Nigeria. Evidence showed that exposure to entrepreneurial knowledge at the university has been substantial, although without requisite support making it difficult to be goal-oriented (Iwu *et al.*, 2016; Obaji & Uche, 2014). Consequently, increase in entrepreneurial knowledge via entrepreneurial education has remained ineffective (Oosterbeek *et al.*, 2010).

Consider a situation where the student has acquired the required entrepreneurial knowledge in the classroom but the other enablers like passion for entrepreneurship, financial support from family, enabling government policies are missing; this may restrict the impact on entrepreneurial inclination.

This dissertation also argues that the reverse also holds where these enablers are assumed to be present. Therefore, considering the moderating effects of biopsychosocial factors on the relationship between entrepreneurial knowledge and entrepreneurial inclination may likely enhance entrepreneurial effectiveness. Hence the following hypotheses are presented:

Hypothesis 4b: Biopsychosocial factors have significant effect on the relationship between entrepreneurial knowledge and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 5b: Biopsychosocial factors have significant effect on the relationship between entrepreneurial knowledge and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 6b: Biopsychosocial factors have significant effect on the relationship between entrepreneurial knowledge and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.4.3 The Moderating Effects of Biopsychosocial Factors on Venture Creation Skills and Entrepreneurial Inclination

The business world is never static; in the same vein, the nature of work keeps fluctuating and changing per diem. Thus, irrespective of academic background or discipline, individuals play significant role by flowing along in generating ideas for new ventures (Cromie, 2000). It is obvious that knowledge and skills to act entrepreneurially should be maximized by Business and Management students, and as such, be inclined to launch out into the real world of entrepreneurs after graduation (Okeke *et al.*, 2016). In spite of participation in entrepreneurship programmes and classes, Ahmad and Buchanan (2015) report the longing of Malaysian students to seek paid employment rather than venturing into entrepreneurial activities after graduation.

Apathy towards entrepreneurship activities could be forestalled by providing necessary impetus for embracing entrepreneurial activities such as favourable government policies, availability of requisite resources and mentorship; these will enhance potential entrepreneurs' skill, and in turn, business formation (Obaji & Uche, 2014; Sandhu *et al.*, 2011). Hence, to have a better understanding of the impact of a moderator, it is appropriate to examine the moderating effects of biopsychosocial factors on venture creation skills and entrepreneurial inclination. Therefore, it is hypothesized that:

Hypothesis 4c: Biopsychosocial factors have significant effect on the relationship between venture creation skills and entrepreneurial inclination among students in Nigerian universities.

Hypothesis 5c: Biopsychosocial factors have significant effect on the relationship between venture creation skills and entrepreneurial inclination among management students in Nigerian universities.

Hypothesis 6c: Biopsychosocial factors have significant effect on the relationship between venture creation skills and entrepreneurial inclination among non-management students in Nigerian universities.

3.12.5 Differences between Management and Non-Management Students on Exogenous and Endogenous Constructs

Prior studies have considered programme of study as crucial in entrepreneurship education (Mwasalwiba, 2010) which should be considered in developing potential entrepreneurs. The study taken among undergraduate students of two Nigerian universities by Aboho *et al.* (2016) on the impact of entrepreneurship education on entrepreneurial inclination, shows that students' entrepreneurial inclination is positively related to entrepreneurship constructs which include programme, curriculum, and pedagogy. In the case of Malaysian students, bin Mahajar and Yunus (2012) in the study conducted among Universiti Pendidikan Sultan Idris students on inclination towards entrepreneurship, the results revealed that programme of study is positively related to students' entrepreneurial inclination. GEM report points out that Slovenia has been able to multiply emerging entrepreneurs as a result of a special entrepreneurship scheme established for young graduates, which has envisioned business ideas for more than half of the participants (GEM, 2017). Furthermore, in a study among Indian university students, Chaudhary (2017) concludes that business students were more entrepreneurially inclined than non-business students. Mukesh, Abhishek and Rajasekharan (2018) measure the level of entrepreneurship in diverse groups of higher education; universities and colleges, professional and vocational courses and business and management education. They found that management students with entrepreneurial education have a slightly higher entrepreneurial potential than engineering students (non-management). A study carried out by Iwu *et al.* (2016) to evaluate entrepreneurial intention of business and non-business students at University of Technology in South Africa. The results indicate no statistically significant relationship between business students and non-business students' entrepreneurial intention. In addition, Lim *et al.* (2012) with evidence from Malaysia, document that significant relationship does not exist between Business Administration and Accounting students of Malaysia that are of Chinese origin. Consistent with Lim *et al.* (2012), Sandhu *et al.* (2010) report no significant difference among Indians, Chinese, Malays and others on students' entrepreneurial inclination, race and programme enrolled. Meanwhile, there seems to be no defined consensus from past studies whether management students are more entrepreneurially inclined than non-management students (bin Mahajar & Yunus, 2012; Sandhu *et al.*, 2010). Hence the following hypotheses:

Hypothesis 7a: Management students possess high entrepreneurial attitude towards entrepreneurial inclination more than the non-management students.

Hypothesis 7b: Management students possess high entrepreneurial knowledge that tends towards their being more entrepreneurially inclined than the non-management students.

Hypothesis 7c: Management students possess high entrepreneurial venture creation skills that tends towards their being more entrepreneurially inclined than the non-management students.

3.13 Chapter Summary

This chapter has depicted extant literature on entrepreneurship education: influencing students' entrepreneurial inclination in Nigerian universities. It further examined a short history of entrepreneurship, followed by entrepreneurial inclination, and again, entrepreneurship education (entrepreneurial attitude, entrepreneurial inclination and venture creation skills). Also, the chapter described the expected role of biopsychosocial factors as the moderator, theoretical framework anchored by human capital theory, self-efficacy theory, social cognitive theory, and general system theory; it concludes with development of the research hypotheses.

The next important aspect of this study and research in general, is the research methodology, which is presented in the next chapter.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

This chapter describes the detailed methods used to achieve the research objectives set out in this dissertation. However, in choosing the appropriate methods to test the stated assumptions, the guiding principles should be to reflect upon the phenomenon in question and take advantage of methods that will improve the objectivity of the research. In addition, the purpose of any useful research is to obtain outstanding results, but this largely depends on the suitability of the following elements: the research design, research instruments, population sampling technique, data collection procedures and data analysis technique, which are addressed in detail in this chapter.

The discussion focuses on research traditions and methodological approaches to social science and management research. As a result, this dissertation employed a quantitative research methodology to understand entrepreneurial inclination and, most importantly, how to encourage and motivate student entrepreneurs at the university level in an emerging economy like Nigeria. This approach has been adopted because of the nature of this study which requires a better perception from the point of view of students. The chapter is divided into fourteen sections after the introductory section. The second section discusses basic philosophical theories from the perspective of entrepreneurial inclination. Sections three and four contain the research design and population for the study, respectively. The unit of analysis is addressed in section five and the research instrument is found in section six. The reliability and validity test is included in section seven and the pilot study in section eight. Data collection procedures are covered in section nine, while data quality control is included in section ten. Then there are data analysis techniques in section eleven and methodological limitations in section twelve. The ethical standard is covered under section thirteen and the chapter summary concludes the chapter.

4.2 Fundamental Philosophical Theories from Entrepreneurial Inclination Perspective

Research is fundamental to informing knowledge on issues to be examined, strategies to be used, data analysis tools; and the approach is the philosophy by which research questions are appropriately addressed (Yilmaz, 2013; Dawson, 2007). The guiding principle of scientific research is that ontology, epistemology and methodology should be well connected, since they are interrelated. In addition, social science researchers believe that the social phenomenon is driven by fundamental philosophical assumptions (Creswell, 2009a). Furthermore, these philosophical assumptions should be explicit for a

clearer perception of the study, since the researcher puts them in relation with the entrepreneurial inclination.

Potential entrepreneurs are needed as a panacea for graduate unemployment which has become a major social problem in emerging economies. It is perceived that the interaction of the individual and the environment is essential in influencing the thinking and reasoning of prospective entrepreneurs on the social world. Although, scholars have indicated that more in-depth studies are needed on the philosophical assumptions, more important is the role of objectivist, subjectivist and constructionist philosophical paradigms, as it relates to entrepreneurship education (Fayolle, 2013). However, whether a researcher should adopt quantitative (objectivist), or pursue interpretive (positivist) approach depends on the phenomenon being investigated. Furthermore, knowledge is not based on a single paradigm, as it is based on divergent viewpoints, which need to be grounded in theoretical and methodological concepts (Sassmannshausen & Gladbach, 2011). Sir Karl Popper stated that “human knowledge is based not on unchallengeable, rock solid foundations, but rather, on a set of conjectures that can never be proven conclusively, but only disproven” (Bhattacharjee, 2012, p. 8). Hence, the inconclusiveness necessitates moving back and forth between theory and observations.

Thus, the underlying assumptions considered in this study following the procedures for undertaking an empirical research are based on quantitative research design. Sukamolson (2010) argued that quantitative research is associated with the reality of purpose (ontology) and that comprehension of reality should be completely independent (epistemology). Thus, the study of individual behaviour requires detailed observation and measurement of objective reality, which exists all over the world (Creswell, 2003). Besides, there is the belief that the world is governed by laws or theories that are verifiable, in which scientific method is out to test. Furthermore, the perception of the axiological assumption is that the research undertaking should be value-free and impartial; therefore, the research language is based on established (rhetorical) definitions. Further, the methodological procedure follows the deductive logic (theory-testing), the cause and effect, and the results can be generalized as it is assumed to be exact and reliable. These four assumptions are discussed in the next sub-sections.

4.2.1 Ontological Concepts

Ontology is a word from the Greek term ‘*ont*’. Ont means ‘being or existence’ (Antwi & Hamza, 2015). Ontology, therefore, is concerned with what we claim to know and see; the affirmation about what exists in reality in this present world (Potter, 2017; Bhattacharjee, 2012). This concept may point to two contrasting viewpoints: objectivism or constructionism. Realist ontology maintains that there is an existence of an objective real world; however, for human comprehension and understanding, this can only be unravelled by applying the right methods (Antwi & Hamza, 2015; Sukamolson, 2010). In this respect, researchers perceived social reality in three-dimensional approaches: idealism (mental

phenomenon), materialism (entirely independent) and realism (social phenomena) (Potter, 2017). As previously mentioned, ontology is concerned about the nature of what actually exists; discipline and understanding differ, therefore different ontologies might produce different results (Anderson *et al.*, 2012). Farny *et al.*, (2016, p. 516) argued that “entrepreneurship is offered as a meaningful description of social reality whilst prescribing desirable actions and ways of engaging in this world”. Thus, the foregoing suggests that there is a link between reality and the entrepreneurial process that requires empirical examination.

4.2.2 Epistemological Concepts

Epistemology is from the root word ‘*episteme*’ in Greek, meaning knowledge or to know. Potter (2017) defined epistemology as the study of knowledge, whereas Dawson (2007) suggested that it is the study of the nature of knowledge and rationale (how we know what we know). Epistemology basically builds on questioning the validity of what we know as knowledge in terms of reality (Kyrö, 2015). Therefore, what should be the most appropriate way to study the world in order to gain knowledge? This invariably places the paradigm in a functional form, where theories can be developed, formulated, tested and subsequently accepted or rejected (Creswell, 2003).

Yilmaz (2013) asserted that qualitative method is rooted in epistemological assumption, which asserts that social situations are complex and as a result cannot be measured in terms of variables. Quantitative research centres on the worldview of constant reality, and that social phenomenon are separate entities from the researcher; who is independent with the perspectives of objectivity on the events under consideration. This study followed quantitative research since the epistemological notion is based on revealed truth. Therefore a field investigation was carefully conducted with the understanding that research in such paradigm should not be influenced; else the purpose could be defeated.

4.2.3 Axiological Concepts

Kyrö (2015) referred to axiology as what we acknowledge as valuable (ontology) in our world, the roles of these values in relation to knowledge and means of accessing such knowledge (epistemology). The author acknowledged that the interaction of axiology with ontology and epistemology may be related to the “how and what” to learn and teach in entrepreneurship education. In addition, he concluded that connecting axiology with entrepreneurship education necessitates further research. In his own submission, Sukamolson (2010) stated that the axiological assumption of quantitative research is that research must be value-free and unbiased.

4.2.4 Rhetorical Concepts

Rhetorical concept is concerned with the language of research (Yilmaz, 2013). Sukamolson (2010) submitted that it is grounded on fixed definitions, while the style is formal without subjective voice.

4.3 Research Design

Research design is important in any empirical study since an incompatible research design may pose a serious challenge to the researcher, even more important in a doctoral dissertation. As a result, a researcher is expected to have a thorough understanding of common methods, which are quantitative and qualitative. Moreover, each scientific research relies on data coupled with a chosen research technique to examine the research problem and propose a solution to the research questions. Hence, the ability to distinguish between the different research designs will help a researcher to reach a prime conclusion and take a decisive standpoint as to which design to strictly adhere to. Therefore, in a bid to clarify the choice of method adopted in this dissertation, the components being investigated were assessed to reveal the kind of research method to be employed, and means of data collection. The aim is to specify that the methodology chosen for this study corresponds perfectly to the context of the research, as indicated in the literature of previous researchers (Antwi & Hamza, 2015).

The methodology is the procedure for undertaking an empirical research that guides the research process; such as strategies, methods and analysis, and depends on the ontological, epistemological and methodological perceptions of the researcher. Therefore, the methodological process in this study followed the quantitative deductive approach, which is the hypothesis-testing (i.e. testing a theory). Past research has shown that this is apt for exploring entrepreneurial inclination (Edirisinghe & Nimeshi, 2016). A deductive approach investigates ideas and patterns identified from theory based on new empirical data: not only to test that theory, but with the mind-set to advance or extend it (Bhattacharjee, 2012). In this perspective, this research employed theory testing with the belief that what contributes to knowledge should be seen, measured, or empirically supported (Monippally & Pawar, 2010). With deductive procedures, the researcher may go through the literature to assert the relevant theories, and then state identifiable variables that would be tested in the study.

Deductive approach research uses different methods which include experimental and survey research. A researcher longing to verify a known issue comes up with a hypothesis, and by making observations, a given result is derived in order to validate or invalidate the correctness of the statement. The essence of a deductive approach is to examine the hypothesis, and this is majorly by means of questionnaires and or secondary data. McDonald, Gan, Fraser, Oke, and Anderson (2015), in their review, noted that the deductive approach still leads in the area of entrepreneurship. Furthermore, Bhattacharjee (2012) stated that the deductive approach leads to more robust conclusions than the inductive approach, which is primarily conducted through interviews and observations. The adoption of a choice of research

paradigm could be based on the axiological perspective of the researcher as well as the knowledge and experiences of life. The theoretical perspective underlying this research is therefore the realist/objectivist ontology: a belief in an objective, real world, which presupposes that the opinion of peoples can be genuine or pretentious (Antwi & Hamza, 2015). Meanwhile, the philosophical position is empirical epistemology within the positivistic paradigm with deductive approach. The methodology is survey research and the method used is the questionnaire (Creswell, 2003).

4.3.1 Quantitative Design

The quantitative design allows the researcher to use an informed standardized research instrument, which is mainly administered to large representative samples to allow researchers to generalize their findings. The generalization of findings is one of the merits of this approach (Yilmaz, 2013). To achieve this, the focus is on close-ended questionnaires. The evaluation of large participants' responses is simplified through the use of statistical techniques, making the approach easy to analyse, unlike qualitative research where only a fraction of the population is studied extensively.

Previous studies have identified the quantitative method as a long-standing research method used in social science research, which is derived from natural sciences such as sociology, psychology, physics and chemistry (Antwi & Hamza, 2015; Sukamolson, 2010). Furthermore, the study of entrepreneurial inclination requires concurrent views and ideas of the majority, which should not be subjected to minority opinions. Therefore, in order to justify the choice of quantitative data as the most appropriate method and to formulate the research questions, a thorough review of the research methods was considered. It is of the greatest importance to understand the theoretical basis of the types of research and the fundamental principles of the chosen research method in order to obtain appropriate results. (McCusker & Gunaydin, 2015).

Matlay (2008) suggested that studies on entrepreneurship research demands quality and strength anchored by research questions, research design, methodological choice and samples, which typifies the researcher's knowledge, point of interest and level of work experience. In addition, the sources of information used by the researcher are vital and such claims should be authenticated. This includes citations from experts in the field, research monographs, textbooks, Internet, reports, conference proceedings and other relevant publications. Taking this into account, the research method for this dissertation is a positivist method that uses a deductive approach to collect quantitative data (Bhattacharjee, 2012). With deductive procedures, the researcher can go through the literature to assert the relevant theories and then indicate the identifiable variables that would need to be tested in the study. From a positivist point of view, researchers use theoretical tests believing that what contributes to knowledge must be empirically supported (Monippally & Pawar, 2010).

In positivist models, different methodologies can be used to collect quantitative data. Prior research itemized different quantitative research instruments to include surveys, custom surveys, mail/e-mail/internet surveys, telephone surveys, self-administered questionnaire surveys, omnibus surveys, correlational research, trend analysis, exploratory, descriptive and experimental research (Sukamolson, 2010). Survey research is notable among quantitative research instruments and consists of field experiments, field surveys, correlation surveys and comparative causal research.

Table 4-1: Differences between Quantitative and Qualitative Research Approaches

Orientation	Quantitative approach	Qualitative approach
Paradigm/Worldview (assumption about the world)	Positivism/Realism	Interpretivism/Idealism
Research purpose (rationale)	Numerical description Causal explanation Prediction	Subjective description Empathetic understanding Exploration
Ontology (nature of reality)		
Epistemology (theory of knowledge)	Dualist/Objectivist	Subjectivist
Methodology (aims of scientific investigation)	Experimental/Manipulative	Hermeneutical/Dialectical
Research methods (technique and tools)	Empirical examination Measurement Hypothesis testing Randomization Blinding Structured protocols Questionnaires	Ethnographies Case Studies Narrative research Interviews Focus group discussion Observations Field notes Recordings and filming
Scientific method (role of theory)	Deductive approach Testing theory	Inductive approach Generation of theory
Nature of Data Instruments	Variables structured and validated- data collection instrument	Words, images, categories In-depth interviews, participant observation, field notes, and open ended questions
Data Analysis	Identify statistical relationship among variables	Use descriptive data, search for data, themes and holistic features
Results	Generalizable findings	Findings: provision of insider viewpoints
Final report	Formal statistical report with: Correlations Comparisons of means Reporting of statistical significance of findings	Informal narrative report

Source: **Adapted from Antwi and Hamza (2015)**

4.3.2 Justification for Quantitative Approach

Considering qualitative, quantitative and mixed methods as different forms of data collection, each of them has strengths and weaknesses as well as different ontological, epistemological and methodological characteristics (Yilmaz, 2013; Dawson, 2007). However, the method to be employed in research approaches from a social science and management perspective is dependent on the vision and purpose of the individual. McCusker and Gunaydin (2015) noted that the qualitative method generates words rather than numbers and that, when answering a question, the personality of the researchers can negatively or positively influence respondents. Although it requires a small sample, it does take time as the researcher will engage participants individually, not collectively, therefore, the researcher's world view is subjective; therefore, the outcome cannot be generalised.

In the case of mixed methods, certain underlying challenges are incorporated, such as the timing of the research, the resources and expertise required for both methods (Jick, 1979). Creswell and Clark (2011) suggested that where a data source is sufficient to understand the research objectives, the idea of mixed methodologies should be abandoned; otherwise, this will result in duplication of effort and, consequently, a waste of resources. Therefore, using a better option in this dissertation by reaching a greater number of participants seems plausible than a fractional number of students, and this can be achieved through quantitative approach.

Researchers have many reasons for using quantitative design and some of them are described below. It is effective in quantifying opinions, attitudes and behaviour. It deals with 'how many' or 'how much' in order to proffer solution to research questions. It aims at measuring the social reality that is in line with the positivist philosophical approach. In the quantitative method, the researchers are well fixed on the desired result, which makes it possible to prepare premeditated questions in advance. Moreover, the desired information can be gathered from different categories of persons without the intervention of the researcher, so that this approach measures reality and not an assumption of what is expected. Thus, it is explained by objectivist epistemology; while it analyses "causal relationships between isolated variables within a framework that is value-free, logical, reductionistic and deterministic, based on *a priori* theories" (Yilmaz, 2013, p. 312).

Another significant reason for using quantitative design is that it uses different tools to gather numerical data. These tools include standardized questionnaires and psychological tests with worded questions (Antwi & Hamza, 2015), unlike qualitative data, which are not numerical and cannot be analysed statistically. Moreover, a quantitative research is not rigid. This flexibility permits large sample of data to be collected, more importantly, when data is required for comparison between groups, and results can be easily generated through statistical techniques. In addition, quantitative researchers reflect on world views objectively. Therefore, to study social phenomena, the researcher is

quite separate and independent of the subjects while the researcher endeavours as much as possible to be unbiased (Yilmaz, 2013).

Logically, each of these methods has both strengths and weaknesses; however, using mono method in research dissertation may be more appropriate. The final reason for choosing this method is attested to by Sekaran and Bougie (2016). They stated that a scientific research gains more confidence when the findings can be replicated over and over with the same results. Therefore, based on this study's research objectives, quantitative method is considered the most appropriate, as recommended in the literature to be a notable approach (McDonald *et al.*, 2015; Bhattacharjee, 2012).

4.3.3 Cross-sectional Survey

Questionnaire-based survey uses scientific sampling and questionnaire design, and it has been well-established as the traditional sampling technique (Creswell, 2003). Survey research can be considered in two ways: it can either be cross-sectional or longitudinal survey. Examples of survey research include telephone interviews, face-to-face interviews and self-administered questionnaires. To achieve the research objectives and answer the research questions in this dissertation, the research design and method was premised on having individual responses by surveying a sample from the population and the most appropriate means was questionnaire survey. This method has merits such as the intensity of external validity, as it can engage large sample size, and it also gives room for comparison between groups. In addition, it is useful for hypothesis testing and the findings can be generalized (Sukamolson, 2010). On the other hand, it is deficient in internal validity as the independent variable cannot be influenced. Another demerit is that it is not free from respondent's prejudices (Bhattacharjee, 2012). However, a focus on the strengths and not the weaknesses makes it a better option to be explored in this research. Therefore, deductive approach was used in acquiring quantitative data, with cross-sectional field survey at various academic institutions.

Cross-sectional survey employed in this dissertation has been identified as the most widely used in data gathering (Nabi *et al.*, 2017). Moreover, longitudinal survey design is less preferable because of the regulated time frame involved in this dissertation. Cross-sectional survey is cost efficient and less time consuming and it is well-recognized in social and management science research. The researcher collected data once off from the respondents under examination in their various universities. The survey was directed towards evaluating entrepreneurship education in Nigeria and in shaping entrepreneurial inclination of university students.

4.4 Population of the Study

The research population consists of those within the scope of the research interest at that period of data gathering (Hair, Black, Babin, & Anderson, 2010). The strength of information depends on the quality

of data gathered from that population. Therefore, getting the right population is a critical research process. Hence, selecting the population sample for this study out of the six geo-political zones was hectic. The reason is because Nigeria is such a multifaceted country with the incessant tribal agitation from every nook and cranny of the country. This makes the issue more problematic. The targeted population of the study in this dissertation encompassed Nigerian universities (both public and private) in the South West geo-political zone, out of which five universities were selected.

All the States in the geo-political zone were covered with the exception of Oyo State. However, Lagos has a larger representation of Nigerians from a wider coverage point of view. It embodies people of varied upbringing in terms of gender, age, education and social status. Therefore, Lagos as a city is sufficient for any general knowledge about Nigeria where the majority of the socialites live. Adekola *et al.* (2016) and Jeffry (2012) maintained that the unending search for greener pasture has been the cause of influx of people into Lagos from every State of Nigeria. As a result, all undergraduate final year students from the six geo-political zones were represented, making the findings generalizable and so substantiating its external validity. Although the data was collected from the universities in the South West geopolitical zone of Nigeria, it could be generalized for the entire country as all the universities in Nigeria operate the same curriculum as provided by The National Universities Commission.

4.4.1 Respondents' Domain

The targeted group was selected from various departments in each of the five universities. All the selected groups were represented, and each institution was given 110 questionnaires to administer: this added up to 550 questionnaires in all. Following Koloba (2016), the final-year students are well-positioned to provide critical assessments of their entrepreneurial capabilities. Moreover, the university students are appropriate because they are at par in age and academic qualifications; as such, they constitute a homogeneous group. Fernandez-Cornejo *et al.* (2018) discussed that university students are energetic adults who are set to proceed with their vision to the labour market and probably own a family.

Both probability and non-probability sampling techniques can be employed in sample selection (Fayomi, 2017; Ranwala & Dissanayake, 2016). However, convenience sampling method is commonly used by researchers (Cummins *et al.*, 2010). In this dissertation, the convenience sampling method was used for the sample selection process. This method was adopted based on its merits, such as, ease of access to the participants, time and cost effectiveness.

The university ownership structure in Nigeria comprises of three categories, which are Federal, State and Private. For this study, two universities each from Federal and State categories and one private university were selected making a total of five universities, all from the South-West geo-political zone

of Nigeria. Any university in the list of accredited universities in Nigeria and within the South-West geo-political zone was eligible for selection. However, the Gate Keeper Consent received from the five universities made it possible to administer the questionnaires in those institutions.

Table 4-2: List of Federal Universities in South-West Nigeria

S/No.	Name	YOE	Regime Era	Location
1.	Federal University, Oye Ekiti	2011	Goodluck Ebele Jonathan	Ekiti State
2.	University of Lagos, Lagos	1962	Abubakar Tafawa Balewa	Lagos State
3.	Federal University of Agriculture, Abeokuta	1981	Shehu Shagari	Ogun State
4.	Federal University of Technology, Akure	1981	Shehu Shagari	Ondo State
5.	Obafemi Awolowo University, Ile Ife	1962	Tafawa Balewa	Osun State
6.	The University of Ibadan	1948	British	Oyo State

Source: **Author's survey (2019), YOE = Year of establishment**

Table 4-3: List of State Universities in South-West Nigeria

S/No.	Name	YOE	During the regime of	Location
1.	Ekiti State University, Ado-Ekiti	1982	Adekunle Ajasin	Ekiti State
2.	Lagos State University, Ojo	1983	Lateef Kayode Jakande	Lagos State
3.	Olabisi Onabanjo University, Ago-Iwoye	1982	Olabisi Onabanjo	Ogun State
4.	Adekunle Ajasin University, Akungba-Akoko	1999	Adebayo Adefarati	Ondo State
5.	Ondo State University of Science and Technology, Okitipupa	2010	Olusegun Agagu	Ondo State
6.	University of Medical Sciences, Ondo	2015	Olusegun Mimiko	Ondo State
7.	Osun State University, Osogbo	2007	Olagunsoye Oyinlola	Osun State
8.	Ladoke Akintola University, Ogbomosho	1990	Sasaenia Oresanya	Oyo State

Source: **Author's survey (2019), YOE = Year of establishment**

Table 4-4: Faith-Based Private Universities in South-West Nigeria

S/No.	Name	YOE	Established by	Location
1.	Anchor University, Ayobo	2014	Deeper Christian Life Ministry	Lagos State
2.	Babcock University, Remo	1999	Seventh-Day Adventist Church	Ogun State
3.	Covenant University, Ota	2002	Living Faith Church	Ogun State
4.	Crawford University	2005	Apostolic Faith Mission	Ogun State
5.	Mountain Top University, Makogi Oba	2015	Mountain of Fire Ministries	Ogun State
6.	Wesley University, Ondo	2007	Methodist Church of Nigeria	Ondo State
7.	BOWEN University, Iwo	2002	Nigerian Baptist Convention	Osun state
8.	Joseph Ayo Babalola University, Ikeji-Arakeji	2006	Christ Apostolic Church	Osun State
9.	Redeemer's University, Ede	2005	The Redeemed Christian Church of God	Osun State
10.	Ajayi Crowther University, Ibadan	2005	Supra Diocesan Board of the Church of Nigeria	Oyo State

Source: Author's survey (2019), YOE = Year of Establishment

Table 4-5: Universities Selected for the Study

S/No.	Owned by	Total	No Sampled
1.	The Federal government	06	02
2.	The State government	08	02
3.	Private organization	10	01
	Total	24	05

4.4.2 Sampling Design and Sample Population

Sampling is a process whereby certain group of people are selected from a specific population for statistical analytical purposes. It will be of value to have an entire population sampled by researchers. But this could be on rare occasion either with qualitative or quantitative data, and in reality, this may be impossible due to time constraints and costs (Chuan, 2006). Therefore, the ultimate is getting a specific sample size (Gogtay, 2010). Having an estimated sample size from a given population that is sufficient to draw a conclusion for the results to be generalized is considered important. The

determination of the sample size from a given population is not based on a mono method. Rather, it depends on the type of data the researcher is interested in; either quantitative or qualitative.

Scholars have suggested different methods and formulae for calculating the sample size (Chuan, 2006; Gogtay, 2010). However, Krejcie and Morgan (1970) provided a procedure for doing this with a standard formula as well as a given table. This table contains population (N) of 10 to 1 million with their expected sample size (S). For instance, in a population of 10,000, 40,000 and 1,000,000, the required sample size should be 370, 380 and 384 respectively (Krejcie & Morgan, 1970). The total population of the five universities selected is less than 200,000. Following Krejcie and Morgan (1970), in a given population of 75,000 and above, the suggested appropriate sample size is 382. Using a large sample size is one of the merits of quantitative research method; moreover, a larger sample size produces greater reliability. Therefore, the sample size was increased by 43% in order to minimize low response rate from the respondents, especially in Nigeria where students are known to be restive at the dawn of examinations. For the purpose of this dissertation and to satisfy the requirement as suggested in the literature a total number of 550 questionnaires were distributed.

There was adherence to strict confidentiality of information in this study. Therefore, in order to adhere to this undertaking and protect the anonymity of those universities, the use of pseudonyms was embraced. Questionnaires were administered evenly in these five universities in the South-West geo-political zone. In addition, these institutions were preferred in this study for cost efficiency and ease of access. Besides, they were the ones whose management consented that their students should serve as respondents for the study through their granting of the Gate Keeper Consent.

4.5 Unit of Analysis

The unit of analysis in research studies can be individuals, groups, firms and objects the researcher desires to investigate. This is one of the significant decisions in social science research (Bhattacharjee, 2012). Thus, the unit of analysis guides the researcher in following the right method for data gathering, knowing and getting the required sample size, and the research instrument to be explored. Hence, it should not be compromised. However, in nurturing competent entrepreneurs, individuals with practical knowledge and experience in the business world have been suggested as would-be appropriate unit of analysis to be examined. This is one of the important aspects to be resolved in entrepreneurship education. This requires identifying what should be considered as a unit of analysis (postgraduate / undergraduates / combination of postgraduate and undergraduates)? Previous studies have considered issues on entrepreneurship education using both postgraduate and undergraduate students as unit of analysis (Yusof & Sandhu, 2007). On the other hand, Ranwala and Dissanayake (2016) surveyed undergraduates generally without considering their level of entrepreneurial knowledge that can impact on their entrepreneurial decision. Moreover, having only postgraduate students could undermine the

findings because majority of them could be gainfully employed, therefore, entrepreneurship may be handled with levity (Odewale, Abd Rani, Migiro, & Adeyeye, 2019b; Rae & Woodier-Harris, 2012).

Thus, the widely held practice in past studies on entrepreneurial inclination focused on individuals and in most cases the final year students have been examined as unit of analysis (Aboho *et al.*, 2016; Okeke *et al.*, 2016; Asamani & Mensah, 2013; bin Mahajar & Yunus, 2012; Keat *et al.*, 2011; Olomi & Sinyamule, 2009). This study centres on the entrepreneurial inclination among university students in Nigeria, and the unit of analysis used was the individual student. Final year students were selected because of the assumption that they must have completed their entrepreneurial modules to enable them decide on their choice on entrepreneurial activities. This should have contributed immensely to their vision as budding entrepreneurs and with strong impact on their inclination or disposition towards entrepreneurial activities (Okeke *et al.*, 2016). Participation was without coercion and they were at liberty to withdraw without any coercion prior to completion of the questionnaire. Besides, as final year students, since the present unemployment predicament in Nigeria is worrisome, it is possible that this could raise their aspiration to take deep thought on entrepreneurial venture after graduation (Aboho *et al.*, 2016).

4.6 Research Instrument

Another significant aspect in every empirical research is the data collection stage. However, it is not all data that can be readily addressed because they are not in quantitative structure. This necessitates the use of research instruments, which must be set right by providing quantitative data that can be evaluated statistically. Therefore, in order to provide a reliable data that will make meaningful contribution to the body of knowledge, standardized research instruments must be used. The questionnaire-based survey is a scientific method (Creswell, 2003) used in this study to identify characteristic variables of respondents, their attitude towards entrepreneurship education, knowledge, skills as well as their level of entrepreneurial inclination. Furthermore, the moderator variable considers participants' view on innovativeness, passion and government policy in line with entrepreneurial inclination.

For the purpose of accomplishing the research objectives, this section depicts each stage of the assessment instrument. The research instrument was designed following established and authenticated instruments (Parveen *et al.*, 2018). According to Wu and Wu (2008), there are steps to be followed while constructing the questionnaire. These steps include considering related past studies, developing definite items in line with theory and seeking advice from experts in the field as well as statistician's counsel. One of the notable instruments in entrepreneurship studies is Liñán and Chen's (2009) instrument. However, they suggested that the questionnaire should be replicated with modifications.

4.6.1 Measurement of Constructs

Theories are tested by measuring certain constructs in a concise and scientific form. Some are easy to measure such as age and weight, but some phenomena are not; and such must be conceptualized and operationalized to enable precise measurement (Bhattacharjee, 2012). Conceptualization is simplifying a general term to a measurable concrete term in order to fully understand what the concept implies. Scientific research requires operational definitions that define constructs in terms of how they will be empirically measured. Operationalization means itemizing required indicators for measuring a given construct. The following variables were conceptualized and equally operationalized: entrepreneurial attitude, entrepreneurial knowledge and venture creation skills as independent variables, while entrepreneurial inclination is the dependent variable. In addition, biopsychosocial factors is the moderator variable comprising gender, previous work experience, family financial status, innovativeness, passion and government policy.

However, questionnaire functions as the main data gathering instrument guided by a Likert scale rating system. This research employed structured questionnaire based on the Likert scale, drawn and reviewed by a Statistician. Likert scale is a method of studying respondents' level of agreement with some statements in a parametric guide. It is a commonly used rating scale that allows respondents to align with only one out of the five or more responses in a series of statements conveyed by the researcher (Schmidt & Hollensen, 2006). There are different schools of thought on the precise points to be used, either 5 or 7. However, Bendig (1954) and Komorita (1963) (as cited in Matell & Jacoby, 1971) made it explicit in their empirical investigations that regardless of the number of scale employed, reliability is impartial. For example, Masrek and Gaskin (2016) used a 5-point Likert scale represented as 1 for "Strongly Disagree"; 2 for "Disagree"; 3 for "Neither Agree Nor Disagree"; 4 for "Agree" and 5 for "Strongly Agree", while Ogbeibu, Senadjki, and Gaskin (2018) and Rauch and Hulsink (2015) used a 7-point Likert scale for their studies.

With this in mind, following Masrek and Gaskin (2016), the questionnaire for this dissertation was designed based on a 5-point Likert scale. This ranges from strongly disagree, disagree, neither agree nor disagree, agree to strongly agree. Hence, the development of the questionnaire explored in this study followed a proven scale of measurement from the literature based on related subject. Moreover, the research instrument was further substantiated by subjecting it to face and content validity to be sure of its exactness and relevance in the research setting. Schmidt and Hollensen (2006) agreed that it is one of the common validation methods.

The purpose of face and content validity is to ascertain completeness, quality and whether all the right items were included in the questionnaire. In this research, this was carried out by some experts. The first person was my supervisor, who is an expert in questionnaire design. Next was a Professor in entrepreneurship, followed by a Senior Lecturer that also used questionnaire for his PhD programme,

and last but not the least, was another Senior Lecturer. Although, face and content validity centres on expert's perspective on the test topic, however, the assessment of the scale could be based on individual's beliefs and values, making such judgment subjective. Furthermore, each questionnaire had a cover letter with a brief background of the study, which emphasized the significance of the research as well as the researcher's name and contact details.

This research took the form of a cross-sectional design to administer questionnaire survey in order to ascertain whether biopsychosocial factors as the moderator could influence entrepreneurial education and students' entrepreneurial inclination in selected Nigerian universities. The questionnaire survey integrated three comprehensive set of items. First, Part 1 was designed to represent questions on demographic characteristics; second, Part 2 aimed at four different variables which are entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination (sections A-D). The last segment, Part 3, focused on the moderator variable (biopsychosocial factors) (sections A-D).

4.6.2 Part 1 - Identifying Respondents

This section presents questions on demographic characteristics, and previous studies have measured demographic attributes in numerous ways. For this study, respondents' demographic data captured the following: gender, age, parents' employment history, ethnicity, programme of study, working experience and family annual income (Ramaswamy, 2013; Keat *et al.*, 2011).

Gender (male and female), as a variable, has been examined extensively in entrepreneurship studies by scholars like Gurgel *et al.* (2014). Respondents are to indicate their age group (Below 20 years, 20-24 years, 25-29 years and above 30 years). For the categorization of parents' employment history in this study, it was stated as self-employed parents (Yes or No). Next is ethnic group, which consist the six geo-political zones in Nigeria (South South, South East, South West, North Central, North East and North West). Programme of study in the demographic data includes Business/Management Science, Engineering, Sciences, Computing and others. In addition, respondents were required to indicate their working experience (Yes or No). Furthermore, the family annual income of the respondents was considered in the demographic setting of this study in the following order (Below ₦1million; ₦1 - ₦3 million; ₦3 - ₦6 million; ₦6 - ₦12 million; ₦12 - ₦25million, and above ₦25 million).

4.6.3 Part 2 - Entrepreneurial Focus

This section centres on four different variables, which are entrepreneurial attitude, entrepreneurial knowledge, venture creation skills (constructs to measure independent variables), and entrepreneurial inclination as the dependent variable. This segment presents forty statements about entrepreneurship education and entrepreneurial inclination. The students were requested to respond to each of the

questions by ticking their preferred scale on the Likert Scale from strongly disagree to strongly agree. The measures for these four variables are now discussed hereunder.

4.6.3.1 Entrepreneurial Attitude

Entrepreneurial attitude is defined in this study as the deep motivation for business engagement and earnest longing towards entrepreneurial activities. Based on related literature, this study adapted measurement used by different scholars (Gafar *et al.*, 2015; Liñán & Chen, 2009; Phan, Wong & Wang, 2002; Robinson *et al.*, 1991). Consequently, following Masrek and Gaskin (2016), the responses comprise a 5-point Likert scale, starting with Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-6.

Table 4-6: Measures of Entrepreneurial Attitude

Construct	Code	Survey Items	Source
Entrepreneurial Attitude	ENA 01	I can sacrifice personal comfort in order to take advantage of business opportunities.	Gafar <i>et al.</i> , (2015); Liñán & Chen (2009); Phan <i>et al.</i> (2002); Robinson <i>et al.</i> (1991)
	ENA 02	Being an entrepreneur implies more advantages than disadvantages to me.	
	ENA 03	If I had the opportunity and resources, I'd like to start a firm.	
	ENA 04	I know that social and economic conditions will not affect my success in business.	
	ENA 05	Among various options, I would rather be an entrepreneur.	
	ENA 06	I believe that concrete results are necessary in order to judge business success.	
	ENA 07	I get a sense of accomplishment from the pursuit of my business opportunities.	
	ENA 08	Being an entrepreneur would entail great satisfactions for me.	
	ENA 09	I believe it is important to analyse your own weaknesses in business dealings.	
	ENA 10	Education at the university is adequate for entrepreneurial success.	

4.6.3.2 Entrepreneurial Knowledge

Entrepreneurial knowledge is defined as the acquisition of pre-requisite know-how by the potential entrepreneur via entrepreneurship education. Following previous literature, this study adapted the measurement from Matlay (2008), Pretorius and Włodarczyk (2007), and Robinson *et al.* (1991). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting

with: Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-7.

Table 4-7: Measures of Entrepreneurial Knowledge

Construct	Code	Survey Items	Source
Entrepreneurial Knowledge	ENK 01	Entrepreneurship courses and programmes I attended ... empowered my ability to identify and evaluate business opportunities.	Matlay (2008); Pretorius & Włodarczyk (2007); Robinson <i>et al.</i> (1991)
	ENK 02	... increased my readiness to start a firm and keep it working.	
	ENK 03	... sharpened my ability to develop business plan and entrepreneurial project.	
	ENK 04	... enhanced my financial capability and management skills.	
	ENK 05	... heightened my morale on the probability of succeeding.	
	ENK 06	... changed my perception about risk taking propensity.	
	ENK 07	... enhanced my creativity and innovativeness.	
	ENK 08	... broadened my opportunity recognition.	
	ENK 09	... increased my understanding of the attitudes, values and motivations of entrepreneurs.	
	ENK 10	... inspired my networking and e-business.	

4.6.3.3 Venture Creation Skills

This study defines venture creation skills as the fundamental expertise needed by potential entrepreneurs for efficiency and effectiveness in entrepreneurial activities. The items for measurement were adapted from the following authors: Gafar *et al.*, 2015; Omerzel & Antoncic, 2008; Matlay, 2008; Pretorius & Włodarczyk, 2007). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with; Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-8.

Table 4-8: Measures of Venture Creation Skills

Construct	Code	Survey Items	Source
Venture creation skills		From entrepreneurship courses and programmes I attended I have learnt ...	Gafar <i>et al.</i> (2015); Omerzel & Antoncic (2008); Matlay (2008); Pretorius & Włodarczyk (2007)
	VCS 01	... business strategy skills (value creation, market or target segment, competitive advantage).	
	VCS 02	... business idea development (specific training, idea lab, business incubator).	

VCS 03	... business risk (political instability, commercial risk, risk management).
VCS 04	... business planning (strategic planning, project planning).
VCS 05	... human resource issues (labour laws, labour productivity, labour turnover).
VCS 06	... macro-environmental issues (inflation, exchange rate, interest rate).
VCS 07	... marketing related issues (SWOT of competitors, effective market, packaging).
VCS 08	... financial issues (financial planning, cash flow, obtaining credit facilities, management of consumer credit).
VCS 09	... management functions (changes in business environment, time management, effective control).
VCS 10	... e-business (understanding e-business, assessing and providing internet information).

4.6.3.4 Entrepreneurial Inclination

Entrepreneurial inclination is defined in this study as readiness to seize every opportunity to create ventures by integrating contextual factors with passion, innovativeness and resilient determination to succeed. The items for measurement in this section were adapted from Keat *et al.* (2011), Liñán and Chen (2009), and Mohar, Manjit & Jain (2008). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-9.

Table 4-9: Measures of Entrepreneurial Inclination

Construct	Code	Survey Items	Source
Entrepreneurial Inclination	ENI 01	I have strong plans to venture into business once I finish my studies.	Keat <i>et al.</i> (2011); Liñán & Chen (2009); (Mohar <i>et al.</i> , 2008)
	ENI 02	I am interested in starting my own business.	
	ENI 03	I am always inclined towards entrepreneurship.	
	ENI 04	I see myself becoming an entrepreneur someday.	
	ENI 05	I have strong desire to be the owner of my own business.	
	ENI 06	There are not many business/entrepreneurial opportunities in Nigeria.	
	ENI 07	Nigeria socio and economic environment is highly supportive of entrepreneurship.	
	ENI 08	I am ready to make every effort to become an entrepreneur.	

ENI 09	My professional goal is becoming an entrepreneur.
ENI 10	I will make every effort to start and run my own business.

4.6.4 Part 3 - Strategic Factors

This section incorporates questions on biopsychosocial factors as the moderator variable between entrepreneurship education and entrepreneurial inclination. The biopsychosocial questions comprise forty-nine statements about psychological, behavioural and environmental factors. The essence of this section is to reveal whether a combination of factors such as innovativeness, risk-taking, passion, government policy and role models can cause attitudinal changes in students' entrepreneurial inclination. A 5-point Likert Scale was also used to measure biopsychosocial survey, which comprises Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5.

4.6.4.1 Innovativeness

Innovativeness is considered an indispensable tool required by entrepreneurs to remain vibrant and valuable in business creation. This section adapted the measurement employed by Robinson *et al.* (1991). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with; Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-10.

Table 4-10: Measures of Innovativeness

Construct	Code	Survey Items	Source
Innovativeness	PFI 01	I feel very energetic working with innovative colleagues in a dynamic business climate.	Robinson <i>et al.</i> (1991)
	PFI 02	Most of my time is spent working on several business ideas at the same time.	
	PFI 03	I believe that to become successful in business you must spend some time every day in developing new opportunities.	
	PFI 04	I believe it is important to continually look for new ways to do things in business.	
	PFI 05	I enjoy finding good solutions for problems nobody has looked at yet.	
	PFI 06	I feel terribly restricted being tied down to tightly organized business activities, even when I am in control.	
	PFI 07	I believe that in order to succeed, one must conform to accepted business practices.	

PFI 08	I believe that organizations which do not experience radical changes now and then tend to get stuck in a rut.
PFI 09	I believe in being able to use old business concepts in new ways.

4.6.4.2 Risk Taking

Potential entrepreneurs cannot be delineated through risk taking propensity alone; however, it remains a strong factor in entrepreneurial studies. This section adapted the measurement by Meertens and Lion (2008) and Rohrmann (2005). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with; Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-11.

Table 4-11: Measures of Risk-taking

Construct	Code	Survey Items	Source
Risk-taking	PFR 01	I see the possibility of starting a new business as a potential opportunity to pursue.	Meertens & Lion (2008); Rohrmann (2005)
	PFR 02	The probability of a new venture doing poorly is very high.	
	PFR 03	I can manage and withstand business risk.	
	PFR 04	I see the possibility of starting a business as a potential loss.	
	PFR 05	I do not take risk with my health.	
	PFR 06	I usually view risks as a challenge.	
	PFR 07	Starting a new business is very risky.	
	PFR 08	I dislike stress, therefore I prefer to avoid risks.	
	PFR 09	I would label the option of starting a new business as something positive.	
	PFR 10	If I do not start my own business I may be missing a great opportunity.	

4.6.4.3 Passion

Passion remains one of the pertinent ingredients in managing a successful business venture and it cuts across different disciplines. The items for measurement in this section were adapted from the following studies: Dabale and Masese (2014) and Fellnhofer (2017). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with Strongly Disagree = 1,

Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-12.

Table 4-12: Measures of Passion

Construct	Code	Survey Items	Source
Passion	BFP 01	It is exciting to figure out new ways to solve unmet market needs that can be commercialized.	Dabale & Masese (2014); Fellnhofer (2017)
	BFP 02	Searching for new ideas for products and services appears enjoyable to me.	
	BFP 03	Scanning the environment for new opportunities really excites me.	
	BFP 04	Establishing a new company seems exciting to me.	
	BFP 05	Pushing myself to make my business better will motivates me.	
	BFP 06	Nurturing a new business through its emerging success will be enjoyable.	
	BFP 07	Owning my own business will energize me.	
	BFP 08	Being the founder of a business could turn out to be an important part of me.	
	BFP 09	Reading books on entrepreneurship seems very important to me.	
	BFP 10	Passionately longing to start my own venture.	

4.6.4.4 Government Policy

The extant inability to contribute positively to economic growth and development via nascent entrepreneurs may depend on the inadequacy of governmental support in Nigeria. This section adapted the measurement used by Busenitz, Gómez, and Spencer (2000). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-13.

Table 4-13: Measures of Government Policy

Construct	Code	Survey Items	Source
Government policy		I will be an entrepreneur if ...	Busenitz <i>et al.</i> (2000)
	EFG 01	... government organizations in this country assist individuals with starting their own business.	
	EFG 02	... government sets aside government contracts for new and small businesses.	
	EFG 03	... local and national governments have special	

support available for individuals who want to start a new business.

EFG 04	... the government sponsors organizations to help new businesses develop.
EFG 05	... even after failing in an earlier business, the government assists entrepreneurs in starting again.
EFG 06	... turning new ideas into businesses is an admired career path in this country.
EFG 07	... entrepreneurs are admired in this country.
EFG 08	... individuals know how to legally protect new business.
EFG 09	... most people know where to find information about markets for their products.
EFG 10	... e-government contributes to start up business success and growth.

4.6.4.5 Role models

An entrepreneurial role model helps to pilot, direct, motivate and instruct on ‘how it is done’. Networking, brainstorming and collaboration with experts can build a long lasting business. This section adapted items of measurement from Fellnhöfer (2017). Following Masrek and Gaskin (2016), the responses were scored on a 5-point Likert scale, starting with Strongly Disagree = 1, Disagree = 2, Neither Agree nor Disagree = 3, Agree = 4 and Strongly Agree = 5. This is presented in Table 4-14.

Table 4-14: Measures of Role Models

Construct	Code	Survey Items	Source
Role Models	EFR 01	There is an entrepreneurial person in my immediate family I am trying to be like in my career pursuit.	Fellnhöfer (2017)
	EFR 02	There is an entrepreneurial person particularly inspirational to me in my career path.	
	EFR 03	In the career path I am pursuing, there is an entrepreneurial person I admire with passion.	
	EFR 04	I have a mentor from real business world as a potential entrepreneurial person.	
	EFR 05	Students are encouraged to establish their own business based on active support for the start-up of new businesses by successful entrepreneurs.	
	EFR 06	An existing supportive university environment inspires my ideas for new business and entrepreneurial career path.	
	EFR 07	The university provides resources to assist and	

encourage student entrepreneurs.

EFR 08	Having a personal mentor with good business ideas will increase the start-up of new businesses.
EFR 09	There are no role models in my immediate environments.
EFR 10	Entrepreneurial and business educational programmes from real business world would help students to start businesses.

4.7 Reliability and Validity Test

Reliability and validity, also known as psychometric properties of measurement scales (Bhattacharjee, 2012) determine the appropriateness of the constructs being employed. Yilmaz (2013, p. 317) stated that “reliability means consistency or the degree to which a research instrument measures a given variable consistently every time it is used under the same condition with the same subjects”. It is essential to ensure that research instruments offer a reliable data in order to guide against erroneous results. Types of reliability include test-retest reliability (administering the same test twice in a single group with positive correlation) and parallel forms reliability (administering the same test to measure the same feature with high correlation). Others are internal consistency reliability (having a research instrument that measures the same thing and with result that is positively correlated) and inter-rater reliability (evaluating a set of objects with consistent results among raters) (Yilmaz, 2013).

However, subjecting the research instrument to both face and content validity (how indicators cover all facets of the construct) is crucial by relying on experts in the field as well as experienced researchers (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014b). Internal consistency can be measured using Cronbach Alpha, and Composite Reliability is employed to further validate the reliability of the constructs. Cronbach Alpha is an index of reliability that ranges in value from 0 - 1. Tavakol and Dennick (2011) stated that the expected acceptable range should be between 0.70 - 0.95. On the contrary, Hair, Anderson, Tatham and Black (1998) suggested that scores between 0.60 and 0.70 are appropriate within the lower limit of acceptability. Studies have revealed that Cronbach Alpha is one of the most acceptable statistical instruments for testing the level of reliability of a data set (Tavakol & Dennick, 2011). It helps to determine the consistency and trustworthiness of measurement scales and the construct items. Although, all items used for this study stemmed from related studies, Cronbach’s Alpha coefficient and Composite Reliability were used to measure the internal consistency reliability.

Test of validity was considered after affirming the reliability of the measurement instruments. Validity centres on the degree to which an instrument examines what is proposed to measure (Tavakol & Dennick, 2011). Structural and content validities must be taken into consideration while developing the research instrument. Convergent validity can be evaluated using factor analysis, while discriminant

validity may be assessed on correlations and empirical validity may be established on structural equation modelling.

Reliability and validity analyses are required in quantitative studies to evaluate the adequacy of the instrument to be measured (Dawson, 2007) as both reliability and validity are interrelated. The development and functional assessment of instruments depend on its ability to measure what they are intended to measure. The authenticity of the research instrument was confirmed with some modifications on the items in the questionnaire, as suggested by experts. This study used confirmatory factor analysis within structural equation modelling to evaluate the validity of the measurement model. Byrne (2001) asserted that using confirmatory factor analysis in the investigation of constructs validity started about 30 years ago and that it has been one of the challenging approaches. The necessary requirements for these two tests are stated in Table 4-15.

Table 4-15: Reliability and Validity Requirements

Reliability		Criteria
1	Internal reliability	When the value of Cronbach's Alpha is greater than 0.6, the internal reliability is realized.
2	Construct reliability	Latent construct represents reliability and internal consistency of the measured variables; it requires a value of CR greater than 0.6.
3	Average Variance Extracted (AVE)	AVE is the average percentage of variation explained by the items in a construct.
Validity		Criteria
1	Convergent validity	Convergent validity is justifiable when all items in a measurement model are statistically significant and it can equally be established via AVE.
2	Construct validity	Construct validity could be acceptable when the fitness indexes (absolute fit, incremental fit and parsimonious fit) are healthy.
3	Discriminant validity	Discriminant validity is established when the measurement model is free from redundant items and it can also be verified when the correlation between each pair of exogenous construct is less than 0.85.

Source: **Adapted from Ahmad, Zulkurnain and Khairushalimi (2016)**

4.8 Pilot Study

A good research design needs to be valid and reliable, therefore, a pilot study is needful before the commencement of the major study as this will indicate "if the questionnaire is appropriate and if the variables are properly understood" (Omerzel & Antoncic, 2008, p. 1186). Moreover, pilot study is essential to mitigate futuristic problems, and also, to authenticate the validity of what is to be measured as well as the reliability of the constructs and its internal consistency (Bhattacharjee, 2012; Tavakol &

Dennick, 2011). The essence of the pilot study therefore, is to verify the appropriateness of the research instrument.

Prior to administering questionnaires for this study, the questionnaire was piloted in two universities where 150 questionnaires were distributed. The result of the Cronbach's alpha values for entrepreneurial inclination, entrepreneurial attitude, entrepreneurial knowledge, venture creation skills, passion, government policy, risk taking and entrepreneurial role models, were well above 0.70.

However, following the feedback, more importantly, some comments from the respondents helped in no small way to improve and filter some clumsy questions for the sake of clarity and precision. However, some questions were retained to enable the researcher identify the unengaged respondents, as such they were neither coded nor considered for analysis in this study. Consequently, students from these two universities were excluded from participation during the administration of the questionnaires for the main survey. This decision was supposed to guide against any form of bias towards the main survey.

4.9 Data Gathering Procedures

Data collection is a major part in every empirical research, as the validity of the findings rests on the quality of raw data gathered (McCusker & Gunaydin, 2015). As a result, the erroneousness or exactness of the findings hinges on the processed information. The two main sources of data gathering are primary and secondary. Primary data can be collected in different ways such as field survey, interview etc. On the other hand, secondary data are data that have been collected and processed by someone else. The primary source of data collection was explored in this dissertation, and primary data were collected with the use of self-administered questionnaires.

Besides, other sources of gathering information for this dissertation include: different government publications, international publications (journals), conference proceedings, books, newspapers, reports from universities, internet, and public records. Studies with positivist paradigm are purely objective as the researcher is neutral and independent of what is researched. Prior to the data gathering, the Gate Keeper's consent was duly obtained from each of the five universities, and their readiness and support before and after the data collection was highly impressive.

However, with Ethical Clearance from the University of KwaZulu Natal and permission from the supervisor, the researcher proceeded for data collection with the expectation that by December 2018, the data collection stage would have been finalized. However, this schedule was put on hold as a result of the nationwide industrial action in Nigerian universities by the Academic Staff Union of Universities (ASUU). Consequently, the data collection could not commence until March 2019, and was completed by April 2019. Although, the research design was cross-sectional with the use of self-

administered questionnaires, the non-uniform school calendar being run in Nigeria contributed to the prolonged time frame of the data gathering.

Furthermore, extracting information from the final year students was a bit demanding, as some of them were getting set for their second semester examinations. On the other hand, others were just settling down to begin a new semester after the prolonged ASUU-Federal Government face-off. Therefore, getting their attention and consent as respondents required the support of some members of staff. Hence, the distribution and collection was done with the assistance of some of the Professors in the various departments in the universities. This was extremely necessary, taking into consideration the time lag and cost implications. Hence, students who had indicated voluntary participation were given the questionnaires to complete. Going through their heartening comments, it became obvious that many of them enthusiastically completed the questionnaires and are optimistic about the possible outcome of the research.

4.9.1 The Procedure for Self-Administered Questionnaires

A quantitative research uses diverse tools to gather numerical data, such as standardized questionnaires and psychological tests (Antwi & Hamza, 2015). The make-up of the questionnaire for this study stemmed from the literature by ascertaining scales from related past studies. A pilot study was conducted in two universities (one from a public institution and the second from a private institution) before administering the main sample for the study. Responses from the pilot study helped to exclude some ambiguous questions. The questionnaire survey incorporates three segments. Firstly, Part 1 stands for questions on demographic features, which consists seven variables: gender, age, parents' employment history, ethnicity, programme of study, working experience and family annual income.

Secondly, Part 2 contains entrepreneurial attitude, entrepreneurial knowledge and venture creation skills, which denote independent variables. These questions seek to indicate the essence of entrepreneurship education, while entrepreneurial inclination, the dependent variable centres on the level of the respondents' readiness as potential entrepreneurs (sections A-D). The last segment, Part 3 focuses on the biopsychosocial factors (the moderator) - to examine the extent to which those variables can motivate entrepreneurial inclination (sections A-D). The questionnaire was designed on a five-point Likert scale: Strongly Disagree = 1, Disagree = 2, Neither Agree Nor Disagree = 3, Agree = 4 and Strongly Agree = 5. The respondents were to specify the level of their agreement with each of the statements. The scale does not give room for any indecision or respondents sitting on the fence.

Summarily, the stages of administering the questionnaires for this research can be divided into three: Firstly, there was a connection with the Registrars of the selected universities to clarify the purpose of the study and secure the Gate Keeper's Consent. Subsequently, the self-administered questionnaires were distributed to students at their different departments and faculties based on convenience sampling

for a once-off cross-sectional data to be collected. It is important to state that participation was entirely voluntary and anonymous. The random selection was necessary for external validity as well as generalization, most especially with the use of large sample size. Moreover, randomization helped to cancel out the effects of extraneous variables and for the whole population to be represented.

4.10 Data Quality Control

Questionnaires were administered to the respondents who were approached at their different universities. The lecturers granted access to the lecture halls and 110 questionnaires were handed over to the lecturers in each institution for distribution to the respondents. The students were required to complete the questionnaires and return same immediately after completion. In all, a total of 550 questionnaires were distributed at the five selected universities. 522 (95%) questionnaires were returned while 28 (5%) were not returned; however, after data cleaning, 137(26.25%) out of the total number returned were not useable.

This was followed by coding, that is, the conversion of data into numeric terms for appropriate recording into IBM Statistical Package for Social Sciences (SPSS) software. Sorting was carried out to identify useable and non-useable data. SPSS, as a notable software for evaluating data in the social sciences, was used because of its capability to generate multidimensional results. These include probability plots, charts and reports. The 385 questionnaires that were left after data screening and cleaning were subjected to statistical analysis. However, going through the questionnaires, it can be concluded that rich and satisfactory data were obtained, and as such fit for further in-depth analysis and evaluation of the research objectives.

The descriptive characteristics of the participants were considered using the SPSS software. Boomsma (2000) argued that the use of Structural Equation Modelling demands that research should meet certain merits. This includes having strong theoretical footings, accurate description of the structural model, proper reporting of psychometric properties of scales, precise description of sample size as well as the population under study. Therefore, with the understanding of the research objectives, a cross-sectional research design was adopted to evaluate the relationship between the variables such as entrepreneurial attitude, entrepreneurial knowledge, venture creation skills, entrepreneurial inclination and biopsychosocial factors. The quantity and quality of data collected was robust and considered appropriate for the study.

4.11 Techniques of Data Analysis

Data gathering does not produce a known result without employing statistical analysis; therefore, the information gathered demands appropriate statistical analysis and interpretation. However, a suitable statistical analysis requires an individual with a good grasp of statistics. Data analysis techniques in

this study embraced statistical evaluation of the questionnaire using IBM Statistical Package for Social Sciences (SPSS) (version 23) and Structural Equation Modelling (SEM) using AMOS (version 24) software.

4.11.1 Structural Equation Modelling

Structural Equation Modelling as a measurement model is becoming a preferred choice as a statistical method in the social sciences. This is because it permits testing of a set of relationships between one or more variables, and as a statistical tool, to test modelling interactions, non-linearity and correlated errors (Hair *et al.*, 2014b). According to Schmidt and Hollensen (2006), Structural Equation Modelling approach is essentially for the analysis of causal relationships among the variables. Structural Equation Modelling has two types of theoretical constructs, which are observed variables and latent (unobserved) variables. It provides a complex means of data analysis and hypothesis testing than other methods. Further, Structural Equation Modelling permits the researcher to evaluate the relationship between one or more exogenous variables (independent variables) and one or more endogenous variables (dependent variables).

Structural Equation Modelling model is sub-divided into two: measurement model, which considers the relationship between observed and latent variables, and structural model, which indicates the relationship between the latent variables. Advantages of Structural Equation Modelling include conducting confirmatory factor analysis, estimating error variance parameters, incorporating both observed and latent variables and completing the test of model fits (Malkanthe, 2015).

4.11.2 Evaluating Structural Equation Modelling Techniques

Although, exploratory factor analysis was used for the preliminary assessment, Dardas and Ahmad (2014) concluded that using exploratory factor analysis alone may not be adequate. Therefore, this study employed both techniques exploratory factor analysis and confirmatory factor analysis. Hair *et al.* (2014a) identified the two estimation techniques of Structural Equation Modelling to include: maximum likelihood Covariance Based Structural Equation Modelling (CB-SEM), (which is acknowledged in software like LISREL, EQS and AMOS) and Partial Least Squares based Structural Equation Modelling (PLS-SEM). The authors stated that “CB-SEM involves a maximum likelihood procedure whose goal is to minimize the difference between the observed and estimated covariance matrices, as opposed to maximizing explained variance” (Hair *et al.*, 2014a, p. 45). Meanwhile, PLS-SEM centres on maximizing explained variance of the endogenous constructs. As a result, CB-SEM and PLS-SEM differ in significance. However, CB-SEM is more relevant to confirmatory factor analysis. When constructs adapt previous scales, CB-SEM is generally used for such analysis.

Moreover, in testing moderating effects, Structural Equation Modelling differs from those traditional statistical analysis (ANOVA, ANCOVA, MANCOVA, MANOVA) (Wang, 2004). Furthermore, it does not consider measurement errors that may have serious implication on the results (Malkanthie, 2015). Structural Equation Modelling software provides an avenue for assessing complex interactions such as confirmatory factor analysis and time series analysis. Thus, this study employed the CB-SEM approach as the estimation model, using quantitative survey data. In addition, to test for the consistency of the measurement construct, confirmatory factor analysis was applied to measure reliability and validity of the scales, as this is being widely used in social science research (Tsai, Chang, & Peng, 2014).

4.11.3 Confirmatory Factor Analysis

Previous studies have shown that using confirmatory factor analysis within the framework of Structural Equation Modelling to test for the validity of factorial structures is perceived as a new style. Although it is demanding. However, as an emerging trend, it differs from the traditional methodologies (Byrne, 2001). In the application of confirmatory factor analysis techniques in testing for the factorial validity of a measuring instrument, computer programs such as AMOS, EQS and LISREL are required. As earlier stated, for obvious reasons, this study used both exploratory factor analysis and confirmatory factor analysis techniques for achieving a better result.

Subsequent to the exploratory factor analysis, a confirmatory factor analysis using Analysis of Moment Structure (AMOS) version 24 was tested and regression analysis was applied to test the research hypotheses. Hence, this study conducted data analysis using AMOS (Version 24).

4.11.4 Analysis of Moment Structure

Analysis of Moment Structure (AMOS,) otherwise known as the Analysis of Mean and Covariance Structures, is one of the well-liked and commonly used computer programs; as it provides the user with all the required tools for Structural Equation Modelling path diagrams (Byrne, 2001).

Moreover, if a survey results and findings would remain useable, it hinges on the adequacy of data analysis as well as its assumptions. Therefore, to perform statistical analysis, the different approaches that are relevant (univariate, bivariate and multivariate analysis) must be considered. This is generally divided into two: parametric methods and non-parametric methods. The parametric method has underlying distributional assumptions, unlike the non-parametric method (Rencher, 2002). The process of data analysis followed a parallel technique used in related works. It commenced with parametric assumptions of all the statistical tests to ensure accuracy, this includes linearity, common-method bias and normal distribution of data. In addition, fundamental assumptions, which include normality test, linearity and multicollinearity were all taken into consideration prior to further analysis.

4.12 Methodological Limitations

The research methodology used mono-method rather than mixed-methods or triangulation, as suggested by some scholars (Dawson, 2007). However, Lackeus (2015) submitted that when a single instrument, either quantitative or qualitative, can limit the appropriate outcome, then, it becomes logical that having a robust research can necessitate the combination of these two methodologies.

A further limiting factor was the use of cross-sectional method as against longitudinal method. However, accomplishing the research objectives using cross-sectional method achieved appropriate results. Nonetheless, adopting longitudinal procedure could not be considered in this study because time constraint as well as cost consideration remain serious challenge.

4.13 Ethical Standard

Wordweb dictionary defines ethics as the principles of right and wrong that are accepted by an individual or a social group. Furthermore, it is also regarded as the philosophical study of moral values. Research ethics involve giving due diligence to every information and great dignity to every confirmed participant (Akaranga & Makau, 2016). According to Dawson (2007), it means displaying remarkable character towards the participant as well as the information. It has its origin in the field of biomedical research, which involves the use of human beings and it dates back to 18th century. However, real ethical consideration came on board from 9th December, 1946 (Akaranga & Makau, 2016). Since ethical issues run through every phase in conducting research, it calls for appropriate values to be upheld at each stage of the study (Akaranga & Makau, 2016).

A research of this nature no doubt requires that the researcher should act thoughtfully and ethically with integrity, knowing that the expected research participants are young adults. Researchers are expected to abide by acceptable ethical pattern or practice in the process of data gathering. However, ethical issues to be considered depend on the participants under consideration; such as the poverty-stricken groups or vulnerable sick people (Akaranga & Makau, 2016; Dawson, 2007). Therefore, strict adherence to distinct ethical issue becomes vital. The researcher obtained Gate Keeper's Consent letters from five universities: two each from Federal and State universities and one from a private university, prior to seeking the University's Ethical Clearance. Although, Gate Keeper's Consent was sent to six universities through appropriate authority; five of the universities responded positively. The sixth university failed to respond to the request seeking their consent to use their university as part of this study.

The Gate Keeper's letters were submitted along with other required documents to the Research Office for the Humanities and Social Science Committee of University of Kwa-Zulu-Natal for necessary consideration. Thereafter, an approval letter with Ethical Clearance Number HSS/0748/018D was

received from the Research Office. The guiding principles for data collection as stipulated in the University's Ethical Clearance Form were strictly adhered to. In addition, in order to uphold strict confidentiality of information and protect the anonymity of the selected institutions, the study used pseudonyms. This is equally applicable to analysing and reporting of the data especially when the final report is expected to be at the public domain.

The respondents were final-year university undergraduates, who are adults and are not less than 20 years of age. Therefore, the issue of harm to respondents does not arise. However, for ethical concerns, participants were not coerced, and sensitive questions that could warrant negative reaction were not included in the questionnaire, and the information gathered was limited to the study under investigation (Bhattacharjee , 2012).

Furthermore, to secure the respondents' consent, the first page of the questionnaire contains a covering letter affirming their voluntary participation and right to withdraw, should the need arise in the process of answering the questions. Moreover, after coding and recording of data into Excel Spreadsheet, all data collected were immediately collated and packaged to be delivered to the Graduate School of Business and Leadership, University of KwaZulu-Natal, Westville Campus, Durban, for safety. Also, this study complied with the Data Protection Act, which focuses on fairness and data accuracy (Dawson, 2007).

4.14 Chapter Summary

This chapter basically discussed research methodology, stating the justification for the choice of research method, while the formalized research stages remain the guiding principles. This includes the research design, population and sampling techniques, data collection, pilot study and justification for data analysis based on IBM SPSS version 23 as well as CB-SEM analysis using AMOS version 24. Finally, ethical issues were expressed.

CHAPTER FIVE

DATA ANALYSIS AND DISCUSSIONS

5.1 Introduction

This chapter presents in-depth data analyses of the results of the cross-sectional survey designed to investigate entrepreneurial inclination of Nigerian university students. Bhattacharjee (2012) submitted that quantitative data analysis requires software programs such as SPSS or SAS, and several prior studies have shown that IBM SPSS is appropriate for use for data analysis. IBM Statistical Package for the Social Sciences (SPSS) version 23.0 was used for data preparation and preliminary data analyses such as data coding, data entry, missing values, data transformation, common method bias and exploratory factor analysis. On the other hand, Analysis of Moment Structure (AMOS) version 24 was used for the confirmatory factor analysis and multiple regression analysis. Past research showed that AMOS is one of the well-liked and commonly used computer programs (Byrne, 2001) for CB-SEM analysis.

The remainder of the chapter is organized as follows: Data preparation briefly describes the different processes taken in order to ascertain data accuracy. These include data coding, data entry, missing values and data transformation. The next section shows steps involved in reducing the effect of common method bias as suggested in prior research (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). This is followed by respondents' demographic profile. The next section presents and discusses data analysis technique using Structural Equation Modelling. Thereafter, structural model and results for related hypotheses for both direct and moderator variables were presented. The chapter summary concludes the chapter.

5.2 Data Preparation

Undertaking a research involves different stages that include data collection; which leads to the commencement of data exploration. Following the steps suggested by Bhattacharjee (2012), the systematic data preparation includes data coding, data entry, missing values and data transformation. However, data editing takes precedence in order to minimize errors and ensure accuracy. Data editing refers to thorough checking of the completed and returned survey questionnaires for accurateness before data coding.

5.2.1 Data Coding

Data coding is the first stage in transforming raw data into numeric format that is understandable by statistical software. The raw data from the survey questionnaires were coded and entered manually into IBM SPSS version 23.0. The coding and type of scales employed are presented in Table 5-1.

Table 5-1: Analysis of Coding and Response Scale

Construct	Coding	Response scale
Entrepreneurial inclination	ENI	Ordinal
Entrepreneurial attitude	ENA	Ordinal
Entrepreneurial knowledge	ENK	Ordinal
Venture creation skills	VCS	Ordinal
Innovativeness	PFI	Ordinal
Risk taking	PFR	Ordinal
Passion	BFP	Ordinal
Government policy	EFG	Ordinal
Role model	EFR	Ordinal
Gender	DEM01	Nominal
Age	DEM02	Ordinal
Self-employed parent	DEM03	Nominal
Geo-political zone	DEM04	Ordinal
Programme of study	DEM05	Nominal
Work experience	DEM06	Nominal
Family annual income	DEM07	Ordinal

5.2.2 Data Entry

Data entry is the input of information from questionnaire survey into a computer application. This was done painstakingly to avoid errors while recording. Osborne (2015) submitted that erroneous information can filter in during data entry, which can create serious problems during statistical analysis. Adequate data cleaning and screening were undertaken in this study to guard against this type of error. All the entries were double-checked, not only for scores that are out of range, but for error-free data sets. Furthermore, frequencies were scrutinized for each of the variables; they were all found to be within the range of possible scores on the items. The minimum and maximum values tally with codebook for each of the items.

5.2.3 Missing Data

It is not uncommon to find some records of missing data due to participants' unwillingness to give concise answers as expected. Osborne (2015) described missing data as another possible type of extreme scores; as such, 'missingness' in research should not be considered as irrelevant because it can affect both the sampling size as well as the desired results if not properly handled. Therefore, to minimize the effect of missing data in this study, the researcher checked the data file for missing values by running a descriptive analysis in order to observe the level of 'missingness' in each item. Prior research argued that there are better alternatives to clarifying missing data via software programs than the traditional methods (Acock, 2005). Acock (2005, p. 1018) submitted that "Expectation Maximization (EM), as implemented in SPSS, can impute a single new data set that has no missing values". This study established that data were missing randomly; and according to Tabachnick and Fidell (2007), Expectation Maximization method can be employed when data are missing at random. Consequently, any questionnaire with more than 10% missing values was sifted out from the analysis, while those with less than 10% were replaced using the EM as suggested by Acock (2005).

5.2.4 Outliers

Scholars have acknowledged that in research, data scores that are unbalanced with the majority of the data can occur; these extreme cases are described as outliers (Hair, Hult, Ringle, & Sarstedt, 2013; Osborne, 2015). Their presence in a data set could present a different estimate of regression coefficient and lead to false outcome in a regression analysis (Verardi & Croux, 2008). This could be as a result of errors in measurement or recording. Rencher (2002) suggested identification (deletion of outliers from analysis) or accommodation (modification of analysis) as means of dealing with outliers.

Subsequently, this study observed the frequency table of all variables; there is no value outside the minimum and maximum range. In addition, Casewise Statistics disclosed that there are 6 strange cases, but the maximum Cook's Distance from the Residual Statistics is 0.180, which is less than 1, indicating that none of the cases will have any undue influence on the results. Further, after the eight factors were extracted during the exploratory factor analysis their factor scores were examined to check for outliers. Twenty cases were detected to have factor scores greater than ± 3 . The outliers were subsequently excluded from the sample, leaving 385 cases for further analysis.

5.2.5 Normality Test

Statistically, normality assumption is assessed with two components: skewness and kurtosis. The literature provides evidence that with large samples of 200 or more cases the skewness and kurtosis do not have significant effect on the analysis and normality will not pose any problem (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). However, having variables that are normally distributed give credence to

further analysis (Tabachnick & Fidell, 2007). Therefore, for this dissertation normality examinations were conducted since a large sample size may inflate the value of skewness and kurtosis, and at the same time, reduce the standard error (Field, 2009).

Further, both univariate and multivariate normality tests were conducted to investigate whether the study data (singly and jointly) were normally distributed, since this is a prerequisite before Structural Equation Modelling analysis technique can be executed. The absolute values of the skewness and kurtosis of each manifest variable were less than 3 and 10 respectively, thus satisfying univariate normality (Kline, 2005). For multivariate normality, Raykov and Marcoulides' (2008) suggestion was followed. They suggested that for multivariate normality to be assumed, Mardia's coefficient should not be equal to $p(p + 2)$, where p is the number of manifest variables. For this study, with 34 manifest variables, $p(p + 2)$ equals $34(34+2) = 1,224$. Mardia's coefficient from AMOS version 24.0 output is 361.39, which is less than 1,224, suggesting that normality is not an issue in this study.

5.2.6 Multicollinearity Test

Multicollinearity is a statistical phenomenon where there is a high intercorrelation between two or more independent variables in multiple regression analysis (Rencher, 2002; Pallant, 2011; Sekaran & Bougie, 2016). The presence of multicollinearity in a multiple regression analysis makes it difficult to identify separately the effect of the highly correlated independent variables on the dependent variable, as it will give a flawed estimate and significant levels (Hair *et al.*, 2010; Cooper & Schindler, 2011).

To assess the degree of multicollinearity among the explanatory variables past studies suggested the use of correlation matrix, tolerance level, and variance inflation factors (Gujarati & Porter, 2009; Hair *et al.*, 2010; Tabachnick & Fidell, 2007; Peng & Lai, 2012; Sekaran & Bougie, 2016). There is no consensus in the literature as to the correlation coefficient that constitutes high multicollinearity, as Sekaran and Bougie (2016), Gujarati and Porter (2009), and Tabachnick and Fidell (2007) suggested 0.7, 0.8, and 0.9 respectively. In the same vein, there is no consensus among scholars regarding the benchmark for variance inflation factors (VIF) and tolerance value. For Hair *et al.* (2013), a VIF that is greater than 5 and tolerance level (TOL) less than 0.20 among the regressors suggests multicollinearity concerns, while Gujarati and Porter (2009) put the values at 10 and 0.10 respectively.

This study used correlation matrix, tolerance level, and variance inflation factors for examination of multicollinearity concerns, and the results are contained in Tables 5-2 and 5-3 respectively. The acceptable levels suggested by past studies were well satisfied in this study; hence, suggesting multicollinearity was not an issue in the study.

Table 5-2: Correlation Matrix of the Exogenous Constructs

	Attitude	Knowledge	Skills
Attitude	1		
Knowledge	0.086	1	
Skills	0.318	0.188	1

Table 5-3: Tolerance and Variance Inflation Factors (VIF)

Latent Constructs	Tolerance	VIF
Attitude	0.898	1.113
Knowledge	0.964	1.038
Skill	0.873	1.146

5.2.7 Linearity:

In regression analysis, it is assumed that a linear relationship exists between the dependent and independent variables. This is the case when the variation in the dependent variable remains unchanged at different levels of the independent variable (Hair *et al.*, 2010). This study adopts different methods to test the linearity assumption. First, curve estimation regression was performed for all direct effects in the model and the *p*-values were less than 0.01 except for Entrepreneurial Knowledge. Hair *et al.* (2010) showed that linearity will not be a problem in a study if the standard deviation of the residuals is less than that of the dependent variable. Table 5-4 indicates that the standard deviation of the residuals (0.6731) is less than the standard deviation of inclination (0.7876). The foregoing therefore establishes that the assumption of linearity is not violated in this study.

Table 5-4: Standard Deviation of the Dependent Variable and the Residuals

	Standard Deviation
Inclination	0.7876
Residuals	0.6731

5.3 Common Method Bias

Common method bias is a notable issue in self-administered survey, which could occur as a result of measurement technique, rather than the construct. Evaluation of Common method bias is necessary in this study, since the same instrument (questionnaire) was used for data collection for all the manifest variables during the same period. This is to examine whether the result of the measurement model is affected by a method bias. Where this exists, it casts doubts on the validity of the results when a single factor is responsible for more than 50% of the total variance explained (Podsakoff & Organ, 1986).

This could cause measurement errors and bias the estimates (Beta values) of the true relationship among theoretical constructs (Masrek & Gaskin, 2016).

Different steps were taken in this study to lessen the effect of Common method bias, as suggested in prior research (Podsakoff *et al.* 2003). First, questions were worded in simple but precise sentences at the instrument design stage to avoid ambiguity. Second, respondents were instructed to tick as applicable with guaranteed confidentiality. Third, all the variables were subjected to factor analysis, which produced a cumulative variance of 50.87%, and the highest single factor is 22.882% of the total variance explained. This is contained in Table 5-5. Furthermore, Harman's single factor test statistical technique was used to investigate this effect. This test suggests the existence of Common method bias when a single factor is responsible for more than 50% of the total variance explained. All the manifest variables of this study, excluding demographic variables, were entered into IBM SPSS and restricted to a single factor. The finding shows that the study does not have the problem of Common method bias, as the single factor accounts for only 22.53% of the total variance explained. It is therefore established that Common method bias is not an issue in this study.

Table 5-5: Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.542	24.468	24.468	8.924	22.882	22.882	6.612
2	4.150	10.641	35.109	3.782	9.697	32.579	4.100
3	2.542	6.517	41.626	2.157	5.532	38.111	6.733
4	1.933	4.956	46.582	1.436	3.681	41.792	5.734
5	1.785	4.577	51.159	1.280	3.283	45.075	4.612
6	1.424	3.652	54.811	0.883	2.263	47.338	3.342
7	1.292	3.314	58.125	0.648	1.661	49.000	3.495
8	1.112	2.851	60.976	0.729	1.870	50.870	1.870
9	0.891	2.285	63.261				
10	0.825	2.114	65.375				
11	0.818	2.098	67.473				
12	0.753	1.931	69.405				
13	0.730	1.872	71.277				
14	0.702	1.799	73.076				
15	0.670	1.718	74.794				
16	0.654	1.677	76.471				
17	0.604	1.548	78.020				
18	0.600	1.539	79.558				
19	0.580	1.488	81.046				
20	0.564	1.446	82.492				
21	0.550	1.411	83.903				

22	0.524	1.344	85.247
23	0.503	1.291	86.537
24	0.470	1.204	87.742
25	0.451	1.157	88.898
26	0.425	1.091	89.989
27	0.413	1.060	91.049
28	0.404	1.036	92.085
29	0.377	0.967	93.052
30	0.369	0.946	93.998
31	0.352	0.902	94.901
32	0.336	0.862	95.762
33	0.302	0.773	96.536
34	0.291	0.746	97.282
35	0.257	0.658	97.940
36	0.240	0.616	98.557
37	0.217	0.556	99.113
38	0.189	0.486	99.598
39	0.157	0.402	100.000

5.4 Background and Demographic Profile of the Respondents

The questionnaire contained demographic information of the respondents, which consists of seven variables: gender, age, parents' employment status, ethnicity, programme of study, working experience and family annual income. This section presents the statistical data of the respondents that is displayed in actual figures and percentages. The sample consists of 385 valid questionnaires out of 550 that were administered to final year students in five universities within the South-West geo-political zone. This represents a response rate of 70%. A descriptive analysis was conducted in order to analyse the frequency and percentage of the respondents' demographic profile. This is presented in Table 5-7.

Table 5-6: Questionnaire Response and Sample Size Rates

	Questionnaire Response	
	Quantity	Rate
Distributed Questionnaires	550	100%
Unanswered Questionnaires	15	3%
Prospective respondents	535	97%
Total Questionnaires returned	514	93%
Incomplete Questionnaires	26	5%
Total questionnaires accessed	488	89%
Questionnaires dropped after Data cleaning	103	19%
Useable Questionnaires	385	70%

Table 5-7: Profile of Respondents

Background characteristics			Frequency	Percentage
i	Gender	Male	213	55.3
		Female	172	44.7
ii	Age	Below 20 years	22	5.7
		20 – 24 years	295	76.6
		25 – 29 years	66	17.1
		Above 30 years	2	0.5
iii	Self-employed parents	Yes	213	55.3
		No	172	44.7
iv	Geo-political zone	South West	306	79.5
		South East	30	7.8
		South South	18	4.7
		North West	11	2.9
		North East	7	1.8
		North Central	13	3.4
v	Programme of study	Business/Management Sciences	263	68.3
		Engineering	25	6.5
		Science	74	19.2
		Computing	3	0.8
		Others	20	5.2
vi	Work Experience	Yes	219	56.9
		No	166	43.1
vii	Family annual income	Below N 1million	195	50.6
		N 1.01- N 3million	127	33.0
		N 3.01- N 6million	28	7.3
		N 6.01- N 12million	14	3.6
		N 12.01- N 25million	9	2.3
		Above N 25 million	12	3.1

Gender

The gender distribution of the respondents in this study is shown in Table 5-7 which revealed that male students dominate Nigerian universities with 55.3% male and 44.7% female.

Age group

The participants' age category ranged from less than 20 years to above 30 years as shown in Table 5-7. However, majority of the participants were in the age category of 20-24 years (76.6%; $n = 295$) followed by 25-29 years (17.1%; $n = 66$). The participants below 20 years are 22 with a percentage of 5.7%, and those above 30 years are 2 with a percentage of 0.5%. In all, the data shows that more than 99% of the respondents are less than 30 years. This age group is regarded as the most active and energetic in the public domain. Hence, they are expected to be innovative and creative, and that if favourable business environment is provided they will contribute meaningfully to economic growth and development of the country (Oloruntoba and Akinfolarin, 2018).

Parent history

The sample as contained in Table 5-7 revealed that 55.3% of the respondents have self-employed parents while the remaining 44.7% do not. Past studies have indicated that those with self-employed parents may probably be well disposed to entrepreneurial activities. More importantly, it is argued that entrepreneurial mind-set can be fuelled by having successful entrepreneurs within the family (Oguntimehin & Olaniran, 2017; bin Mahajar & Yunus, 2012).

Ethnicity

The ethnicity of the respondents in this study as shown in Table 5-7 comprised the six geo-political zones in Nigeria: South East, South South, South West, North Central, North East and North West. Thus, the respondents from the South-West geo-political zone have the highest participation rate of 79.5%. This was followed by South East, South South, North Central, North West and North East with 7.8%, 4.7%, 3.4%, 2.9% and 1.8% respectively.

Programme of study

Programme of study in the demographic data as depicted in Table 5-7 includes Business/Management Science, Engineering, Sciences, Computing and others. Descriptive accounts of the programmes are useful in that past research has shown that development of entrepreneurial mind-set demands application of entrepreneurship education (Fang & Chen, 2019). In terms of programme of study, the students were not equally represented: the study shows that 68.3% of the participants were Business/Management Sciences and others grouped together accounted for 31.7%. This could be an indication that most of the non-useable questionnaires were those distributed to the non-management students since more than 200 questionnaires were distributed to them.

Working experience

Working experience as shown in Table 5-7 was measured by asking the respondents to indicate “Yes”, if they had prior working experience, and “No”, if otherwise. The respondents’ answer in this study indicated that 56.9% of the participants have prior working experience, while 43.1% have no previous working experience. However, as full-time undergraduates, it signifies that majority of the respondents are not engaged in any occupation at present.

Family annual income

Another demographic data incorporated in this study as indicated in Table 5-7 is family annual income. To actually gauge the level of the financial capability of the respondents in this study, family annual income was assessed within the range of below ₦1million and above ₦25 million. The study revealed that 50.6% of the respondents fall into family annual income of less than ₦1million, followed by those within the range of ₦1.01- ₦3million with 33.0% and ₦3.01- ₦6million with 7.3%. Next, were those in the income bracket of ₦6.01- ₦12million with 3.6%, closely followed by those participants with a family annual income above ₦25 million with 3.1% and finally, those in the range of ₦12.01- ₦25million income group with 2.3%. This result shows the extent of income inequality and poverty in the country, and how difficult it could be for students to survive financially while undergoing their studies. The next subsection leads to analysis of the measurement model.

5.5 Analysis of the Measurement Model

The measurement model depicted the relationship between constructs; it signifies how to measure each construct by means of a set of indicators, and it consists of reflective and formative measurements. In reflective measurement model, all items are expected to indicate the same construct and should be highly correlated (Hulland, 1999). Furthermore, according to Rattray, and Jones (2007, p. 237), “The item and factor analysis stages of the questionnaire development process may then be used to establish if such items are indeed representative of the expected subscale or factor”. Conversely, formative measurement indicators do not correlate; each indicator portrays a facet of the constructs. There are guidelines for both reflective and formative measurement models. In this study, reflective measurement models, which focuses on internal consistency, indicator reliability, convergent and discriminant validity, is adopted as the most appropriate for the analysis.

The measurement model comprised of entrepreneurial attitude, entrepreneurial knowledge and venture creation skills, which are the exogenous variables, while entrepreneurial inclination is the endogenous variable. The moderator variable (biopsychosocial factors) is a composite variable that consists of gender, work experience, family income, passion, government policy and innovativeness. However,

for items to be acceptable, the indicators should be above the threshold of 0.5 (Hair, Ringle, & Sarsdedt, 2011) and the indicator variables must not measure the same phenomenon to remain valid.

5.6 Exploratory Factor Analysis

The questionnaire survey in this study incorporated three broad items together with the demographic variables. Part 1 embraces questions on demographic features; while Part 2 contains four different sub-heads, which are entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination (sections A-D). The third subdivision, Part 3 focuses on the moderating variable – biopsychosocial factors (sections A-D). A total of 385 questionnaires were established as useable after data cleaning. This is above 382 suggested by Krejcie and Morgan (1970) for population that is 75,000 and above. In spite of the fact that all the constructs' measurement in this study were adopted from previous studies; exploratory factor analysis was considered necessary in order to ascertain factors with common features. In addition, "Factor analysis is a statistical technique that reduces a large number of interrelated questions to a smaller number of underlying common factors or domains that are primarily responsible for covariation in the data" (Cappelleri, Gerber, Kourides, & Gelfand, 2000, p. 1800).

Exploratory factor analysis centres on the range of the link between latent variables and their cause factors. In this study, all latent constructs for independent, dependent and moderator variables were subjected to exploratory factor analysis, which was conducted using IBM SPSS Version 23.0. The Maximum Likelihood Estimation method with promax rotation was employed to examine the grouping of the variables. Following Cappelleri *et al.* (2000), a promax (oblique) rotation was applied because factors were assumed to be correlated with one another. Furthermore, Gaskin (2014) opined that the Maximum Likelihood Estimation method with promax rotation should be used for exploratory factor analysis where the sample size is large. In addition, Finch (2006) showed that both varimax and promax methods are equally appropriate regardless of the correlations among the factors and that promax is more appropriate for identifying simple structure.

The study was subjected to preliminary tests such as Kaiser-Meyer-Olkin (KMO) and Barlett's test of sphericity in order to assess the appropriateness of running the factor analysis. Furthermore, Barlett's test of sphericity examines whether the level of significance between correlation matrices and identity matrices is appropriate. KMO, otherwise known as measure of sampling adequacy (MSA), tests if the sample size is large enough to extract factors or whether there is correlation among the items (Li, Harichandran, Carnasciali, Erdil, & Nocito-Gobel, 2016). KMO index ranges from 0 to 1, however, a minimum of 0.5 is recommended as acceptable for factor analysis (Li *et al.*, 2016), while other scholars suggest 0.6 as the benchmark (Schmidt & Hollensen, 2006).

Although, Barlett's test of sphericity works adequately with small sample size, factor analysis is suitable when the p -value is less than 0.05 significant level (Koloba, 2016). For this study, the KMO measure of sampling adequacy is 0.891 and the Barlett's test is also significant, as illustrated in Table 5-8. Further, the communalities for each item measure above 0.300 as shown in Table 5-9. In this study, both the KMO and Barlett's test of sphericity and the communalities indicate that the data is appropriate for factor analysis.

Table 5-8: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.891
Bartlett's Test of Sphericity	Approx. Chi-Square	6792.237
	Df	741
	Sig.	0.000

Table 5-9: Communalities

Items	Initial	Extraction
ENA01	0.366	0.432
ENA02	0.425	0.559
ENA03	0.428	0.559
ENK01	0.434	0.417
ENK02	0.519	0.519
ENK03	0.443	0.439
ENK05	0.448	0.443
ENK06	0.36	0.353
ENK07	0.467	0.514
ENK08	0.415	0.406
ENK09	0.484	0.490
VCS05	0.391	0.378
VCS06	0.362	0.346
VCS07	0.419	0.407
VCS08	0.51	0.551
VCS09	0.451	0.458
ENI01	0.63	0.640
ENI02	0.716	0.780
ENI03	0.576	0.566
ENI04	0.636	0.652
ENI05	0.57	0.585
ENI08	0.595	0.555
ENI10	0.559	0.489
PFI03	0.424	0.421
PFI04	0.453	0.598

BFP02	0.456	0.523
BFP03	0.457	0.460
BFP04	0.362	0.391
BFP05	0.406	0.407
BFP06	0.46	0.498
BFP08	0.494	0.429
EFG01	0.61	0.597
EFG02	0.722	0.753
EFG03	0.678	0.712
EFG04	0.719	0.701
EFG05	0.634	0.656
EFG06	0.434	0.414
EFR06	0.308	0.326
EFR07	0.279	0.417

5.7 Factor Structure

The total variance explained and the eigenvalue criterion was used to measure the factor structure, having satisfied the preliminary criteria for conducting an exploratory factor analysis. The number of factors extracted were controlled with a minimum eigenvalue equal to or greater than 1, as suggested by Bhattacharjee (2012). As a result, factors with eigenvalues less than 1 were excluded, as they were considered insignificant. The factor analysis generated eight theoretically suitable factors with a total variance explained of 50.87%. These eight factors were retained for further interpretation. Moreover, the results reveal that a single major factor did not dominate the variance integrated in the model; this could be viewed as an indication that no common-method bias occurred in the data. In addition, it is obvious from Table 5-10 that these eight factors can be depended upon for further investigation. Besides, the results in Table 5-5 also reveal that entrepreneurial inclination is germane among all the factors, having about 22.88% of the total variance explained, which was far above others that ranked as follows: government policy, 9.70%; entrepreneurial knowledge, 5.53%; passion, 3.68%; venture creation skills, 3.28%; entrepreneurial attitude, 2.63%; innovativeness 1.66 and entrepreneurial role model, 1.87%.

The factor matrix embraces eight latent constructs, as items with factor loadings less than 0.50 were disregarded. Thus, eight common factors from the exploratory factor analysis were extracted on the ground that they were reliable and valid instruments. The results as reported in Table 5-10 reveal that the measures adequately loaded on their individual constructs with factor loadings greater than 0.50. Hence, the factors that were retained for further interpretation include:

- Factor 1: Entrepreneurial inclination (ENI 7 items)
- Factor 2: Government policy (EFG 6 items)

- Factor 3: Entrepreneurial knowledge (ENK 8 items)
- Factor 4: Passion (BFP 6 items)
- Factor 5: Venture creation skills (VCS 5 items)
- Factor 6: Entrepreneurial attitude (ENA 3 items)
- Factor 7: Innovativeness (PFI 2 items)
- Factor 8: Role model (EFR 2 items)

Table 5-10: **Promax Rotational Matrix showing Key Factor Loadings and Cross Loadings**

Latent									
Constructs	Items	ENI	EFG	ENK	BFP	VCS	ENA	PFI	EFR
Entrepreneurial Inclination	ENI02	0.872	0.040	0.125	0.023	-0.137	-0.018	-0.085	0.063
	ENI01	0.799	-0.030	0.123	0.041	-0.057	0.019	-0.207	-0.006
	ENI05	0.778	0.017	-0.049	-0.063	0.050	-0.047	0.104	-0.130
	ENI04	0.772	0.050	-0.050	-0.098	0.113	-0.059	0.180	-0.132
	ENI03	0.750	-0.017	-0.008	0.042	0.006	0.043	-0.064	-0.061
	ENI08	0.642	-0.066	-0.043	0.118	0.020	-0.036	0.063	0.131
	ENI10	0.587	-0.005	-0.150	0.072	0.061	0.141	0.102	0.028
Government Policy	EFG02	0.050	0.879	-0.102	-0.002	0.117	-0.020	-0.020	-0.053
	EFG03	-0.014	0.848	-0.029	0.054	0.020	-0.028	0.073	-0.046
	EFG04	0.039	0.834	-0.068	-0.062	-0.017	0.027	0.044	0.051
	EFG01	-0.027	0.779	0.115	0.033	-0.022	-0.061	-0.045	-0.111
	EFG05	-0.004	0.729	0.068	-0.102	-0.123	0.044	-0.062	0.189
	EFG06	-0.059	0.566	0.086	0.107	-0.020	0.042	-0.009	0.081
Entrepreneurial Knowledge	ENK07	-0.013	-0.039	0.741	-0.068	-0.011	-0.039	0.123	-0.076
	ENK09	0.032	0.005	0.661	-0.015	0.051	-0.074	0.055	0.026
	ENK05	-0.129	0.017	0.637	0.127	0.013	0.066	-0.029	-0.126
	ENK02	0.111	-0.043	0.603	0.090	-0.056	0.009	0.001	0.118
	ENK01	0.058	0.028	0.590	-0.084	0.014	0.057	-0.048	0.124
	ENK06	-0.091	0.102	0.555	0.042	0.024	0.070	0.002	-0.116
	ENK03	0.169	-0.022	0.541	-0.095	0.076	-0.002	0.008	0.096
Passion	ENK08	-0.037	-0.017	0.535	-0.007	0.151	-0.001	0.082	-0.031
	BFP02	0.030	-0.037	0.032	0.748	0.053	-0.074	-0.134	0.000
	BFP06	-0.065	-0.001	-0.091	0.694	0.147	-0.004	0.004	0.095
	BFP03	0.099	0.079	0.095	0.619	-0.057	-0.028	-0.043	-0.081
	BFP05	-0.069	0.015	0.045	0.603	0.002	0.018	0.088	-0.068
	BFP04	0.123	0.018	-0.153	0.560	-0.014	0.071	0.073	0.029
	BFP08	0.060	-0.039	0.070	0.544	-0.123	-0.017	0.152	0.020

Venture Creation	VCS08	-0.022	-0.024	0.102	0.000	0.715	-0.046	-0.055	0.022
Skills	VCS06	0.006	-0.048	-0.057	0.037	0.605	0.027	-0.034	0.029
	VCS09	0.032	0.008	0.132	0.052	0.573	0.029	-0.059	-0.032
	VCS07	0.050	0.067	0.032	0.004	0.573	0.028	-0.002	0.012
	VCS05	-0.018	-0.003	0.076	-0.045	0.554	-0.001	0.052	0.079
Entrepreneurial	ENA02	0.048	-0.012	0.024	-0.101	0.053	0.748	-0.044	-0.048
Attitude	ENA03	0.092	-0.006	-0.062	-0.019	0.024	0.724	0.023	0.043
	ENA01	-0.138	0.004	0.142	0.113	-0.067	0.598	0.047	-0.056
Innovativeness	PFI04	0.033	0.031	0.122	0.012	-0.066	-0.001	0.711	0.048
	PFI03	0.022	-0.051	0.062	0.114	-0.003	0.020	0.536	0.044
Role Model	EFR07	-0.095	-0.006	-0.009	-0.063	0.045	-0.049	0.060	0.659
	EFR06	-0.032	0.096	-0.066	0.100	0.062	0.005	0.026	0.509

5.7.1 Factor 1: Entrepreneurial inclination

The first construct is the endogenous variable (entrepreneurial inclination). This construct has ten (10) items adapted from original measures of past studies (Keat *et al.*, 2011; Liñán & Chen, 2009; Mohar *et al.* (2008). The three (3) items with factor loadings less than 0.50 as suggested by Hair *et al.* (2011) were dropped, while the remaining seven (7) items were retained for further analysis. It has a Cronbach's Alpha coefficient of 0.901 which indicates reasonable internal consistency reliability. The description of this construct is given in Table 5-11.

Table 5-11: Measures of Entrepreneurial Inclination

Construct	Code	Survey Items	Decision
Entrepreneurial Inclination	ENI01	I have strong plans to venture into business once I finish my studies.	Retained
	ENI02	I am interested in starting my own business.	Retained
	ENI03	I am always inclined towards entrepreneurship.	Retained
	ENI04	I see myself becoming an entrepreneur someday.	Retained
	ENI05	I have strong desire to be the owner of my own business.	Retained
	ENI06	There are not many business/entrepreneurial opportunities in Nigeria.	Dropped
	ENI07	Nigeria socio and economic environment is highly supportive of entrepreneurship.	Dropped
	ENI08	I am ready to make every effort to become an entrepreneur.	Retained
	ENI09	My professional goal is becoming an entrepreneur.	Dropped
	ENI10	I will make every effort to start and run my own business.	Retained

5.7.2 Factor 2: Government Policy

Government policy is the second factor, and a component of biopsychosocial factors. This construct is precisely on the expectation of would-be entrepreneurs from the government. Four (4) items were dropped out of the ten (10) measurement items that were developed from Busenitz *et al.* (2000), and the remaining six (6) were retained for further analysis. The retained items have a minimum factor loading of 0.566 and a maximum of 0.879. This is consistent with the suggestion by Hair *et al.* (2011). The description of this construct is given in Table 5-12. The Cronbach's Alpha coefficient of 0.901 shows acceptable internal consistency reliability.

Table 5-12: Measures of Government Policy

Construct	Code	Survey Items	Decision
		I will be an entrepreneur if ...	
Government policy	EFG01	...government organizations in this country assist individuals with starting their own business.	Retained
	EFG02	government sets aside government contracts for new and small businesses.	Retained
	EFG03	...local and national governments have special support available for individuals who want to start a new business.	Retained
	EFG04	the government sponsors organizations to help new businesses develop.	Retained
	EFG05	...even after failing in an earlier business, the government assists entrepreneurs in starting again.	Retained
	EFG06	...turning new ideas into businesses is an admired career path in this country.	Retained
	EFG07	...entrepreneurs are admired in this country.	Dropped
	EFG08	...individuals know how to legally protect new business.	Dropped
	EFG09	...most people know where to find information about markets for their products.	Dropped
	EFG10	...e-government contributes to start up business success and growth.	Dropped

5.7.3 Factor 3: Entrepreneurial Knowledge

The third factor (entrepreneurial knowledge) is an exogenous construct in this research. This construct was measured with 10 items adapted from (Matlay, 2008; Pretorius & Wlodarczyk, 2007; Robinson *et al.*, 1991). Eight (8) items show factor loadings greater than 0.50 while two (2) items with factor loadings less than 0.50 were dropped. The description of this construct is given in Table 5-13. It has a Cronbach's Alpha coefficient of 0.852 indicating satisfactory internal consistency reliability.

Table 5-13: Measures of Entrepreneurial Knowledge

Construct	Code	Survey Items	Decision
Entrepreneurial Knowledge	ENK01	Entrepreneurship courses and programmes I attended empowered my ability to identify and evaluate business opportunities.	Retained
	ENK02	... increased my readiness to start a firm and keep it working.	Retained
	ENK03	... Sharpened my ability to develop business plan and entrepreneurial project.	Retained
	ENK04	... enhanced my financial capability and management skills.	Dropped
	ENK05	... heightened my morale on the probability of succeeding.	Retained
	ENK06	... changed my perception about risk taking propensity.	Retained
	ENK07	... enhanced my creativity and innovativeness.	Retained
	ENK08	... broadened my opportunity recognition.	Retained
	ENK09	... increased my understanding of the attitudes, values and motivations of entrepreneurs.	Retained
	ENK10	... inspired my networking and e-business.	Dropped

5.7.4 Factor 4: Passion

Passion is a latent construct under biopsychosocial factors with ten (10) measurement items adapted from past studies (Dabale & Mase, 2014; Fellner, 2017). It is the fourth factor and the Cronbach's Alpha coefficient of 0.815 indicates acceptable internal consistency reliability. Four (4) items were dropped from further analysis while the remaining Six (6) items were retained consistent with the suggestion of Hair *et al.* (2011). The description of this construct is given in Table 5-14.

Table 5-14: Measures of Passion

Construct	Code	Survey Items	Decision
Passion	BFP01	It is exciting to figure out new ways to solve unmet market needs that can be commercialized.	Dropped
	BFP02	Searching for new ideas for products and services appears enjoyable to me.	Retained
	BFP03	Scanning the environment for new opportunities really excites me.	Retained
	BFP04	Establishing a new company seems exciting to me.	Retained
	BFP05	Pushing myself to make my business better will motivate me.	Retained
	BFP06	Nurturing a new business through its emerging success will be enjoyable.	Retained
	BFP07	Owning my own business will energize me.	Dropped
	BFP08	Being the founder of a business could turn out to be an important part of me.	Retained

BFP09	Reading books on entrepreneurship seems very important to me.	Dropped
BFP10	Passionately longing to start my own venture.	Dropped

5.7.5 Factor 5: Venture Creation Skills

The fifth factor (venture creation skills) is an exogenous variable which was measured with ten (10) items adapted from prior studies (Gafar *et al.*, 2015; Omerzel & Antoncic, 2008; Matlay, 2008; Pretorius & Wlodarczyk, 2007). Following Hair *et al.* (2011), five (5) items with factor loadings greater than 0.50 were retained and five (5) items were dropped because they had factor loadings less than 0.50. The Cronbach's Alpha coefficient of 0.779 indicates adequate internal consistency reliability. The description of this construct is given in Table 5-15.

Table 5-15: Measures of Venture Creation Skills

Construct	Code	Survey Items	Decision
Venture creation skills		From entrepreneurship courses and programmes I attended I have learnt ...	
	VCS01	... business strategy skills (value creation, market or target segment, competitive advantage).	Dropped
	VCS02	... business idea development (specific training, idea lab, business incubator).	Dropped
	VCS03	... business risk (political instability, commercial risk, risk management).	Dropped
	VCS04	... business planning (strategic planning, project planning).	Dropped
	VCS05	... human resource issues (labour laws, labour productivity, labour turnover).	Retained
	VCS06	... macro-environmental issues (inflation, exchange rate, interest rate).	Retained
	VCS07	... marketing related issues (SWOT of competitors, effective market, packaging)	Retained
	VCS08	... financial issues (financial planning, cash flow, obtaining credit facilities, management of consumer credit).	Retained
	VCS09	... management functions (changes in business environment, time management, effective control).	Retained
	VCS10	... e-business (understanding e-business, assessing and providing internet information).	Dropped

5.7.6 Factor 6: Entrepreneurial Attitude

Entrepreneurial attitude is the sixth factor and accounts for about 2.26% of the total variance explained. This construct was measured with ten (10) items adapted from past studies (Gafar *et al.*, 2015; Liñán & Chen, 2009; Phan *et al.*, 2002; Robinson *et al.*, 1991). However, three (3) items were retained for further analysis as they have factor loadings greater than 0.50. The remaining manifest variables were dropped from further analysis as a result of low factor loadings. The description of this

construct is given in Table 5-16. The Cronbach's Alpha coefficient of 0.738 indicates satisfactory internal consistency reliability.

Table 5-16: Measures of Entrepreneurial Attitude

Construct	Code	Survey Items	Decision
Entrepreneurial Attitude	ENA01	I can sacrifice personal comfort in order to take advantage of business opportunities.	Retained
	ENA02	Being an entrepreneur implies more advantages than disadvantages to me.	Retained
	ENA03	If I had the opportunity and resources, I'd like to start a firm.	Retained
	ENA04	I know that social and economic conditions will not affect my success in business.	Dropped
	ENA05	Among various options, I would rather be an entrepreneur.	Dropped
	ENA06	I believe that concrete results are necessary in order to judge business success.	Dropped
	ENA07	I get a sense of accomplishment from the pursuit of my business opportunities.	Dropped
	ENA08	Being an entrepreneur would entail great satisfactions for me.	Dropped
	ENA09	I believe it is important to analyse your own weaknesses in business dealings.	Dropped
	ENA10	Education at the university is adequate for entrepreneurial success.	Dropped

5.7.7 Factor 7: Innovativeness

The seventh factor (innovativeness) was measured with nine (9) items developed from prior work of Robinson *et al.* (1991). Seven (7) measurement items were dropped from further analysis as they have factor loadings below the threshold of 0.50 while the remaining two (2) manifest variables were retained since their factor loadings were greater than 0.50 as suggested by Hair *et al.* (2011). The description of this construct is given in Table 5-17. The Cronbach's Alpha coefficient of 0.692 indicates acceptable internal consistency reliability.

Table 5-17: Measures of Innovativeness

Construct	Code	Survey Items	Decision
Innovativeness	PFI01	I feel very energetic working with innovative colleagues in a dynamic business climate.	Dropped
	PFI02	Most of my time is spent working on several business ideas at the same time.	Dropped
	PFI03	I believe that to become successful in business you must spend some time every day in developing new opportunities.	Retained

PFI04	I believe it is important to continually look for new ways to do things in business.	Retained
PFI05	I enjoy finding good solutions for problems nobody has looked at yet.	Dropped
PFI06	I feel terribly restricted being tied down to tightly organized business activities, even when I am in control.	Dropped
PFI07	I believe that in order to succeed, one must conform to accepted business practices.	Dropped
PFI08	I believe that organizations which do not experience radical changes now and then tend to get stuck in a rut.	Dropped
PFI09	I believe in being able to use old business concepts in new ways.	Dropped

5.7.8 Factor 8: Role Models

The eight factor (role models), has ten (10) measurement items adapted from Fellnhofer (2017). It is one of the latent constructs that comprise the moderating variable (biopsychosocial factors). Eight (8) items were dropped and two (2) were retained for further analysis. The retained items have factor loadings greater than 0.50, while the dropped items have low factor loadings that could lead to having a complex structure. The description of this construct is given in Table 5-18. The Cronbach's Alpha coefficient of 0.602 indicates acceptable internal consistency reliability.

Table 5-18: Measures of Role Models

Construct	Code	Survey Items	Decision
Role Models	EFR01	There is an entrepreneurial person in my immediate family I am trying to be like in my career pursuit.	Dropped
	EFR02	There is an entrepreneurial person particularly inspirational to me in my career path.	Dropped
	EFR03	In the career path I am pursuing, there is an entrepreneurial person I admire with passion.	Dropped
	EFR04	I have a mentor from real business world as a potential entrepreneurial person.	Dropped
	EFR05	Students are encouraged to establish their own business based on active support for the start-up of new businesses by successful entrepreneurs.	Dropped
	EFR06	An existing supportive university environment inspires my ideas for new business and entrepreneurial career path.	Retained
	EFR07	The university provides resources to assist and encourage student entrepreneurs.	Retained
	EFR08	Having a personal mentor with good business ideas will increase the start-up of new businesses.	Dropped

EFR09	There are no role models in my immediate environments.	Dropped
EFR10	Entrepreneurial and business educational programmes from real business world would help students to start businesses.	Dropped

5.7.9 Risk Taking

The next construct under biopsychosocial factors variable is risk taking, which has ten (10) items developed from prior studies (Meertens & Lion, 2008; Rohrmann, 2005). All the ten (10) items were dropped from further analysis since they have factor loadings below the threshold of 0.50 as suggested by Hair *et al.* (2011). The summary is illustrated in Table 5-19.

Table 5-19: Measures of Risk-taking

Construct	Code	Survey Items	Decision
Risk-taking	PFR01	I see the possibility of starting a new business as a potential opportunity to pursue.	Dropped
	PFR02	The probability of a new venture doing poorly is very high.	Dropped
	PFR03	I can manage and withstand business risk.	Dropped
	PFR04	I see the possibility of starting a business as a potential loss.	Dropped
	PFR05	I do not take risk with my health.	Dropped
	PFR06	I usually view risks as a challenge.	Dropped
	PFR07	Starting a new business is very risky.	Dropped
	PFR08	I dislike stress, therefore I prefer to avoid risks	Dropped
	PFR09	I would label the option of starting a new business as something positive.	Dropped
	PFR10	If I do not start my own business I may be missing a great opportunity.	Dropped

The discussions above indicate sufficient reliability and validity of the constructs under the exploratory factor analysis. All the latent constructs show Cronbach's Alpha coefficient greater than 0.60 as indicated by Ahmad *et al.* (2016), suggesting sufficient internal consistency reliability. Table 5-10 indicates the factor loadings were all well above the threshold of 0.50 as suggested by Hair *et al.* (2011), thus confirming sufficient convergent validity. Also, the factor loadings of the indicators show that there is no complex structure as there are no problematic cross-loadings, thus suggesting enough discriminant validity in the study.

5.8 Confirmatory Factor Analysis (CFA)

After the exploratory factor analysis and confirmatory factor analysis, CB-SEM algorithm was used to determine the structure of all the constructs' variables. Confirmatory factor analysis is needful so as to establish whether the hypothesized statistical model fits the actual data set (Dardas & Ahmad, 2014).

In other words, it is used to establish the factorial validity of the constructs. In this study, confirmatory factor analysis was performed via Structural Equation Modelling using the estimation technique of Maximum Likelihood over the variance-covariance matrix for the identified seven factors through AMOS version 24 Statistical Package. In order to run the confirmatory factor analysis and get the model fits, necessary estimations were made, which included standardized moments, residual moments and modification indices. The confirmatory factor analysis model indicates the factor structure could be explained based on seven factors as against eight identified under the exploratory factor analysis. Hence, the seven factors were correlated, while the measurement error terms remain uncorrelated.

However, five manifest variables (ENK06, VCS05, VCS06, EFR06 and EFR07) were dropped in the course of conducting the confirmatory factor analysis, since they had factor loadings less than 0.60. This led to the exclusion of role models as part of the biopsychosocial factors. Further, manifest variables ENI01 and ENI02, ENI04 and ENI05, and EFG01 and EFG04 with modification indices (MI) greater than 15 indicates that there are redundant items in the model. In order to establish discriminant and convergent validity in the research constructs, the measurement model must be free from redundant items (Ahmad *et al.*, 2016). Subsequently, all the redundant items were set as free parameters to improve the fitness indices. Figure 5-1 shows the measurement model combining all constructs, after running the confirmatory factor analysis.

5.9 Reliability of the Instrument

Firstly, the study considered the composite reliability by checking the internal consistency for all constructs, standardized factor loadings for all items, and average variance extracted of each of the construct were adequately studied,

The reliability of the research instrument was assessed by considering Cronbach's Alpha coefficient (α) for internal consistency; composite reliability to indicate the construct reliability and the value of Average Variance Extracted (AVE) for all constructs was established. The values of the Cronbach's Alpha that was conducted on all the factors reveal high internal consistency of the scale employed. The α values for entrepreneurial inclination, entrepreneurial attitude, entrepreneurial knowledge, venture creation skills, passion, government policy and innovativeness are 0.901, 0.738, 0.843, 0.744, 0.815, 0.901, and 0.692 respectively. The AVE for entrepreneurial inclination, entrepreneurial attitude, entrepreneurial knowledge, venture creation skills, passion, government policy and innovativeness, are 0.559, 0.491, 0.435, 0.502, 0.425, 0.622 and 0.535 respectively. This is contained in Table 5-21.

5.10 Path Diagram

Path diagram depicts graphic illustration among variables that are presumed to support the study; it is represented by four geometric symbols, which are; circle (○) for unobserved latent variables, rectangle

(□) for observed variables, singled-headed arrows (→) for effect of one variable on another variable and doubled-headed arrows (↔) for covariance or correlation between two variables (Malkanthie, 2015). It is a perfect way of describing SEM, using the graphic tools. In addition, the label symbol or sign varies with the program used – such as, AMOS, EQS and LISREL programs (Byrne, 2001). Boomsma (2000) submits that a path diagram can be comprehended easily than mathematical model equation. In this study, SEM was implemented to test the hypothesized relationships in the model as the path diagram portrays structural and measurement errors as well as covariances.

Table 5-20 comprises of the analysis of comparative fitness indexes, which are absolute fit, incremental fit and parsimonious fit. All the cases generally depicted acceptable fit of the measurement model, as indicated by the Goodness-of-Fit Index (GFI) of 0.892, Adjusted Goodness-of-Fit Index (AGFI) of 0.872, Comparative Fit Index (CFI) of 0.942, Tucker Lewis Index (TLI) of 0.935, Normed Fit Index (NFI) of 0.868 and Standardized Root Mean Square Residual (SRMR) (0.045). The Root Mean Square Error of Approximation (RMSEA) index was 0.042 below the threshold of 0.10 (Azmi & Bee, 2010). Evaluation of all the fit indices with their corresponding values exhibited a good model fit. The Cronbach's Alpha and the average variance extracted was established as stated in Table 5-21. All the measures loaded reasonably, confirming convergent validity and the low covariance scores support discriminant validity.

Table 5-20: Summary of Comparative Fit Indexes

Category	Indexes	Value attained
Absolute fit measures	CMIN (χ^2)/df	1.669
	Root Mean Square of Error Approximation (RMSEA)	0.042
	RMR (Root Mean Square Residual)	0.034
	Goodness of fit index (GFI)	0.892
Incremental fit measures	Comparative fit index CFI)	0.942
	Tucker Lewis Index (TLI)	0.935
	Normed Fit Index (NFI)	0.868
Parsimonious fit measures	Adjusted Goodness of Fit Index (AGFI)	0.872
	Parsimonious Normed Fit Index (PNFI)	0.779
	Standardized Root Mean Square Residual	0.045

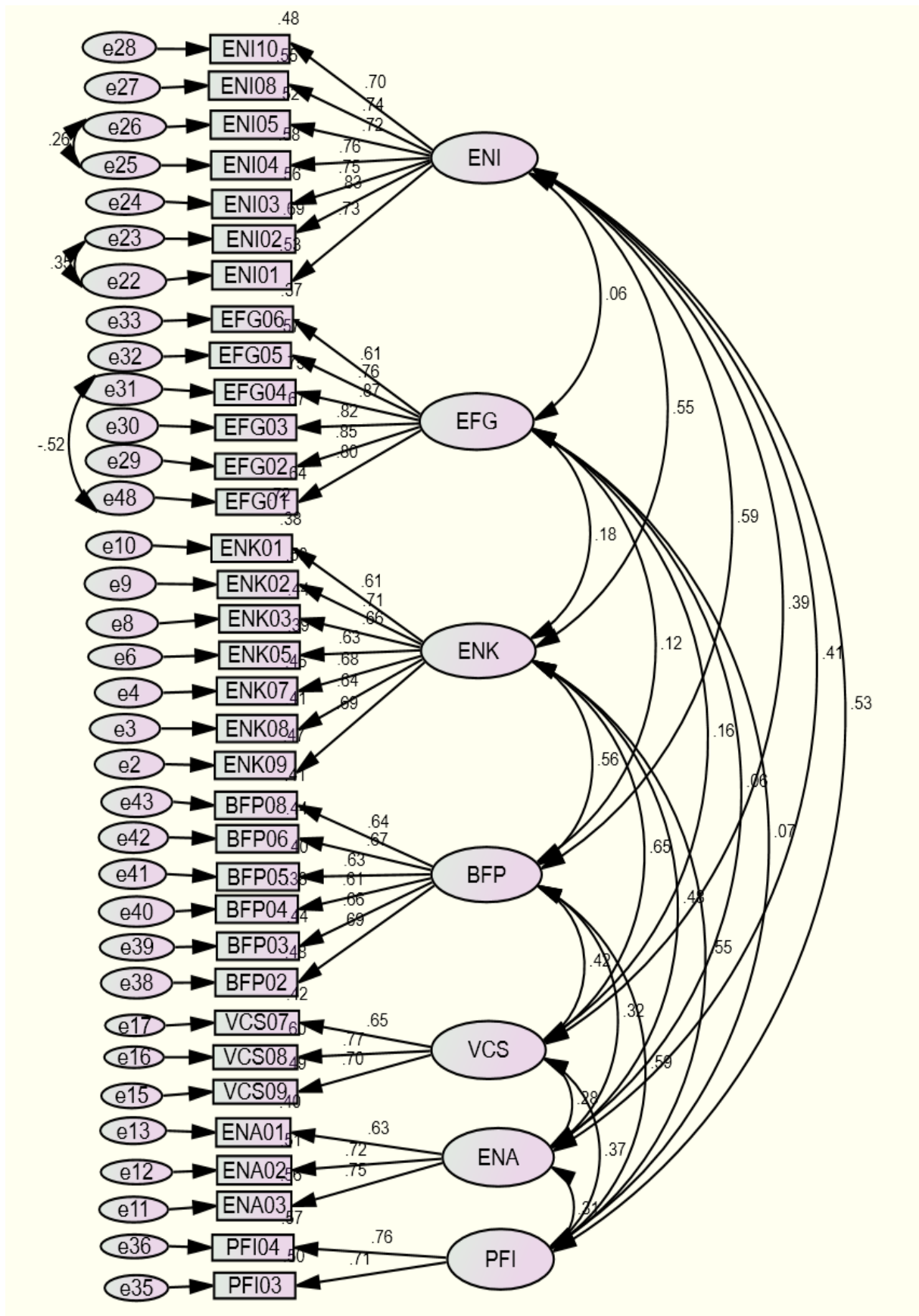


Figure 5-1: **Measurement Model**

5.11 Reliability and Validity

Cavana, Delahaye, and Sekaran. (2001) submitted that reliability of an instrument is an indication that it measures what it purports to measure consistently at various times and under different circumstances without bias. Constructs are operationalized differently by researchers and the guiding principle for choosing variables suitability is that such variables must have been verified by scholars. Construct validity helps to assess a concept that requires challenging operationalization and further psychometric properties of measurement scales (Bhattacharjee, 2012) are tested to ensure the appropriateness of the model being used. Therefore, for this study, construct was evaluated to confirm that measurement items and constructs were valid and reliable. This study employed Composite Reliability and Cronbach's Alpha to ascertain the internal consistency reliability of the constructs (Tavakol & Dennick, 2010).

Measurement model was employed to check for internal consistency, composite reliability, convergent validity and discriminant validity. The results of Indicator Reliability (IR), Average Variance Extracted (AVE), Cronbach's Alpha, Composite Reliability (CR), and Discriminant Validity (DV) are shown in Table 5-21 with all constructs having good values and reliable for further analysis.

5.11.1 Convergent and Discriminant Validity

The literature shows that convergent validity and discriminant validity are used to examine construct validity (Hair *et al.*, 2013). Convergent validity is the degree to which a given set of indicators for a construct converge or share a high percentage of variance (Hair *et al.*, 2014a; Malhotra, 2002). On the other hand, discriminant validity is the level at which the indicators of a construct exemplify a specific construct and the construct's indicators are unique from other constructs in the model (Hair *et al.*, 2014a). It is important for the researcher to investigate both convergent and discriminant validity of the constructs for confirmatory factor analysis before conducting Structural Equation Modelling statistical analysis.

Past research showed that convergent validity can be measured by using AVE, CR and factor loadings (Anderson & Gerbing, 1988). This study employed Anderson and Gerbing's (1988) measures for examining convergent validity. AVE measures the amount of variance explained by a construct in relation to the amount of random measurement error (Netemeyer, Johnston, & Burton, 1990), while CR is a measure of the degree to which items are free from random error (Masrek & Gaskin, 2016). The CRs for all exogenous and endogenous latent constructs were all above the threshold of 0.6 as suggested by Ahmad *et al.* (2016).

Table 5-21: Summary of Results for Measurement of Latent Variables

Latent Variable	Items	Loadings	IR ^a	Cronbach's Alpha	AVE ^b	CR ^c	DV ^d
Entrepreneurial Knowledge				0.843	0.435	0.843	Yes
	ENK07	0.679	0.461				
	ENK05	0.626	0.392				
	ENK03	0.663	0.440				
	ENK02	0.708	0.501				
	ENK01	0.612	0.375				
	ENK09	0.687	0.472				
	ENK08	0.638	0.407				
Entrepreneurial Inclination				0.901	0.559	0.899	Yes
	ENI03	0.751	0.564				
	ENI04	0.760	0.578				
	ENI05	0.720	0.518				
	ENI01	0.728	0.530				
	ENI02	0.831	0.691				
	ENI10	0.695	0.483				
	ENI08	0.742	0.551				
Venture Creation Skills				0.744	0.502	0.750	Yes
	VCS09	0.697	0.486				
	VCS08	0.773	0.598				
	VCS07	0.650	0.423				
Passion				0.815	0.425	0.816	Yes
	BFP02	0.693	0.480				
	BFP03	0.664	0.441				
	BFP04	0.614	0.377				
	BFP05	0.629	0.396				
	BFP06	0.667	0.445				
	BFP08	0.642	0.412				
Government Policy				0.901	0.622	0.907	Yes
	EFG02	0.851	0.724				
	EFG03	0.819	0.671				
	EFG04	0.869	0.755				
	EFG05	0.758	0.575				
	EFG01	0.800	0.640				
	EFG06	0.605	0.366				

Entrepreneurial Attitude			0.738	0.491	0.743	Yes
	ENA03	0.749	0.561			
	ENA02	0.716	0.513			
	ENA01	0.633	0.401			
Innovativeness			0.692	0.535	0.697	Yes
	PFI03	0.706	0.498			
	PFI04	0.756	0.572			

Note: a = Indicator Reliability, b = Average Variance Extracted, c = Composite Reliability, and d = Discriminant Validity.

To consider discriminant validity, this study employed Fornell and Larcker's (1981) criterion. AVEs are connected to latent construct correlation matrix, and discriminant validity is supported when the diagonal values in bold in Table 5-22, which represent the square root of AVE of the constructs, are higher than the values of other correlations. Table 5-22 shows the correlation matrix of the latent constructs and the square root of AVE. The result shows that the square root of AVE values is greater than the correlation values. Further, the maximum correlation coefficient from Table 5-22 is 0.623 that is less than 0.85 suggested by Ahmad *et al.* (2016) that will cause discriminant validity problem. From Table 5-10, the outer loadings of the indicators show that there is no complex structure, as there are no problematic cross loadings. All these suggest enough discriminant validity in this study.

The AVE for entrepreneurial knowledge, entrepreneurial attitude and passion are 0.435, 0.491 and 0.425 respectively, and are less than the threshold of 0.50. They were however admissible because their CRs were 0.843, 0.743 and 0.816 respectively.

Table 5-22: Correlation Matrix of the Latent Constructs and Discriminant Validity

	ENI	ENK	ENA	VCS	EFG	PFI	BFP
ENI	0.748						
ENK	0.063	0.660					
ENA	0.444***	0.086*	0.701				
VCS	0.395***	0.188***	0.318***	0.708			
EFG	0.522***	0.205***	0.526***	0.623***	0.789		
PFI	0.208***	0.328***	0.153***	0.292***	0.242***	0.731	
BFP	0.576***	0.145***	0.356***	0.422***	0.564***	0.239***	0.652

The bold figures in the principal diagonal represent the square root of AVE, while others show the correlations.

***, **, *. Correlation is significant at the 0.01, 0.05 and 0.10 level (2-tailed) respectively.

5.12 Assessment of Effect Size (f^2 values)

This study used the effect size (f^2) to analyse how the exogenous latent constructs explain the variation in the endogenous construct. Effect size shows the contribution of each exogenous latent construct (attitude, knowledge and skills) to the R^2 of the endogenous latent variable (entrepreneurial inclination) by examining the changes in the R^2 (Chin, 1998). Cohen (1988) provided the values for assessing f^2 and suggested that 0.02, 0.15 and 0.35 represent small, medium and large effects respectively. Wilson, Callaghan, Ringle, & Henseler (2007) provided how to calculate f^2 as:

$$f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2} \dots\dots\dots 5-1$$

where:

$R_{included}^2$ = Values of R^2 of the exogenous latent constructs when selected exogenous variable is included in the model.

$R_{excluded}^2$ = Values of R^2 of the exogenous latent constructs when selected exogenous variable is excluded from the model.

Table 5-23: Effect Size

Exogenous Constructs	R-Squared		f^2	Effect Size
	Included	Excluded		
Attitude	0.270	0.156	0.156	Medium
Knowledge	0.270	0.269	0.001	None
Skills	0.270	0.198	0.099	Small

Table 5-23 shows the computation of the effect size (f^2) for the exogenous latent constructs (attitude, knowledge and skills), as used in this study. Attitude, knowledge and skills for explaining entrepreneurial inclination have effect sizes of 0.156, 0.001, and 0.099 respectively. Following the recommendation of Cohen (1998), this finding indicates that attitude, knowledge and skills have medium, none and small effect size on entrepreneurial inclination respectively.

5.13 Structural Equation Modelling

This study employed structural equation modelling to appraise the validity and reliability of the measurement model. Although, scholars have acknowledged that structural equation model does not consist of a specific recommended measure of fit, to evaluate the relative fit of the data to the model, diverse measures are suggested by different authors (Azmi & Bee, 2010). A total of 385 questionnaires were accepted as useable after data cleaning. CB-SEM was used to assess the relationship between

three exogenous constructs (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills), and a single endogenous construct of entrepreneurial inclination.

Evaluation of the structural relationships, model fit and hypothesis testing among constructs are considered for examining the structural model. The numbers of items considered for examination are: entrepreneurial inclination (7), government policy (6), entrepreneurial knowledge (7), passion (6), venture creation skills (3), entrepreneurial attitude (3), and innovativeness (2). Entrepreneurial attitude, entrepreneurial knowledge and venture creation skills are the latent variables that predict students' entrepreneurial inclination, while passion, government policy and innovativeness are components of the moderating variable. In addition, gender, working experience and family annual income, expressed in respondents' demographic profile form part of the moderating variable.

5.14 Results of Hypotheses Testing

This section of the study depicted the summary of the results in consonance with the tested hypotheses in conformity with the research questions stated in Chapter One. From the study's empirical investigation, twenty-one hypotheses were tested by using AMOS CB-SEM, which endorsed simultaneous evaluation of the relationship between three independent variables (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills), and a dependent variable (entrepreneurial inclination) (Hair *et al.*, 2014a), as well as biopsychosocial factors as the moderator. The results of the direct effect of entrepreneurial attitude, entrepreneurial knowledge and venture creation skills on entrepreneurial inclination are presented. It shows the hypotheses, hypothesized relationships, path coefficients (standardized beta values), critical ratios, *p* values, and the decision based on the CB-SEM structural model, as discussed earlier. The hypotheses are presented as follows: Hypotheses 1a-1c in Table 5-26 indicate full sample of all the respondents (N = 385), followed by Hypotheses 2a-2c in Table 5-27, which indicate management students sample (N = 263), and Hypotheses 3a-3c in Table 5-28 that show non-management students sample (N = 122).

This study has nine direct hypotheses, nine moderating hypotheses, and three differences in group hypotheses. To find answer to the research questions the nine direct hypotheses centre of the relationship between entrepreneurial attitude, entrepreneurial knowledge and venture creation skills as the exogenous variables and entrepreneurial inclination as endogenous variable. These hypotheses include:

Table 5-24: **Direct Hypotheses**

No.	Hypothesis
H1a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among students in Nigerian universities.

H1b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among students in Nigerian universities.
H1c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among students in Nigerian universities.
H2a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among management students in Nigerian universities.
H2b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among management students in Nigerian universities.
H2c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among management students in Nigerian universities.
H3a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among non-management students in Nigerian universities.
H3b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among non-management students in Nigerian universities.
H3c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among non-management students in Nigerian universities.

The nine moderation effects' hypotheses as formulated in this dissertation are represented in this section. These hypotheses are in relation to the effect on how biopsychosocial factors affect the relationship between entrepreneurial attitude, entrepreneurial knowledge and venture creation skills as the exogenous variables and entrepreneurial inclination as endogenous variable. These hypotheses include:

Table 5-25: Moderating Hypotheses

No.	Hypothesis
H4a	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among students in Nigerian universities.
H4b	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among students in Nigerian universities.
H4c	Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among students in Nigerian universities.
H5a	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among management students in Nigerian universities.

- H5b Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among management students in Nigerian universities.
- H5c Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among management students in Nigerian universities.
- H6a Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among non-management students in Nigerian universities.
- H6b Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among non-management students in Nigerian universities.
- H6c Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among non-management students in Nigerian universities.

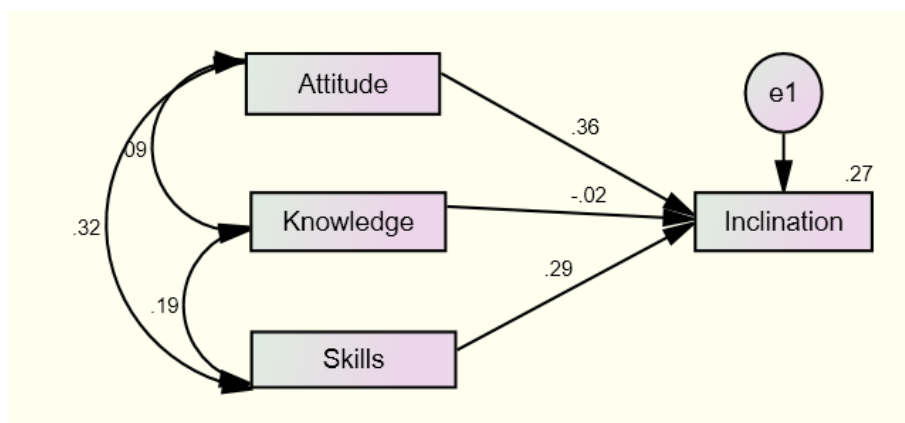


Figure 5-2: The structural model for the direct relationships between exogenous and endogenous constructs for Nigerian university students

Table 5-26: Results of Hypotheses Testing for Direct Relationships (N = 385)

H	Relationship	Path	Coef.	Critical Ratio	P Value	Supported
H1a	Inclination <--- Attitude		0.355	7.719	***	Yes
H1b	Inclination <--- Knowledge		-0.022	-0.484	0.268	No
H1c	Inclination <--- Skills		0.286	6.136	***	Yes
	R ²		0.270			

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$ (1-tailed).

5.14.1 Structural Model and Hypotheses Testing of the Direct Relationships for Full Sample

The AMOS output of the structural model for testing the direct relationships for the full sample is shown in Figure 5-2. The results in Table 5-26 show that 0.270 is the squared multiple correlation (R^2). This suggests that 27% of the variation in students' entrepreneurial inclination can be explained by combining entrepreneurial attitude, entrepreneurial knowledge and venture creation skills.

The path model and hypothesis show that entrepreneurial attitude has significant positive relationship with entrepreneurial inclination ($\beta = 0.355, p < 0.01$). This implies that one standard deviation increase in entrepreneurial attitude will impact entrepreneurial inclination by 0.355. Entrepreneurial courses offered in the universities tend to improve the reasoning and behaviour of students towards entrepreneurial inclination. Entrepreneurial knowledge shows insignificant negative relationship with entrepreneurial inclination ($\beta = -0.022, p > 0.10$). In essence, knowledge gained from attending entrepreneurial courses at the university is not considered sufficient to make the students become entrepreneurially inclined. In the structural model, the relationship between venture creation skills and entrepreneurial inclination is positive and significant ($\beta = 0.286, p < 0.01$). The implication is that one standard deviation increase in venture creation skills will impact entrepreneurial inclination by 0.286. This is an indication that entrepreneurial education equips the students with requisite skills that prepare them for venturing into entrepreneurial activities after graduation.

For Nigerian university students, entrepreneurial attitude remains the highest contributor to explaining entrepreneurial inclination with a path coefficient of 0.355. The result for the relationship between entrepreneurial knowledge and entrepreneurial inclination is somehow surprising considering the influence of knowledge in all human endeavours. In essence, Nigerian students are assumed do not require specialized entrepreneurial knowledge prior to becoming entrepreneurs. This could be an indication that they consider entrepreneurial knowledge acquired at the university as purely theoretical learning (Fang & Chen, 2019) that makes it insufficient for starting any viable business activity.

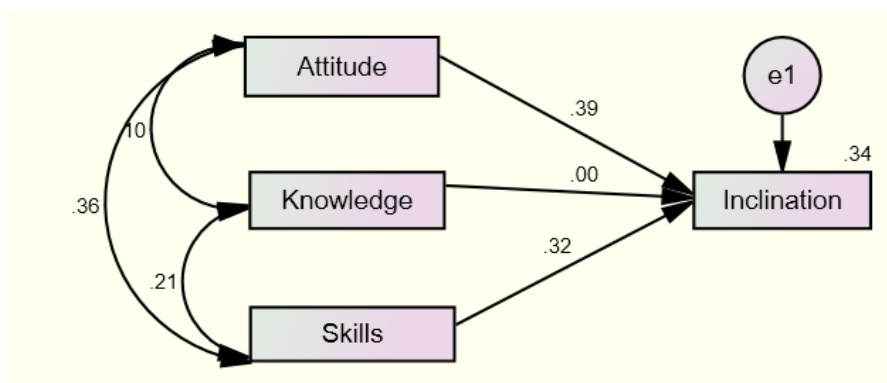


Figure 5-3: The structural model for the direct relationships between exogenous and endogenous constructs for management students

Table 5-27: Results of Hypotheses Testing for Direct Relationships (N = 263)

H	Relationship			Path	Critical	p-Value	Supported
				Coef.	Ratio		
H2a	Inclination	<---	Attitude	0.385	7.169	***	Yes
H2b	Inclination	<---	Knowledge	0.002	0.034	0.973	No
H2c	Inclination	<---	Skills	0.324	5.929	***	Yes
R ²				0.345			

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$ (1-tailed).

5.14.2 Structural Model and Hypotheses Testing of the Direct Relationships for Management Students

This subsection shows the direct relationship between entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination for management students in Nigerian universities. The AMOS output of the structural model is shown in Figure 5-3. The results in Table 5-27 showed that 0.345 is the squared multiple correlation (R^2). This suggests that 34.5% of the variation in management students' entrepreneurial inclination can be explained by combining entrepreneurial attitude, entrepreneurial knowledge and venture creation skills.

The result ($\beta = 0.385$, $p < 0.01$) shows a significant positive relationship between entrepreneurial attitude and entrepreneurial inclination. However, the finding shows a positive insignificant relationship between entrepreneurial knowledge and entrepreneurial inclination ($\beta = 0.002$, $p > 0.10$). Venture creation skills shows a positive relationship with entrepreneurial inclination ($\beta = 0.324$; $p < 0.01$). This implies that one standard deviation increase in entrepreneurial attitude and venture creation skills will impact entrepreneurial inclination by 0.385 and 0.324 respectively for management students.

Table 5-28: Results of Hypotheses Testing for Direct Relationships (N = 122)

H	Relationship			Path	Critical	p-Value	Supported
				Coef.	Ratio		
H3a	Inclination	<---	Attitude	0.308	3.596	***	Yes
H3b	Inclination	<---	Knowledge	-0.042	-0.502	0.616	No
H3c	Inclination	<---	Skills	0.198	2.301	0.021**	Yes
R ²				0.161			

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$ (1-tailed).

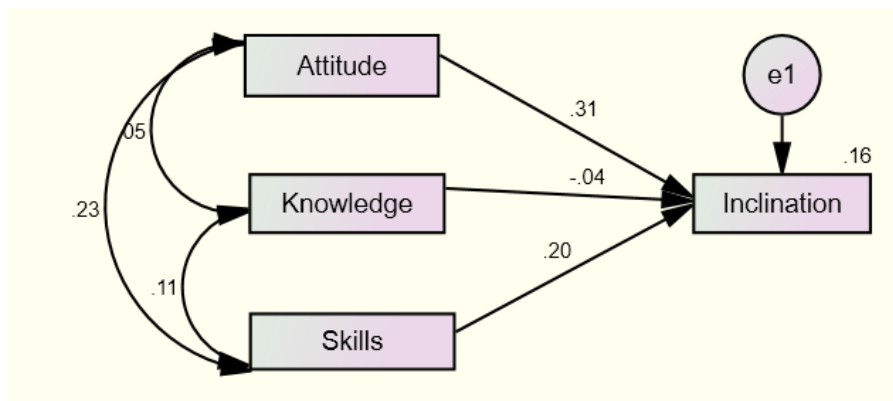


Figure 5-4: The structural model for the direct relationships between exogenous and endogenous constructs for non-management students

5.14.3 Structural Model and Hypotheses Testing of the Direct Relationships for Non-Management Students

This subsection presents the results for direct relationship between entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination for non-management students in Nigerian universities. The AMOS output of the structural model is shown in Figure 5-4. The results in Table 5-28 showed that 0.161 is the squared multiple correlation (R^2). This suggests that 16.1% of the variation in non-management students' entrepreneurial inclination can be explained by the model.

The result ($\beta = 0.308$; $p < 0.01$) shows a significant positive relationship between entrepreneurial attitude and entrepreneurial inclination. Furthermore, it reveals that a negative insignificant relationship exists between entrepreneurial knowledge and entrepreneurial inclination ($\beta = -0.042$; $p > 0.10$). A significant relationship exists between venture creation skills and entrepreneurial inclination ($\beta = 0.198$; $p < 0.05$). The implication is that one standard deviation increase in entrepreneurial attitude and venture creation skills will impact entrepreneurial inclination by 0.308 and 0.198 respectively for non-management students.

5.15 Testing Moderating Effect

This study adopts the product indicator approach to investigate the strength of biopsychosocial factors in moderating the relationship between entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination. This approach is considered appropriate since the moderator variable is not a categorical variable (Rigdon, Schmacker, & Wothke, 1998). In addition, Henseler and Fassott (2010) argued that the group comparison approach is inferior to the product approach. The standardized value of the independent and moderator variables were first obtained, as suggested by Chin *et al.* (2003). Thereafter, the standardized value of the moderator was separately

multiplied with the standardized value of the three independent variables to obtain their interaction terms.

Having established the direct effects on the relationship between the exogenous and endogenous constructs, next, is presentation of the moderating effects of biopsychosocial factors on the relationship between the exogenous and endogenous constructs. Therefore, biopsychosocial factors which comprise of gender, family annual income, working experience, passion, government policy and innovativeness was measured as a composite variable. Following Wang, Hsieh, Assari, Gaskin, and Rost (2018), the moderator and interaction variables were jointly entered into the structural models one at a time to assess the moderating effect of the interaction term.

The results of the moderating effect of biopsychosocial factors on the relationship between entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination are presented. It shows the hypotheses, hypothesized relationship, path coefficient (standardized beta values), critical ratio, and the decision based on the CB-SEM structural model. The hypotheses are presented as follows: Hypotheses 4a-4c in Table 5-29 indicates full sample of all respondents (N = 385), followed by Hypotheses 5a-5c in Table 5-30 for management students (N = 263), and Hypotheses 6a-6c in Table 5-31 for non-management students (N = 122).

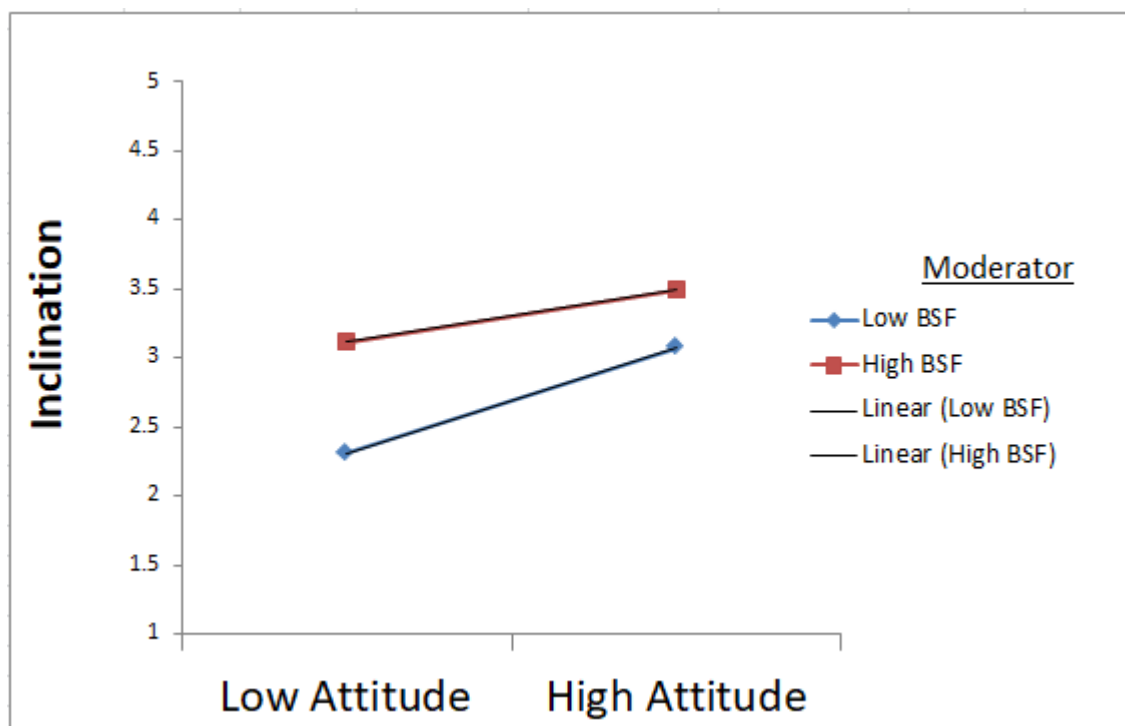


Figure 5-5: **Interaction effect of entrepreneurial attitude and biopsychosocial factors on entrepreneurial inclination for Nigerian university students**

Table 5-29: Assessment of Main Effects and Moderating Effects for Nigerian University students

Panel A				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
H4a	Inclination	<---	Attitude	0.355	7.719***	0.286	6.139***	
	Inclination	<---	Knowledge	-0.022	-0.484	-0.083	-1.844*	
	Inclination	<---	Skills	0.286	6.136***	0.187	3.947***	
	Inclination	<---	BSF			0.307	6.962***	
	Inclination	<---	Att*BSF			-0.096	-2.164**	Yes
	R^2			0.270		0.251		
	f^2			-0.03		None		
Panel B				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
H4b	Inclination	<---	Attitude	0.355	7.719***	0.300	6.462***	
	Inclination	<---	Knowledge	-0.022	-0.484	-0.079	-1.765*	
	Inclination	<---	Skills	0.286	6.136***	0.178	3.799***	
	Inclination	<---	BSF			0.315	7.158***	
	Inclination	<---	Know*BSF			-0.062	-1.397	No
	R^2			0.270		0.256		
	f^2			-0.02		None		
Panel C				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
H4c	Inclination	<---	Attitude	0.355	7.719***	0.302	6.481***	
	Inclination	<---	Knowledge	-0.022	-0.484	-0.082	-1.835*	
	Inclination	<---	Skills	0.286	6.136***	0.181	3.840***	
	Inclination	<---	BSF			0.311	7.047***	
	Inclination	<---	Skills*BSF			-0.037	-0.846	No
	R^2			0.270		0.253		
	f^2			-0.02		None		

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$ (1-tailed).

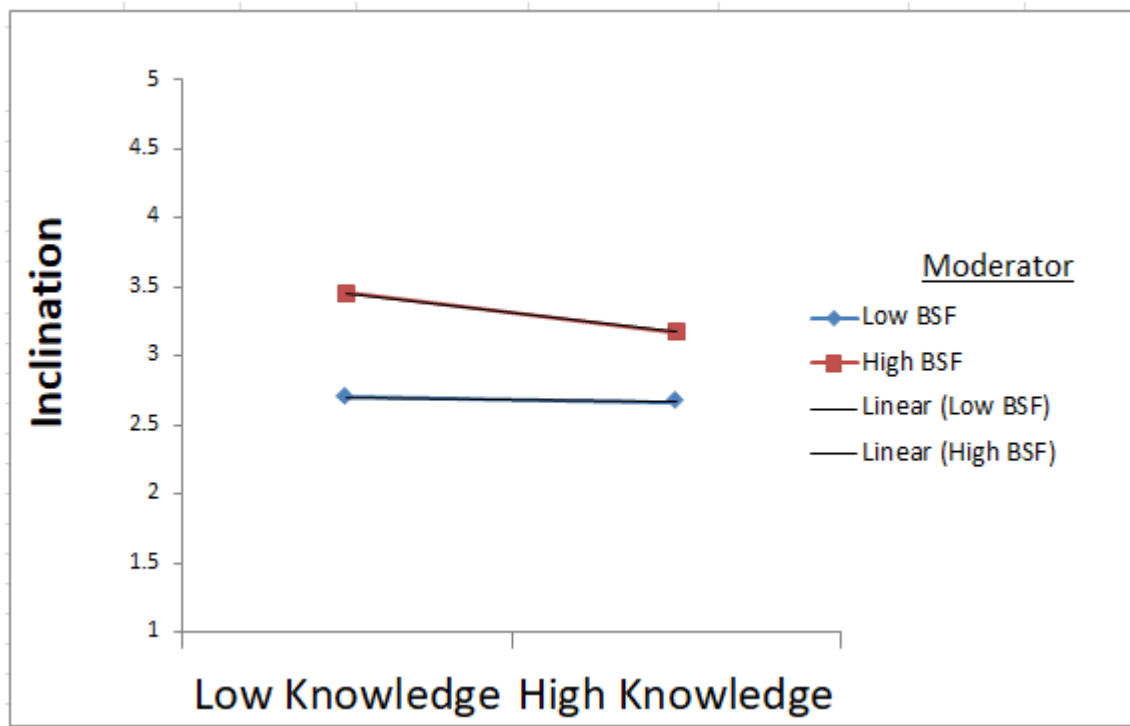


Figure 5-6: **Interaction effect of entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination for Nigerian university students**

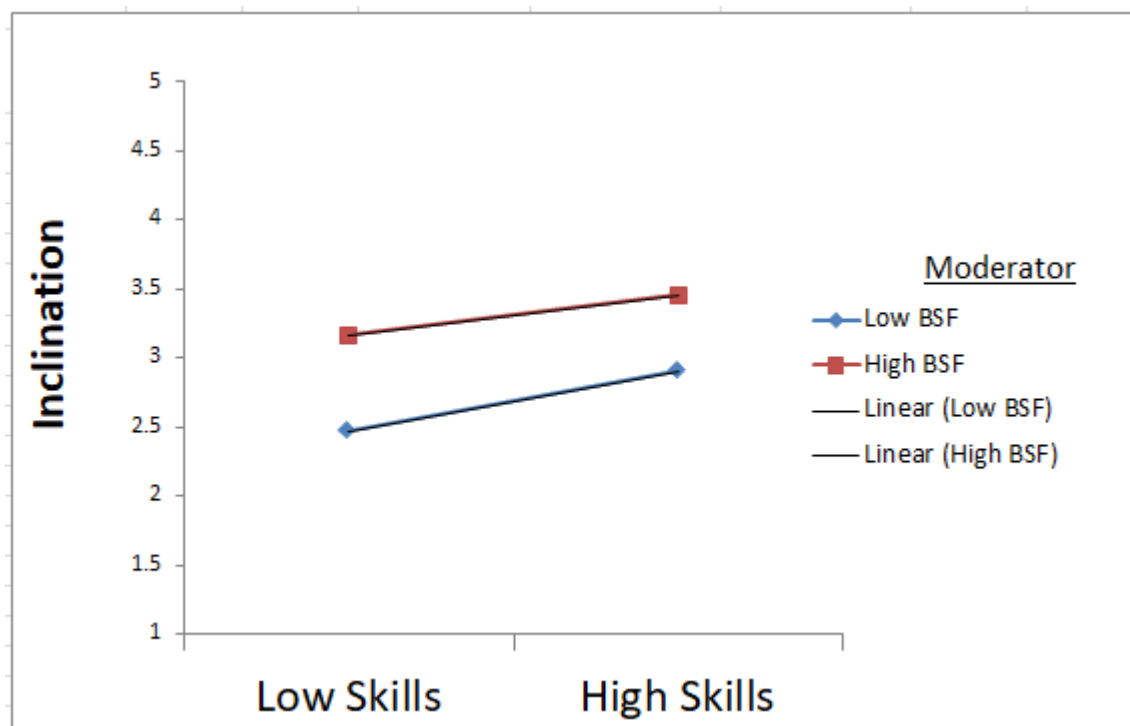


Figure 5-7: **Interaction effect of venture creation skills and biopsychosocial factors on entrepreneurial inclination for Nigerian university students**

The result is presented in Table 5-29. The interaction effect of entrepreneurial attitude and biopsychosocial factors on entrepreneurial inclination shows a path coefficient that is negative and statistically significant ($\beta = -0.096, p < 0.05$). The interaction term for entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination was negative and insignificant ($\beta = -0.062, p > 0.10$), while the interaction term for venture creation skills and biopsychosocial factors on entrepreneurial inclination was also negative and insignificant ($\beta = -0.037, p > 0.10$).

5.15.1 The moderating effects of biopsychosocial factors on exogenous variables and entrepreneurial inclination among management students in Nigerian universities

The interaction term for entrepreneurial attitude and biopsychosocial factors on entrepreneurial inclination as shown in Table 5-30, Panel A, was negative and insignificant ($\beta = -0.042, p > 0.10$). The interaction term for entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination as shown in Table 5-30, Panel B, was negative and insignificant ($\beta = -0.059, p > 0.10$). The interaction term for venture creation skills and biopsychosocial factors on entrepreneurial inclination in the structural model was insignificant ($\beta = -0.054, p > 0.10$) as depicted in Table 5-30, Panel C.

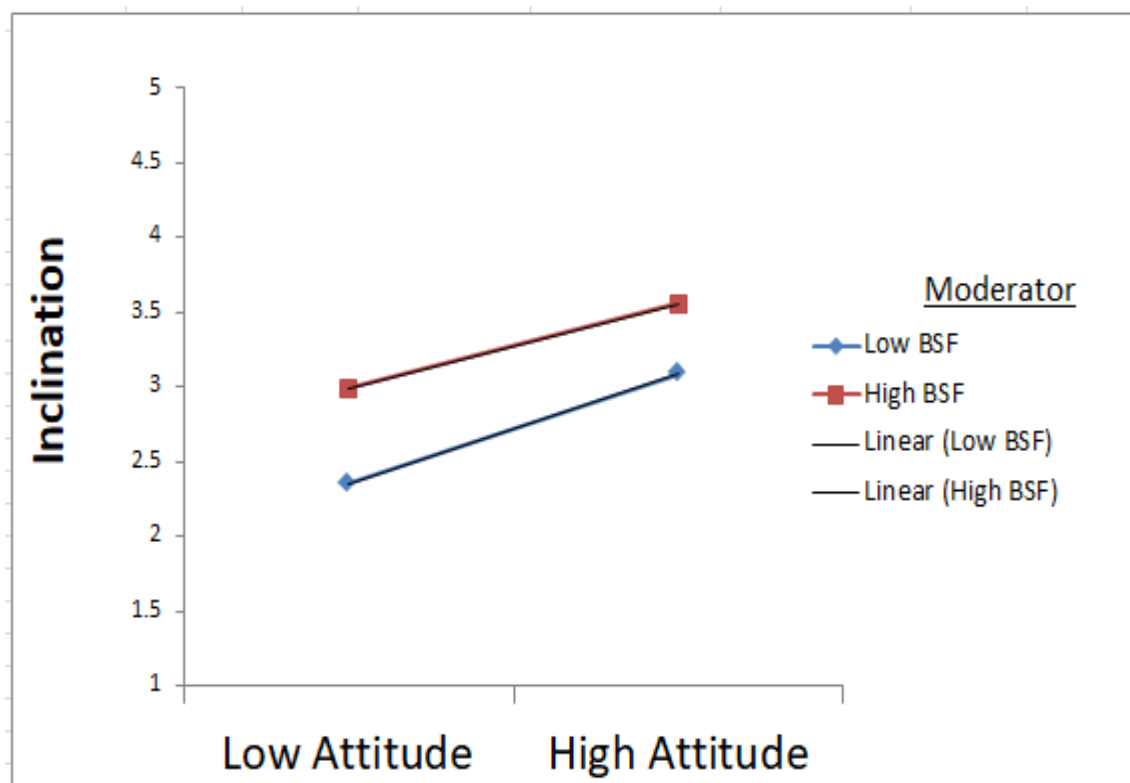


Figure 5-8: Interaction effect of entrepreneurial attitude and biopsychosocial factors on entrepreneurial inclination for management students in Nigerian universities

Table 5-30: Assessment of Main Effects and Moderating Effects for Management Students

Panel A				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
	Inclination	<---	Attitude	0.385	7.169***	0.324	5.847***	
	Inclination	<---	Knowledge	0.002	0.034	-0.050	-0.939	
	Inclination	<---	Skills	0.324	5.929***	0.258	4.573***	
	Inclination	<---	BSF			0.276	5.349***	
H5a	Inclination	<---	Att*BSF			-0.042	-0.808	No
	R^2			0.345		0.304		
	f^2			-0.06		None		
Panel B				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
	Inclination	<---	Attitude	0.385	7.169***	0.331	6.002***	
	Inclination	<---	Knowledge	0.002	0.034	-0.045	-0.861	
	Inclination	<---	Skills	0.324	5.929***	0.249	4.441***	
	Inclination	<---	BSF			0.283	5.499***	
H5b	Inclination	<---	Know*BSF			-0.059	-1.148	No
	R^2			0.345		0.309		
	f^2			-0.05		None		
Panel C				Main-effects Model		Interaction Model		
				Path	Critical	Path	Critical	
H	Relationship			Coef.	Ratio	Coef.	Ratio	Supported
	Inclination	<---	Attitude	0.385	7.169***	0.333	6.018***	
	Inclination	<---	Knowledge	0.002	0.034	-0.051	-0.965	
	Inclination	<---	Skills	0.324	5.929***	0.256	4.541***	
	Inclination	<---	BSF			0.269	5.220***	
H5c	Inclination	<---	Skills*BSF			-0.054	-1.057	No
	R^2			0.345		0.307		
	f^2			-0.05		None		

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$ (1-tailed).

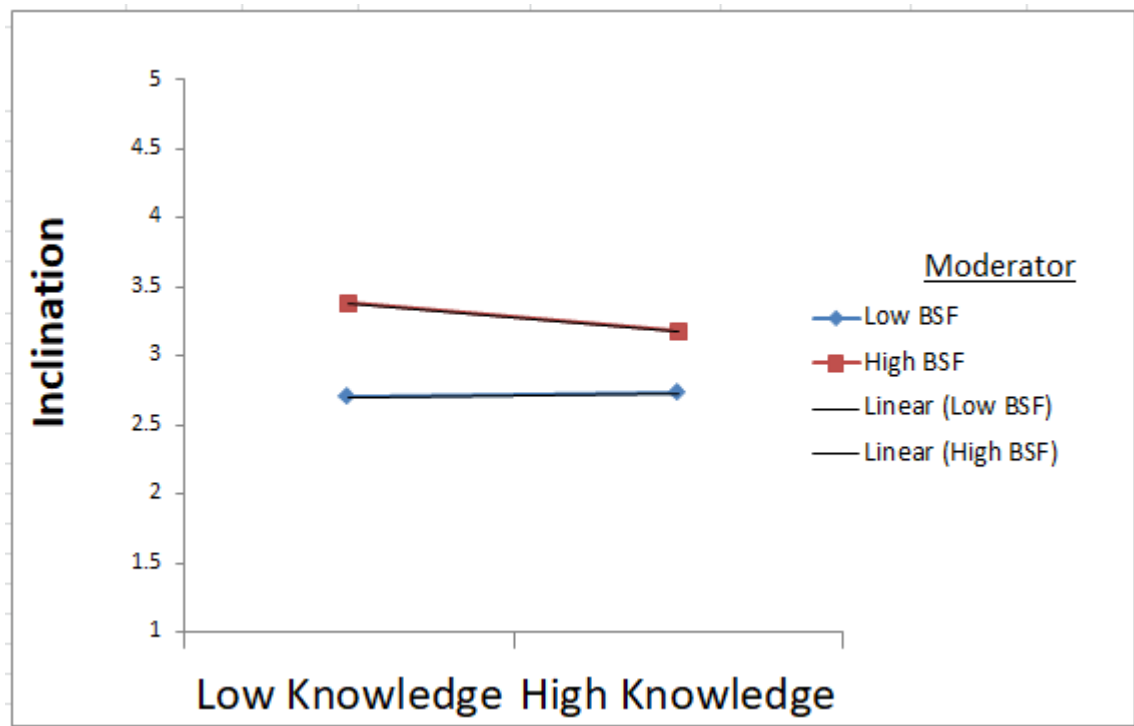


Figure 5-9: Interaction effect of entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination for management students in Nigerian universities

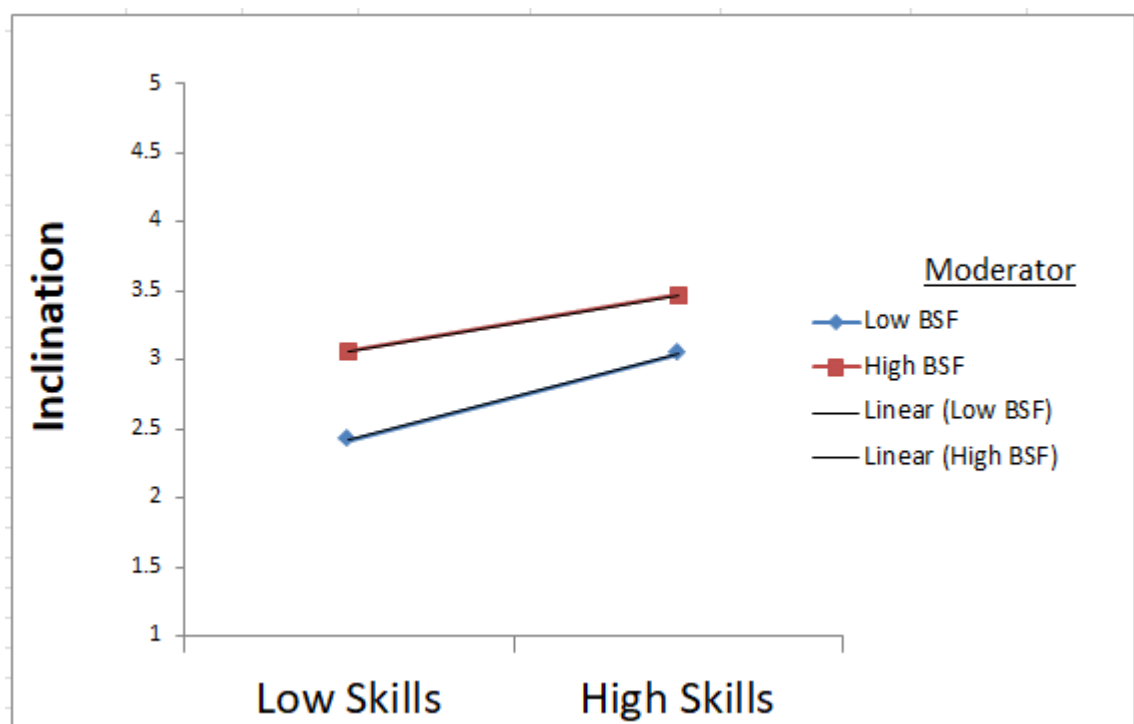


Figure 5-10: Interaction effect of venture creation skills and biopsychosocial factors on entrepreneurial inclination for management students in Nigerian universities

5.15.2 The Moderating Effects of Biopsychosocial Factors on Exogenous Variables and Entrepreneurial Inclination among Non-Management Students in Nigerian Universities.

Table 5-31: Assessment of Main Effects and Moderating Effects for Non-Management Students

Panel A				Main-effects Model		Interaction Model		
H	Relationship			Path Coef.	Critical Ratio	Path Coef.	Critical Ratio	Supported
H6a	Inclination	<---	Attitude	0.308	3.596***	0.241	2.930***	
	Inclination	<---	Knowledge	-0.042	-0.502	-0.123	-1.524	
	Inclination	<---	Skills	0.198	2.301**	0.030	0.361	
	Inclination	<---	BSF			0.353	4.403***	
	Inclination	<---	Att*BSF			-0.155	-1.933*	Yes
	R^2			0.161		0.222		
	f^2			0.08		Small		
Panel B				Main-effects Model		Interaction Model		
H	Relationship			Path Coef.	Critical Ratio	Path Coef.	Critical Ratio	Supported
H6b	Inclination	<---	Attitude	0.308	3.596***	0.252	3.073***	
	Inclination	<---	Knowledge	-0.042	-0.502	-0.121	-1.509	
	Inclination	<---	Skills	0.198	2.301**	0.014	0.170	
	Inclination	<---	BSF			0.385	4.819***	
	Inclination	<---	Know*BSF			-0.047	-0.592	No
	R^2			0.161		0.227		
	f^2			0.09		Small		
Panel C				Main-effects Model		Interaction Model		
H	Relationship			Path Coef.	Critical Ratio	Path Coef.	Critical Ratio	Supported
H6c	Inclination	<---	Attitude	0.308	3.596***	0.251	3.090***	
	Inclination	<---	Knowledge	-0.042	-0.502	-0.119	-1.500	
	Inclination	<---	Skills	0.198	2.301**	0.014	0.169	
	Inclination	<---	BSF			0.407	5.142***	
	Inclination	<---	Skills*BSF			0.013	0.168	No
	R^2			0.161		0.241		
	f^2			0.11		Small		

Note: Significant level; *** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$ (1-tailed).

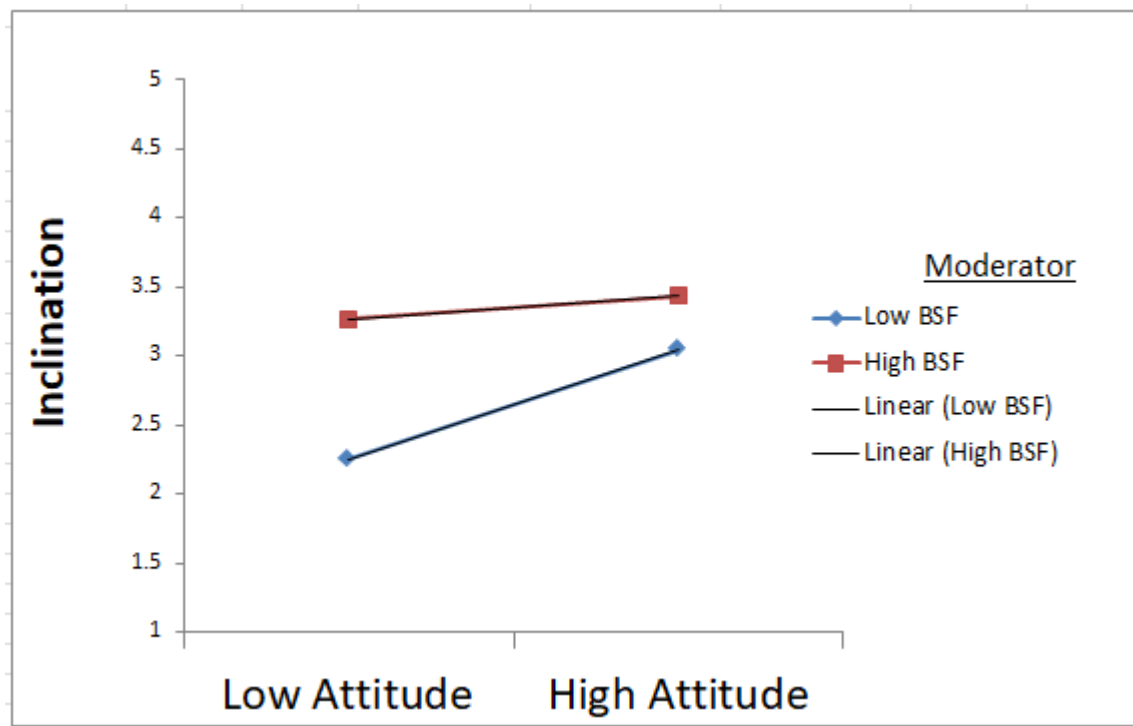


Figure 5-11: Interaction effect of entrepreneurial attitude and biopsychosocial factors on entrepreneurial inclination for non-management students in Nigerian universities

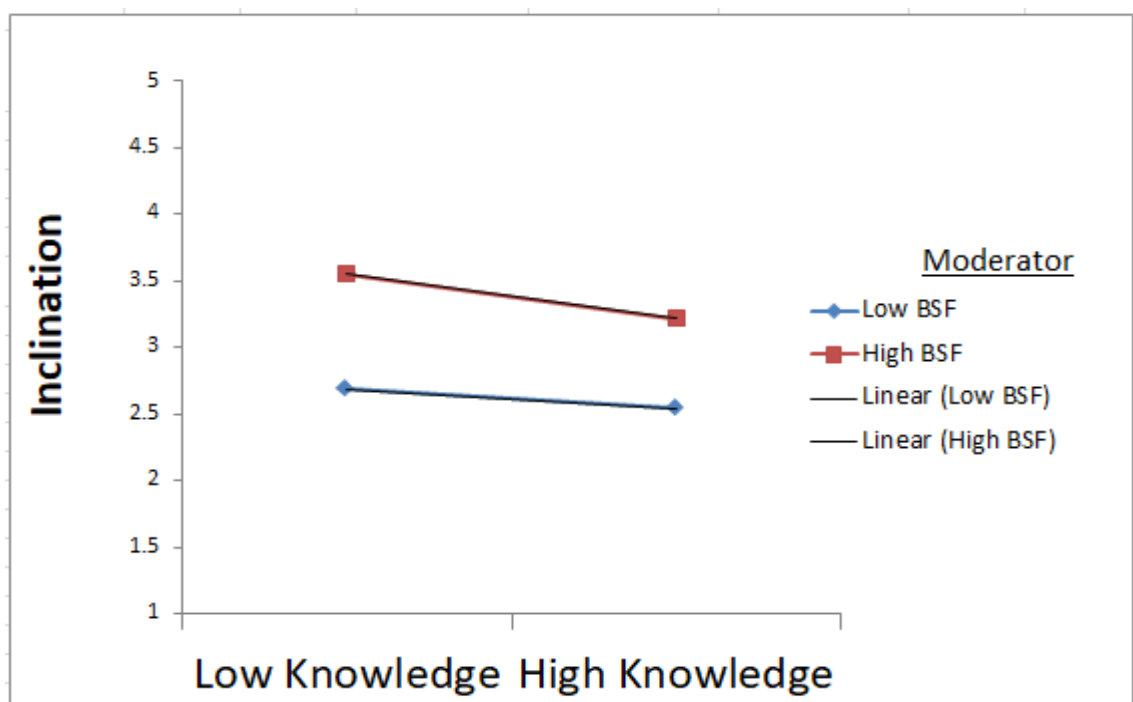


Figure 5-12: Interaction effect of entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination for non-management students in Nigerian universities

As shown in Table 5-31, biopsychosocial factors negatively moderates the relationship between entrepreneurial attitude and entrepreneurial inclination for non-management students ($\beta = -0.155, p < 0.10$). The interaction effect of entrepreneurial knowledge and biopsychosocial factors on entrepreneurial inclination shows the path coefficient is negative and statistically insignificant ($\beta = -0.047, p > 0.10$). The interaction effect of venture creation skills and biopsychosocial factors on entrepreneurial inclination shows a path coefficient that is positive and statistically insignificant ($\beta = 0.013, p > 0.10$).

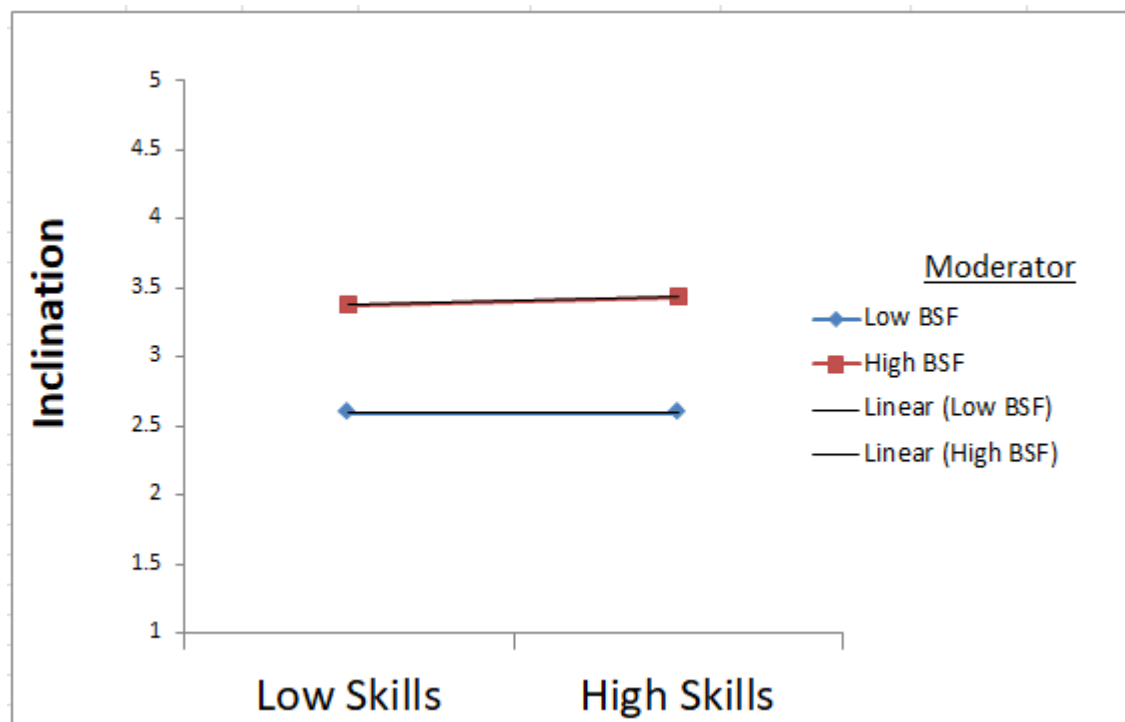


Figure 5-13: **Interaction effect of venture creation skills and biopsychosocial factors on entrepreneurial inclination for non-management students in Nigerian universities**

5.16 Differences in Group Hypotheses (Management and Non-Management Students)

This study used multiple group analyses to examine the differences between management and non-management students of the direct relationships hypothesized in the structural model. Following Kruse, Hagerty, Byers, Gatien, and Williams (2014), this study employed critical ratios test in AMOS to investigate the significance of differences across management and non-management students in Nigerian universities. The results in Table 5-32 indicate that the relationship between entrepreneurial attitude and students entrepreneurial inclination was stronger for management students ($\beta = 0.418, p < 0.01$) than for non-management students ($\beta = 0.270, p < .01$). In addition, the relationship between venture creation skills and students entrepreneurial inclination was stronger for management students ($\beta = 0.319, p < 0.01$), than for non-management students ($\beta = 0.190, p < 0.05$). However, while the relationship between entrepreneurial knowledge and students entrepreneurial inclination was

insignificant for both management ($\beta = 0.002$, $p > 0.10$) and non-management students ($\beta = -0.034$, $p > 0.10$) it still shows that knowledge acquired by management students was stronger than that of non-management students. This finding provides full support for Hypotheses 7a, 7b and 7c.

Table 5-32: Critical Ratio Test in AMOS

H	Relationship			Management		Non-Management		Supported
				Coef.	P-value	Coef.	P-value	
H7a	Inclination	<---	Attitude	0.418	0.000***	0.270	0.000***	Yes
H7b	Inclination	<---	Knowledge	0.002	0.973	-0.034	0.616	Yes
H7c	Inclination	<---	Skills	0.319	0.000***	0.190	0.021**	Yes

Notes: *** p -value < 0.01; ** p -value < 0.05; * p -value < 0.10

5.17 Discussion

This dissertation was designed to better understand how entrepreneurial education impacts entrepreneurial inclination and how biopsychosocial factors affects this relationship. When students secure admission into the universities, their orientation and thinking change and they begin to focus on their course of study (Alcaraz-Rodriguez *et al.* 2014). They are further introduced to entrepreneurial courses designed into the curriculum by the National Universities Commission to prepare them for life after graduation (Akhueomonkhan *et al.*, 2013). The study of Oloruntoba and Akinfolarin (2018) on the evaluation of entrepreneurship program in a State in Nigeria concluded that although there is awareness on the determinations of both governmental and non-governmental organizations in reducing unemployment, but the lack of entrepreneurial skills has made the efforts ineffective. The primary purpose of entrepreneurial education is to make attendees entrepreneurially inclined so as to reduce the growing rate of unemployment in the country. However, without an enabling business environment, individuals' willingness to be entrepreneurially inclined could be weakened (Gafar *et al.*, 2015). This section discusses the results obtained from the data analysis in the context of the research objectives, literature review and research hypotheses.

5.17.1 Direct Effects of Entrepreneurial Attitude on Entrepreneurial Inclination

In this study entrepreneurial attitude is a reflection on people's mind-set toward entrepreneurship, and this can be in form of opportunity recognition, start-ups skills and supportive environments (Ács *et al.*, 2017). In other words, entrepreneurial attitude represents the students' (management and non-management) picture of information on how to become entrepreneurially inclined. Iacobucci and Micozzi (2012) postulated that entrepreneurship pedagogy voids of students' entrepreneurial attitude

should be discarded because entrepreneurship education is expected to prepare and strengthen entrepreneurial attitude among students.

Hypotheses 1a, 2a and 3a stated that entrepreneurial attitude will have significant relationship with entrepreneurial inclination for university, management and non-management students respectively, and the results provide support for these Hypotheses. It was found that the relationship between entrepreneurial attitude and entrepreneurial inclination was significant at the 1 per cent significance level even after including the interaction effect with biopsychosocial factors for the three hypotheses. Cohen, Cohen, West, and Aiken (2003) provided values for assessing standardized path coefficient (β) and recommended that 0.10, 0.30 and 0.50 represent small, medium and large effects respectively. Therefore, following Cohen *et al.* (2003), this finding suggests that entrepreneurial attitude plays a very significant role in the determination of entrepreneurial inclination among Nigerian university students with medium effect. The implication is that partaking in entrepreneurship education courses at the university positively and significantly influence students' entrepreneurial attitude, which, in turn, increases their entrepreneurial inclination irrespective of their course of study. The finding is consistent with prior studies that showed how attitude and self-efficacy significantly contribute to the entrepreneurial mind-set of engineering students (Law & Breznik, 2017). Similarly, the finding supports past studies that documented the importance of attitude in human endeavours (Oosterbeek *et al.*, 2010) for a successful venture and that training is important for entrepreneurial action ((European Commission, 2012b; Gielink *et al.*, 2015). It also aligns with the argument of past studies on the importance of entrepreneurial attitude in would-be entrepreneurs (Devi *et al.*, 2019; Law & Breznik, 2017; Chenube *et al.*, 2011).

Nigerian students are aware of the fact that the rate of unemployment in the country is on the increase and that the era of securing immediate job after graduation is becoming a thing of the past. It is now glaring that the government cannot meet the job demands of the teeming population being turned out yearly from the universities. Therefore, entrepreneurship education is expected to improve students' personal development and behaviour that will in turn affect their attitude towards entrepreneurial inclination (Oyebola *et al.*, 2015).

5.17.2 Direct Effects of Entrepreneurial Knowledge on Entrepreneurial Inclination

Entrepreneurial knowledge refers to the concepts, skills and mentality entrepreneurs' use in the course of starting up and developing their businesses (Ahmad, 2013). The perspectives that entrepreneurial abilities required for business venture can be learned through entrepreneurial education in order to raise competent entrepreneurs are acknowledged by some scholars (Raju, Kumar, & Ramgopal, 2015; Johansen, 2014). In this study, Hypotheses 1b, 2b and 3b stated that entrepreneurial knowledge will have significant relationship with entrepreneurial inclination for university, management and non-

management students respectively. The results did not provide support for these Hypotheses. Although entrepreneurial knowledge is a behaviour driver, this study showed that students that acquire training through entrepreneurship education do not have the propensity to be entrepreneurially inclined. The findings in this study which indicate that entrepreneurial knowledge did not have a significant impact on entrepreneurial inclination is contrary to prior studies (Odewale *et al.*, 2019b; Aboho *et al.*, 2016) and the possible explanation for this could be an indication that there is a training gap in the curriculum. Moreover, it is argued in previous research that entrepreneurial education requires distinct techniques and contents in order to achieve desirable outcome (Liñán & Fayolle, 2015).

Meanwhile, actual contribution of entrepreneurial education to economic growth and development in Nigeria seems unclear in spite of making entrepreneurial education mandatory (Ossai & Nwalado, 2013). In addition, lack of entrepreneurial inclination among the youth is jeopardizing the efforts of stakeholders as self-destructive behaviour, violence and suicidal acts are on the increase (Asogwa & Onyezere, 2018). It is perceived that entrepreneurial knowledge acquired at the university reflects on theoretical learning with little or no practical learning (Fang & Chen, 2019) making it inadequate for business success. This perspective as mirrored in the study of Lackeus (2015) acknowledged that a major challenge in entrepreneurship is transforming theoretical learning into business creation. Moreover, Tiftik and Zincirkiran (2014) believed that theoretical learning without other varied factors will impede starting a business venture.

Consequently, if the students do not acquire knowledge or feel that entrepreneurial education courses are a waste of their time in the university, then experiencing a sense of inclination towards entrepreneurship after graduation could be an illusion. Notwithstanding the finding of this study, entrepreneurial knowledge may continue to be an important variable to consider in future studies. Further, the non-significant relationship between entrepreneurial knowledge and entrepreneurial inclination might be traced back to other factors that are more relevant to entrepreneurial inclination for these students. Such factors may include passion, innovation, finance, enabling environment etc. Moreover, training and learning via traditional methods may dispirit most students who are interested in experimental methods (Maritz & Brown, 2013). It could also be that they want to remain career people after graduation (Ahmad & Buchanan, 2015).

However, this finding is consistent with Kaegon & Nwogu's (2012) submission that practicability of the knowledge gained from entrepreneurship education by Nigerian university graduates has remained problematic due to situational restraints. In other words, Nigeria's peculiarities and specifics could be an impediment to students that attend entrepreneurial courses as the acquired knowledge may not be sufficient for them to become entrepreneurially inclined. Consequently, the expectation from the stakeholders that students with entrepreneurial knowledge will not be job seekers and that entrepreneurial redundancy will decline considerably becomes a mirage in the country. In essence,

from the findings of this dissertation, the stakeholders' expectation is not being accomplished in Nigeria as the students entrepreneurial knowledge does not translate into strong entrepreneurial inclination. Although research has shown that "over these past four decades, entrepreneurship has grown within universities faster than virtually any other area of intellectual pursuit" (Kuratko & Morris, 2018, p. 13).

5.17.3 Direct Effects of Venture Creation Skills on Entrepreneurial Inclination

Venture creation skill is defined as the ability to become entrepreneurially creative as a result of training received through entrepreneurship education. The expectations of stakeholders remain high as the literature showed that competence to create is acquired through formal education (Baptista & Naia, 2015; European Commission, 2012b) and this is consistent with the human capital theory. Venture creation skills therefore relate to demonstrating the competencies gained during training and to ascertain whether the background knowledge and thinking skills acquired by the students have modified their capability and readiness to create venture in real life practice.

Hypotheses 1c, 2c and 3c stated that venture creation skills will have significant relationship with entrepreneurial inclination for university, management and non-management students respectively. The results provide support for these Hypotheses. The results show that an increase in venture creation skills as a result of entrepreneurship education acquired at the university leads to an increase in entrepreneurial inclination among Nigerian university students. This suggests that students require acquisition of diverse skills like critical thinking, analytical, communication, negotiation and legal skills etc. during entrepreneurial lectures at the university to encourage their desire to be inclined towards entrepreneurial activities. This finding supports Gielnik *et al.* (2017), that reported failure in mastering entrepreneurial skills will lower effectiveness and passion in venture creation. This finding is also consistent with Koloba (2016), who documented that relationship exists between entrepreneurial factors and venture creation. Furthermore, Watchravesringkan *et al.* (2013) reported that entrepreneurial skills moderated the relationship between students' values and attitude towards entrepreneurship. They concluded that students who believed that they have been equipped with necessary skills via entrepreneurship training were more entrepreneurially inclined than others. In addition, Lim *et al.* (2012) documented that entrepreneurially inclined students possess competence in personal entrepreneurial skills. Therefore, following Cohen *et al.* (2003), this finding suggests that venture creation skills play a very significant role in the determination of entrepreneurial inclination with near medium effect. Therefore the students' enhanced skills will inevitably increase their tendency to engage in entrepreneurial activities after graduation.

5.17.4 Moderating Effects Results

This section of the study focuses on another major objective of this dissertation to investigate whether biopsychosocial factors would moderate the effect of entrepreneurial education and entrepreneurial inclination. Biopsychosocial factors is defined as a set of dynamics that embrace biological, psychological, behavioural and environmental or contextual components which are requisites for raising potential entrepreneurs. As discussed earlier, this study used CB-SEM to evaluate the strength of the biopsychosocial factors as the moderator variable on the relationship between entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination. The results are shown in Tables 5-29, 5-30 and 5-31 for university, management and non-management students respectively.

Most importantly, the findings obtained from the moderating effects represent the significant contributions of this dissertation. The Self-efficacy theory (Austin & Nauta, 2015; Bandura, 1994; Koloba *et al.*, 2015; Schunk, 1991) and Social cognitive learning theory (Bandura, 2001; Baum & Locke, 2004; Hamidi *et al.*, 2008; Oguntimehin & Olaniran, 2017) have provided theoretical support for the new findings.

The results obtained from the moderating effects showed that biopsychosocial factors negatively moderates the relationship between entrepreneurial attitude and entrepreneurial inclination for students in Nigerian universities and non-management students. However, the finding was insignificant for management students. The result of the tested hypothesis as shown in Table 5-29, Panel A, supported Hypothesis 4a that biopsychosocial factors significantly affect the relationship between entrepreneurial attitude and entrepreneurial inclination. The negative coefficient indicates a weakening effect on the positive relationship. Further, following the technique developed by Aiken and West (1993), a plot was created as shown in Figure 5-5 that interprets the interaction result. It indicates that students with low biopsychosocial factors dampen the positive relationship between entrepreneurial attitude and entrepreneurial inclination more than students with high biopsychosocial factors. Hence, aspiration of entrepreneurship attendees to become entrepreneurs varies with their level of biopsychosocial factors, as opportunity to start business venture hinges on the availability of those factors. Thus, entrepreneurship education could achieve better results if potential entrepreneurs with passion and innovativeness are well equipped and adequately supported to launch out their business ideas on or before leaving the university.

Biopsychosocial factors show significant positive relationship with entrepreneurial inclination but its interaction term with entrepreneurial attitude is significant and negative. The explanation for this could be because of the respondents whose families have annual income in the less than ₦1 million (₦1M) bracket constitute a large percentage of the sample. Financial constraints on the part of the entrepreneurially inclined may inhibit business formation making business ideas more theoretical

rather than practical. Hence, Adeniyi *et al.* (2014) argued that financial challenge is still regarded as one of the greatest problem in starting a new business in Nigeria. Similarly, Nabi *et al.* (2018) perceived that financial skills and analysis remain the most discouraging aspect of entrepreneurship for the First Year Higher Education at British university. Moreover, the high lending rates demanded by major Nigerian banks can lessen the innovative spirit of nascent entrepreneurs (Shuaibu *et al.*, 2018). In addition, if starting a business is perceived as stressful and demanding than paid employment, then, attitude towards entrepreneurship may impact negatively on business formation (Watchravesringkan *et al.*, 2013).

The result did not support Hypothesis 5a, that biopsychosocial factors significantly affect the relationship between entrepreneurial attitude and entrepreneurial inclination among management students in Nigerian universities. However, following the method developed by Aiken and West (1993), a plot was established as shown in Figure 5-8 that clarifies the interaction result. It shows that students with low biopsychosocial factors have strong weakening effect on the positive relationship between entrepreneurial attitude and entrepreneurial inclination more than students with high biopsychosocial factors. In other words, students with high biopsychosocial factors will be encouraged to be more effective, efficient and productive in business creation than those with low biopsychosocial factors.

Hypothesis 6a predicted that biopsychosocial factors have significant effect on the relationship between entrepreneurial attitude and entrepreneurial inclination among non-management students in Nigerian universities. The result of the tested moderating effect in Table 5-31, Panel A, confirms this hypothesis as expected. Further, the calculated moderating effect size (f^2), as recommended by Chin *et al.* (2003) in the model is 0.08, hence, indicating detection of a small moderating effect. Following Aiken and West (1993), the plot in Figure 5-11 clarifies the interaction result. It shows that students with low biopsychosocial factors have stronger weakening effect on the positive relationship between entrepreneurial attitude and entrepreneurial inclination than students with high biopsychosocial factors. This clearly shows that if potential entrepreneurs should work on their passion and innovativeness, while stakeholders support favourable business environment then non-management students will be inclined to commence entrepreneurial activities. This is consistent with the conclusion of Devi *et al.* (2019) in their study that examined female entrepreneurs' attitude towards entrepreneurship, that entrepreneurship education should focus on influencing individuals' need for the entrepreneurially inclined to be raised.

Hypothesis 4b stated that biopsychosocial factors have significant effect on the relationship between entrepreneurial knowledge and entrepreneurial inclination among students in Nigerian universities. Based on the finding as shown in Table 5-29, Panel B, the result did not support this hypothesis. However, following Aiken and West's (1993) technique, as shown in Figure 5-6, students with low

biopsychosocial factors show benign effect on the insignificant negative relationship between entrepreneurial knowledge and entrepreneurial inclination. On the other hand, students with high biopsychosocial factors strengthen the insignificant negative relationship between entrepreneurial knowledge and entrepreneurial inclination. It is expected that the knowledge acquired during entrepreneurial education classes will generate a better understanding on how to perceive business opportunities. Thus, stakeholders should provide enriching curriculum to boost students' entrepreneurial inclination (Odewale *et al.*, 2019b; Roy & Das, 2016).

The finding did not provide support for H5b, that biopsychosocial factors significantly affect the relationship between entrepreneurial knowledge and entrepreneurial inclination among management students in Nigerian universities. A plot was formed following Aiken and West's (1993) method as shown in Figure 5-9 that interprets the interaction result. It indicates that students with high biopsychosocial factors strengthen the insignificant negative relationship between entrepreneurial knowledge and entrepreneurial inclination more than students with low biopsychosocial factors. Undergraduates' perception that entrepreneurial education at the university has been mere knowledge acquisition without the necessary impetus may be the contributing factor to the lack of support for this hypothesis.

The finding did not provide support for Hypothesis 6b that biopsychosocial factors significantly affect the relationship between entrepreneurial knowledge and entrepreneurial inclination among non-management students in Nigerian universities. The result in Table 5-31, Panel B, indicates that biopsychosocial factors have insignificant effect on the relationship between entrepreneurial knowledge and entrepreneurial inclination among non-management students in Nigerian universities. In addition, the calculated moderating effect size (f^2), as recommended by Chin *et al.* (2003), in the model is 0.09, hence indicating detection of a small moderating effect. Following Aiken and West (1993), the plot in Figure 5-12 clarifies the interaction result. It shows that students with high biopsychosocial factors strengthen the negative relationship between entrepreneurial knowledge and entrepreneurial inclination more than students with low biopsychosocial factors. One can assume that the contributing factor to the lack of support as revealed in the finding in this section could be because knowledge transmission in entrepreneurial education at the university has not been tailored towards entrepreneurial activity that can lead to raising real entrepreneurs. Moreover, low motivation within and without the institutional set up can hinder the primary application of entrepreneurial knowledge acquired from the university. Further, the pedagogical approach to entrepreneurial education should move away from the traditional method and incorporate case studies, seminars, and internships to ingrain practical knowledge in the students.

The finding in Table 5-29, Panel C did not provide support for Hypothesis 4c, that biopsychosocial factors significantly affect the relationship between venture creation skills and entrepreneurial

inclination among students in Nigerian universities. The result as shown in Table 5-29 Panel C indicates that biopsychosocial factors have insignificant effect on the relationship between venture creation skills and entrepreneurial inclination among students in Nigerian universities. A plot was generated shadowing Aiken and West's (1993) method as indicated in Figure 5-7 that explains the interaction result. It shows that students with low biopsychosocial factors weaken the positive relationship between venture creation skills and entrepreneurial inclination more than students with high biopsychosocial factors.

Entrepreneurship education is expected to heighten the desire and confidence to start business venture as shown in the findings of Dabale and Masese (2014). However, there are different views on why entrepreneurial education attendees could show less interest in exploring their entrepreneurial skills towards business venture creation. One of such is fear of business failure; fear has been identified as one of the major reasons for potential entrepreneurs' refusal to start business venture ((Nabi *et al.*, 2018; Berger, 2014). In addition, learners hardly have the chance to practice the needed skills as potential entrepreneurs due to inadequate entrepreneurial trainers' personal skills (Ruskovaara & Pihkala, 2013). Hence, it can be assumed that trainers' personal skills could be a factor to be re-appraised for efficiency and effectiveness in developing potential entrepreneurs.

Hypothesis 5c predicted that biopsychosocial factors significantly affect the relationship between venture creation skills and entrepreneurial inclination among management students in Nigerian universities. The result as shown in Table 5-30 Panel C indicates that biopsychosocial factors have insignificant effect on the relationship between venture creation skills and entrepreneurial inclination among management students in Nigerian universities. Following Aiken and West's (1993) technique as shown in Figure 5-10, students with low biopsychosocial factors dampen the positive relationship between venture creation skills and entrepreneurial inclination more than students with high biopsychosocial factors. Past research shows that positive government policies, passion, innovativeness as well as individual-environmental well-being will enhance venture creation skills required by potential entrepreneurs (Xie, 2014). Nonetheless, biopsychosocial factors are not significant as shown in the findings. However, this does not mean that biopsychosocial factors are irrelevant, the reason for its insignificance can be attributed to lack of favourable government policies and the unfriendly economic environment in Nigeria (Adeniyi *et al.*, 2014; Obaji & Uche, 2014; Eneji *et al.*, 2013).

Hypothesis 6c predicted that biopsychosocial factors have significant effect on the relationship between venture creation skills and entrepreneurial inclination among non-management students in Nigerian universities. The result as shown in Table 5-31 Panel C indicates that biopsychosocial factors have insignificant effect on the relationship between venture creation skills and entrepreneurial inclination among non-management students in Nigerian universities. Following Chin *et al.* (2003),

the calculated moderating effect size (f^2) in the model is 0.11, thus indicating detection of a small moderating effect. In addition, following Aiken and West's (1993) recommendation, a plot was created as shown in Figure 5-13 that interprets the interaction result. It shows that students with high biopsychosocial factors strengthen the positive relationship between venture creation skills and entrepreneurial inclination more than students with low biopsychosocial factors. This finding substantiates existing literature (Nabi *et al.*, 2018) that skills can impact entrepreneurial intent positively while lack of finance can inhibit the demonstration of skills towards entrepreneurial activities.

5.17.5 Differences between Groups: Management and Non-Management Students

A further primary objective of this dissertation was to investigate whether entrepreneurship education acquired at the university makes management students to be more entrepreneurially inclined than their non-management counterparts. The critical ratio test in AMOS was used to investigate the group analysis. Hypothesis 7a predicted that management students possess high entrepreneurial attitude towards entrepreneurial inclination more than the non-management students. The result supports this prediction as demonstrated that management students develop entrepreneurial attitude towards entrepreneurial inclination more than their non-management counterparts. It is also consistent with findings from past studies among students from India (Chaudhary, 2017) and Oman (Varghese & Hassan, 2012), where business students are shown to be more passionate about entrepreneurial activities than the non-business students.

The finding supports Hypothesis 7b that management students possess high entrepreneurial knowledge towards entrepreneurial inclination more than the non-management students. Although the relationship between entrepreneurial knowledge and students' entrepreneurial inclination was not significant for both management and non-management students, it still shows that knowledge acquired by management students was stronger than that of non-management students. This clearly shows that management students consider entrepreneurial education as business oriented course more than the non-management students. The knowledge acquired makes them to tend towards entrepreneurial inclination more than their non-management counterparts. Prior research suggested that entrepreneurial education trainers should focus on those who are attracted and also interested by screening the new entrant in higher institutions to know their values for entrepreneurial activities before participating in entrepreneurial education programme (Nabi *et al.*, 2018).

Hypothesis 7c predicted that management students possess high entrepreneurial venture creation skills that tend towards their being more entrepreneurially inclined than the non-management students. The result in Table 5-32 provides support Hypothesis 7c. The relationship between venture creation skills and students entrepreneurial inclination was stronger for management students than for non-

management students. This evidence shows that if management students are well-equipped they will be inclined to commence business venture. It is equally important to know that a similar result is found in the studies of Ibrahim and Lucky (2014) who confirmed that entrepreneurial skill is strongly connected to entrepreneurial intention among Nigerian students.

The results of this study extend our understanding of the predictors of entrepreneurial inclination and how biopsychosocial factors affect this relationship among Nigerian university students and both management and non-management students. Findings provide support for 11 of the study's 21 hypotheses. With respect to entrepreneurial attitude, the result shows that it can influence entrepreneurial inclination. The results of the SEM suggest that management students are more entrepreneurially inclined than their non-management counterparts in terms of attitude, knowledge and skills acquired during their entrepreneurship education classes. In addition, the findings show that entrepreneurial attitude and venture creation skills are critical for Nigerian university students, management and non-management students in relation to entrepreneurial inclination.

5.18 Chapter Summary

This chapter exhibits the quantitative data of the respondents from the 5 universities that participated in the research. The analysis commenced with ensuring that the preliminary stages were strictly considered as any inadequacies at this phase could undermine the entire results. Thus, the fundamental requirements such as sample size, normality test, outliers, multicollinearity etc. were established before proceeding for further analysis. Moreover, the following were ascertained in the study; internal consistency, assessment of convergent and discriminant validity, path coefficient, R-squared values, and determination of effect sizes. Furthermore, all the 21 hypotheses that were developed from the onset of the study were tested and 11 were supported while 10 were not supported.

Measurement models and structural models were used for the CB-SEM analysis. This study employed the reflective measurement models with internal consistency reliability (Cronbach Alpha and Composite reliability), assessment of convergent validity (indicator reliability and average variance extracted), and discriminant validity as key evaluation criteria. In addition, the key evaluation criteria for structural models include path coefficients (size and significance), R-squared values, and determination of effect sizes. The hypotheses were divided into three parts as follows: direct effects relationships, moderating effects relationships, and differences in group hypotheses that consist of 9, 9 and 3 hypotheses respectively.

Most important, the study confirmed one of the hypotheses testing on the moderating influence of biopsychosocial factors. It established the empirical support as stated in H4a that biopsychosocial factors have significant effect on the relationship between entrepreneurial attitude and entrepreneurial inclination among students in Nigerian universities. The study further asserts that management

students are more entrepreneurially inclined than non-management students in Nigerian universities. The results indicate that the objectives of this study were achieved; hence, the next and final phase is the summary, conclusion and recommendation as contained in the next chapter.

CHAPTER SIX

SUMMARY AND CONCLUSION

6.1 Introduction

This chapter embraces a broad view of summary, conclusion and recommendation based on the results drawing from the research questions as well as the research objectives stated in Chapter One. This chapter therefore presents the summary of the study as it relates with the literature review as well as the tested hypotheses. The sub-sections also include the relationship between entrepreneurial attitude, knowledge, venture creation skills and entrepreneurial inclination. The discussion also incorporates moderating influence of biopsychosocial factors as well as the differences between management and non-management students. The chapter equally considers the discussion of the research implications, limitation of the study and future research, followed by conclusion and recommendations.

6.2 Summary of the Study

This study sets to empirically investigate the influence of biopsychosocial factors on entrepreneurial education and students' entrepreneurial inclination, in order to make significant impact consequent to the current decline in entrepreneurial activities leading to rising unemployment rate among university graduates in Nigeria. The study adopted a mono-method research technique to obtain quantitative data to investigate the relationship between the proxies for entrepreneurial education (entrepreneurial attitude, entrepreneurial knowledge, and venture creation skills) and entrepreneurial inclination among Nigerian university students. This study employed survey questionnaire based on a 5-point Likert Scale for data collection with samples drawn from five universities from the South West geo-political zone of Nigeria. The final sample of 385 cases consists of final year students from both management and non-management faculties. The data was screened and then analysed with the SPSS software (version 23) and AMOS (version 24).

Based on the suggestion by past researchers on the need to consider other variables to examine their moderating influence in entrepreneurship research, this study extends prior studies by examining the moderating effect of biopsychosocial factors on the relationships. The biopsychosocial factors form a composite variable that consists of gender, work experience, family income, passion, government policy, and innovativeness. Further, considering the effect of covariances on the latent constructs, this study employed Analysis of Moments Structures (AMOS version 24) software using covariance-based structural equation modelling for data analysis. The findings as presented in Chapter Five show that there is a significant relationship between entrepreneurial education and entrepreneurial inclination.

However, this construct (entrepreneurial inclination) has been under-researched and misconstrued for entrepreneurial intention by several scholars. Beyond intention, inclination is imperative for anyone to become engaged in entrepreneurial activities. Entrepreneurial redundancy is now a malaise that needs urgent attention in Nigeria and entrepreneurial education should be the launch pad for graduates to become budding entrepreneurs. Most importantly, different elements have been documented as prerequisites for becoming successful entrepreneur (Mujahid, Mubarik, & Naghavi, 2019), which include entrepreneurial attitude, entrepreneurial knowledge and venture creation skills.

Past studies have acknowledged that the essence of entrepreneurial education in universities' curricula is to explore diverse techniques to instil entrepreneurial inclination in the students and raise potential entrepreneurs that would grow to become employers of labour rather than seeking paid employment (Bae *et al.*, 2014; Johansen, 2014; Iacobucci & Micozzi, 2012; Zhou & Xu, 2012; Kuratko, 2005). Thus, this study further supports the view that entrepreneurship education is considered as a tremendous way to fostering prospective entrepreneurs at the universities. Moreover, this is in line with human capital theory which posited that education has the capability to influence countless categories of people positively (Becker, 1964).

However, there is no consensus as to whether entrepreneurs are born or made. Some scholars argue that entrepreneurs are made (Raju *et al.*, 2015), while others have discarded this notion on the ground that entrepreneurs are born and not made (Hopkins, 2004). On the other hand, there are those that are not precise on whether they are born or made (Mwasalwiba, 2010; O'Connor, 2013; Von Graevenitz *et al.*, 2010; Von Graevenitz & Weber, 2011). Hence, this study aligns with prior entrepreneurship studies (Maresch *et al.*, 2016; Liñán & Fayolle, 2015; Martin *et al.*, 2013; Hebert & Link, 2011) on the view that entrepreneurial education has become a notable domain, which should probably influence would-be entrepreneurs.

Moreover, the study incorporated different theories such as human capital theory, self-efficacy theory, social cognitive theory and general system theory, which serve as underpinning theories for developing theory models for entrepreneurial inclination with the mind-set to reduce unemployment among Nigerian university graduates.

The objectives set out to be addressed in this study are hereunder restated.

- i. To determine the relationship between entrepreneurial attitude and students' entrepreneurial inclination.
- ii. To determine the relationship between entrepreneurial knowledge and students' entrepreneurial inclination.
- iii. To determine the relationship between venture creation skills and students' entrepreneurial inclination.

- iv. To examine the moderating effects of biopsychosocial factors on the relationship between entrepreneurial attitude and entrepreneurial inclination.
- v. To examine the moderating effects of biopsychosocial factors on the relationship between entrepreneurial knowledge and entrepreneurial inclination.
- vi. To examine the moderating effects of biopsychosocial factors on the relationship between venture creation skills and entrepreneurial inclination.
- vii. To investigate whether students from Faculty of Management with entrepreneurial education are better positioned to become entrepreneurially inclined than those from other faculties with entrepreneurial education.

Twenty-one hypotheses divided into three sets were developed to investigate this study. Nine hypotheses each were structured to address the direct relationships and the moderating effects, while the remainder three address the differences in groups. To remain consistent with the research objectives, empirical answers were sought for the research questions that are restated hereunder:

- i. What is the relationship between entrepreneurial attitude and entrepreneurial inclination?
- ii. What is the relationship between entrepreneurial knowledge and entrepreneurial inclination?
- iii. What is the relationship between venture creation skills and entrepreneurial inclination?
- iv. What is the moderating effect of biopsychosocial factors on the relationship between entrepreneurial attitude and entrepreneurial inclination?
- v. What is the moderating effect of biopsychosocial factors on the relationship between entrepreneurial knowledge and entrepreneurial inclination?
- vi. What is the moderating effect of biopsychosocial factors on the relationship between venture creation skills and entrepreneurial inclination?
- vii. Are students from Faculty of Management with entrepreneurship education better positioned to become entrepreneurially inclined than those from other faculties with entrepreneurship education?

The first three research questions in this study examined the relationship between entrepreneurial education (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills) and entrepreneurial inclination. It is argued from stakeholders' perspective, that knowledge acquired in entrepreneurial education is expected to be transferred towards building entrepreneurial activities, which in turn should produce skilled entrepreneurs (Onuma, 2016; Mustapha & Selvaraju, 2015; Gurgel *et al.*, 2014). This argument is anchored on the human capital theory, which admits that education has the ability to impact numerous classes of people positively (Becker, 1964). In addition, students with high self-efficacy; exhibit confidence and courage in their expertise to execute a task and thus able to venture into entrepreneurial activities (Shahriar, 2018; Koloba *et al.*, 2015; Kobia & Sikalieh, 2009). On the contrary, entrepreneurial knowledge was not significant in this study, although this does not imply that it does not play any vital role in nurturing potential entrepreneurs. However,

the insignificant result could be evidence that theoretical knowledge acquired during the mandatory entrepreneurship education has not yielded as expected. This result provides support for the view of Oyebola *et al.* (2015) that entrepreneurship education courses being offered in Nigeria is deficient, hence, efforts to enhance business creation has been unproductive. The summary of results of the hypotheses testing is presented in Table 6-1.

Past studies indicated that Nigerian university graduates are entrepreneurially inclined theoretically (Dakung *et al.*, 2017; Aboho *et al.*, 2016; Okeke *et al.*, 2016). However, functional approaches to overcoming business creation barriers have been a major impediment to their entrepreneurial disposition. Similarly, Adeniyi *et al.* (2014) reported that without requisite support, entrepreneurial training will remain futile. On the other hand, Nwekeaku (2013) argued that Nigerian curricula lacks entrepreneurship drive due to feigned policy implementation, and as such, graduates of higher institutions have been unapt to pursue business opportunities.

6.3 The Relationship between Entrepreneurial Attitude and Entrepreneurial Inclination

The result of this study indicates that a positive relationship exists between entrepreneurial attitude and entrepreneurial inclination as predicted in Hypotheses 1a, 2a, and 3a. The relationship is strong because both the main effects and the moderating effects models show positive relationship between the constructs for Nigerian university students, management students, and non-management students. Following Cohen *et al.* (2003) recommended values for assessing standardized path coefficient, entrepreneurial attitude could be said to have medium effect on entrepreneurial inclination for the three structural models since the standardized path coefficients are well above the threshold of 0.30.

Table 6-1: Summary of Results of Hypothesis Testing

No.	Hypothesis	Result
H1a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among students in Nigerian universities.	Supported
H1b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among students in Nigerian universities.	Not Supported
H1c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among students in Nigerian universities.	Supported
H2a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among management students in Nigerian universities.	Supported
H2b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among management students in Nigerian universities.	Not Supported
H2c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among management students in Nigerian universities.	Supported
H3a	There is a significant relationship between Entrepreneurial Attitude and Entrepreneurial	Supported

	Inclination among non-management students in Nigerian universities.	
H3b	There is a significant relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among non-management students in Nigerian universities.	Not Supported
H3c	There is a significant relationship between Venture Creation Skills and Entrepreneurial Inclination among non-management students in Nigerian universities.	Supported
H4a	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among students in Nigerian universities.	Supported
H4b	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among students in Nigerian universities.	Not Supported
H4c	Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among students in Nigerian universities.	Not Supported
H5a	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among management students in Nigerian universities.	Not Supported
H5b	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among management students in Nigerian universities.	Not Supported
H5c	Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among management students in Nigerian universities.	Not Supported
H6a	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Attitude and Entrepreneurial Inclination among non-management students in Nigerian universities.	Supported
H6b	Biopsychosocial factors have significant effect on the relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination among non-management students in Nigerian universities.	Not Supported
H6c	Biopsychosocial factors have significant effect on the relationship between Venture Creation Skills and Entrepreneurial Inclination among non-management students in Nigerian universities.	Not Supported
H7a	Management students possess high entrepreneurial attitude towards entrepreneurial inclination more than the non-management students.	Supported
H7b	Management students possess high entrepreneurial knowledge that tends towards their being more entrepreneurially inclined than the non-management students.	Supported
H7c	Management students possess high venture creation skills that tends towards their being more entrepreneurially inclined than the non-management students.	Supported

Prior studies provided empirical evidence to the conjecture that attitude impacts the behaviour of individuals (Asamani & Mensah, 2013; Keat *et al.*, 2011; Franke & Luthje, 2004). That is, students'

entrepreneurial attitude will eventually influence their propensity for entrepreneurial inclination. This dissertation shows that students develop strong entrepreneurial attitude consequent upon their entrepreneurship education courses in the university that leads to increases in their entrepreneurial inclination.

This finding lends strong support to the human capital theory that education has the potentiality of motivating diverse groups of people positively (Becker, 1964). However, students with low biopsychosocial factors weaken this positive relationship more than students with high biopsychosocial factors.

6.4 The Relationship between Entrepreneurial Knowledge and Entrepreneurial Inclination

This study finds an insignificant relationship between entrepreneurial knowledge and entrepreneurial inclination for Nigerian university students, management students, and non-management students. This is consistent with prior study that found no significant relationship between new business creation and content of entrepreneurship lectures received (Oyebola *et al.*, 2015). It is possible to conclude that entrepreneurial education curriculum in Nigeria is merely creating awareness with little or no impact on students' readiness towards entrepreneurial inclination. In addition, this study provides evidence that Nigerian students rarely gain entrepreneurial knowledge through entrepreneurship courses attended at the universities, hence it becomes difficult for them to be entrepreneurially inclined. Moreover, this result is similar to those documented by prior researchers that Nigerian universities curriculum has not fully deviated from formal educational system that is developed to provide little or no entrepreneurial knowledge (Kehinde & Agwu, 2015). Although evaluating the supporting theories under chapter three indicates that there is a perceived connection between entrepreneurship knowledge and entrepreneurial inclination which cannot be undermined in developing the entrepreneurially inclined, however, acquiring entrepreneurial knowledge that can culminate into business creation is still missing (Kuratko & Morris, 2018; Oyebola *et al.*, 2015) in the Nigerian university education curriculum. Consequently, stakeholders should re-strategize on developing appropriate methods and approaches for entrepreneurial education courses to be more impactful in Nigerian universities.

6.5 The Relationship between Venture Creation Skills and Entrepreneurial Inclination

The result of this study revealed that positive relationship exists between venture creation skills and entrepreneurial inclination. The three hypotheses predicted earlier, H1c for Nigerian university students, H2c for management students and H3c for non-management students were well supported. The implication is that both management and non-management students perceive venture creation skills as important and that they value enterprising and entrepreneurial skills (Jones, Pickernell, Fisher,

& Netana, 2017; Matlay, 2008). Following Cohen *et al.* (2003) recommended values for assessing standardized path coefficient, venture creation skills could be said to have medium effect on entrepreneurial inclination for the three structural models. This is because the standardized path coefficients are well above the threshold of 0.10 considered as small effect.

The findings obtained in this study broaden the significant relationship between entrepreneurship education (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills) and entrepreneurial inclination. The researcher found strong relationship between entrepreneurship education and entrepreneurial inclination, which endorses entrepreneurial attitude and venture creation skills as the main capability of entrepreneurship education. Furthermore, the study of Mustapha and Selvaraju (2015) found support for personal skills and ability since they are significant prior to starting a business.

6.6 Moderating Influence of Biopsychosocial Factors on Entrepreneurship Education and Entrepreneurial Inclination

The failure to meet up with the expected research standard as a result of flexible research methodology (Matlay, 2005) and lack of moderators (Roy & Das, 2016; Fayolle, 2013) have been identified as weak spots in some studies. Hence, to prevent such flaws, past studies suggested that future researches on entrepreneurship education should include moderating variable(s) (Martin *et al.*, 2013). Therefore, this dissertation examined the moderating effect of biopsychosocial factors on entrepreneurial education and entrepreneurial inclination with a prospect to enhancing an understanding of entrepreneurial education as well as encouraging improvements in the teaching approach of entrepreneurial education in Nigerian universities.

Therefore, the moderating influence of biopsychosocial factors was examined as stated in the research questions section of this study. It examined its interaction with entrepreneurial attitude, entrepreneurial knowledge and venture creation skills (independent variables) as essential elements in entrepreneurial inclination (dependent variable) among university students. This study has empirically tested this which is missing in prior research in Nigeria and in entrepreneurship domain.

This study shows that biopsychosocial factors significantly moderate the relationship between entrepreneurial attitude and entrepreneurial inclination. The empirical evidence in this study strongly supports the view that entrepreneurial attitude is a determinant factor in order to foster potential entrepreneurs, hence, training and courses that will inculcate favourable entrepreneurial attitude should be intensified (Oyebola *et al.*, 2015; Ali *et al.*, 2009). Moreover, with biopsychosocial factors, values and beliefs toward positive entrepreneurial attitude can be developed or strengthened at the university.

Furthermore, findings in this study revealed that biopsychosocial factors did not significantly moderates the relationship between entrepreneurial knowledge and entrepreneurial inclination. The

dynamism of the business world requires constant up-to-date entrepreneurial knowledge to keep abreast of issues and development in a highly competitive business environment. However, perceived entrepreneurial knowledge might be inadequate to raising the entrepreneurially inclined graduates at the institutional level. Moreover, acquisition of theoretical entrepreneurial knowledge without practical resourceful action within the institution is creating a gap between ‘entrepreneurial the how’ and potential entrepreneurs. Therefore, this study sheds light and clarifies the making and growing of the entrepreneurially inclined based on 5WsH (entrepreneurial the ‘what’, entrepreneurial the ‘why’, entrepreneurial the ‘where’, entrepreneurial the ‘when’, entrepreneurial the ‘who’ and entrepreneurial the ‘how’). The findings from the moderating variable indicate that ‘entrepreneurial the how’ which is vital in nurturing would-be entrepreneurs demands further consideration on the part of the trainers. This will help to unravel appropriate methods and the craved impetus that could enhance a better participation in entrepreneurial activities by young graduates. However, foresight and all-inclusive support on the part of the stakeholders cannot be overemphasized. This contributes significantly to this study, as previous studies and theories such as human capital theory, self-efficacy, social cognitive learning theory and general system theory support the findings (Rauch & Hulsink, 2015; Baum & Locke, 2004; Becker, 1964; Bandura, 1977; von Bertalanffy, 1968).

6.7 Differences between Management Students and Non-Management Students

Consequently, research question seven, which distinguishes management students from non-management students on the basis of entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination, was considered. This study uses multiple group analysis and employs critical ratios test in AMOS following Kruse *et al.* (2014) to investigate the significance differences across management and non-management students in Nigerian universities. In this section of the study, the results of all the three hypotheses (7a-7c) that were developed to examine the two groups, based on entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination, were well supported.

Management students were found to possess high entrepreneurial attitude, entrepreneurial knowledge and venture creation skills that tend towards being more entrepreneurially inclined than non-management students. This is consistent with the findings of Chaudhary (2017) that Indian students from business schools are more entrepreneurially inclined than their counterparts from non-business schools. These findings align with the expectation that business/management faculty students, who have been exposed to different entrepreneurial programs, would be more entrepreneurially inclined than others. Moreover, a key assumption and anticipation of stakeholders is that participating in entrepreneurial classes should help attendees to become entrepreneurially inclined.

This study shows that management and non-management students differ with respect to their entrepreneurial attitude, entrepreneurial knowledge and venture creation skills. In addition, both theoretical and empirical researches suggest that entrepreneurial attitude can be shaped based on different factors (Gielink *et al.*, 2015; Rafferty *et al.*, 2013; Sanchez, 2013). However, this study has shown that to enhance entrepreneurial inclination among university students biopsychosocial factors should be considered.

6.8 Implications of the Study

6.8.1 Practical Implication

The findings from this study provide information for the curriculum developers and other relevant stakeholders on the need to consider entrepreneurial attitude as germane for nurturing potential entrepreneurs from Nigerian universities. It is established in this dissertation that to nurture potential entrepreneurs at the university level in Nigeria, supportive entrepreneurial training should be prioritized. However, entrepreneurial passion and innovativeness are required in fostering prospective entrepreneurs. In addition, the findings show that favourable government policy is of interest for nascent entrepreneurs to emerge and compete domestically and internationally. Moreover, this study has contributed to the furtherance of entrepreneurship view in the literature as it sheds light on the making and growing of the entrepreneurially inclined based on 5WsH and that 'entrepreneurial the how' which is the bedrock in building potential entrepreneurs is missing in entrepreneurial knowledge dissemination at the university.

6.8.2 Theoretical Implication

The concept of entrepreneurial inclination is broadened by this study, which explores the entrepreneurial inclination among university students in an emerging country like Nigeria. This study provided a precise definition of the term “entrepreneurial inclination” that differs from earlier studies. In addition, it was able to distinguish between intention and inclination, which has been used interchangeably in some earlier studies. Since studies on entrepreneurship are few, it cannot be assumed that research outcomes in developed economies will be similar to those in emerging economies, particularly Nigeria. Inspired by Xie’s (2014) conceptual model and Obschonka and Schiller (2016), this study integrated a moderator variable and documented for the first time, how biopsychosocial factors weaken the positive relationship between entrepreneurial attitude and entrepreneurial inclination. Nigeria’s peculiarities such as devastated military era, policy inconsistencies, absence of transformational leadership, economic mismanagement and widespread corrupt practices may have caused this weakening effect. All these have contributed to dispiriting the university students. In addition, this is the first study on Nigeria, the most populated country in Africa.

Given the various constructs examined in this study, this dissertation not only contributed to the literature, it created the advancement of theory in the area of entrepreneurship. In addition, theories such as human capital theory, social cognitive theory and general system theory were used in the examination of the various hypotheses.

Human capital theory predicts that acquiring higher levels of key competencies (knowledge, skills and abilities or attitudes) will bring about outstanding accomplishment (Martin *et al.*, 2013). So the belief of this theory is that education has the ability to influence the vast majority of individuals. Furthermore, human capital theory has been supported in different studies, by investigating the relationship between human capital and entrepreneurship outcomes (Martin *et al.*, 2013).

Self-efficacy theory asserts that motivation to persevere becomes stronger when people are “given appropriate skills and adequate incentives” (Bandura, 1977, p. 194). Thus, they become more passionate, leading to skills acquisition, which also enhances efficacy beliefs (Baum & Locke, 2004). Based on this premise, as the entrepreneurially inclined possesses required skills, their entrepreneurial self-efficacy could be influenced through supportive environment and, in turn, be empowered for venture creation. Individuals with high self-efficacy show greater confidence in their ability to accomplish a task and thus to venture into entrepreneurial activities.

General Theory has been integrated and explored in this study: coined by von Bertalanffy (Hofkirchner & Schafrank, 2011), who perceived that evidence of interrelationship subsists in every aspect of society. The combination of variables for further empirical evidence finds support in general systems theory, which this dissertation predicts as germane in nurturing potential entrepreneurs. Precisely, general system theory explains that proof of interrelationship exists in organizations as well as in society; hence, any societal challenge should be pictured and weighed collectively. The importance of GST is that it illustrates the impact of interconnectedness in society.

Drawing on this inspiration, this study tests the influence of biopsychosocial factors on entrepreneurial education and students’ entrepreneurial inclination among Nigerian university students. It verifies for the first time, that biopsychosocial factors significantly moderate the relationship between entrepreneurial attitude and entrepreneurial inclination. Thus, in this study, exploring this theory to understand and substantiate the influence of biopsychosocial factors on entrepreneurial inclination among Nigerian university students stands as a major contribution to the literature (Hofkirchner & Schafrank, 2011).

In addition, the analysis approach of the present study differs from earlier studies on entrepreneurial inclination in Nigeria. In addition, it is an important contribution to the body of knowledge since it indicates that biopsychosocial factors significantly moderate the relationship between entrepreneurial attitude and entrepreneurial inclination which has not been examined in related studies.

Besides, this dissertation has theoretically given a novel knowledge about moderation, by indicating that biopsychosocial factors negatively moderates the relationship between entrepreneurial attitude and entrepreneurial inclination. As a result, this study found that the presence of biopsychosocial factors can influence entrepreneurial inclination, which in turn will increase emerging entrepreneurs. Thus, this study has shed more light on the understanding of the relationship between entrepreneurial attitude, entrepreneurial knowledge and venture creation skills and entrepreneurial inclination.

Furthermore, the results showed that management students have higher levels than non-management students in terms of their entrepreneurial attitude, entrepreneurial knowledge and venture creation skills. Therefore, this dissertation has established more theoretical implications than the general justification for the influence of biopsychosocial factors on entrepreneurial attitude, entrepreneurial knowledge and venture creation skills and inclination. To the best of the researcher's knowledge, this study is the first to examine the moderating influence of biopsychosocial factors on entrepreneurship education and students' entrepreneurial inclination.

6.8.3 Methodological Implications

Thus far, past studies on entrepreneurial education and entrepreneurial inclination have been considered using diverse statistical tools such as SPSS and SEM (Koloba, 2016; Keat *et al.*, 2011), however, this study employed a quite robust statistical tool using the Analysis of Moments Structures (AMOS version 24) covariance-based structural equation modelling. This distinctive tool, as suggested by Hair *et al.* (2014a), is important when considering the moderating effect of a third variable. Hence, this study used AMOS being one of the authoritative approaches for the measurement of latent (unobserved) variables using the Structural Equation Modelling. Thus, the use of this technique is noteworthy. By using CB-SEM, the following were ascertained: the assessment of convergent and discriminant validity, path coefficient and R-squared values. CB-SEM was used to assess the relationship between the three exogenous constructs (entrepreneurial attitude, entrepreneurial knowledge and venture creation skills), and a single endogenous construct of entrepreneurial inclination (Hair *et al.*, 2014a).

Another important methodological contribution of this study is the validation of Keat *et al.* (2011), Liñán and Chen (2009), and Mohar, Manjit, & Jain (2008) entrepreneurial inclination measurement scale adopted in this study. In addition, this study makes an important contribution to the moderating influence of biopsychosocial factors on entrepreneurial attitude and entrepreneurial inclination literature. The results of the convergent and discriminant validity and reliability tests indicate the constructs were valid and reliable.

6.8.4 Managerial Implications

This study has contributed immensely to management practice. It has empirically supported the claim that entrepreneurial attitude and venture creation skills are positively related to entrepreneurial inclination. Hence, educators, curriculum developers and other related parastatals should consider them as relevant in entrepreneurial education. In addition, stakeholders should highlight entrepreneurial attitude and venture creation skills for realistic entrepreneurial educational goals in higher institutions of learning in Nigeria.

The panacea to the current entrepreneurial redundancy in Nigeria seems to have defied several government programme initiatives. Therefore, this study suggests that promising governmental policies in favour of entrepreneurship should be established to adequately support students with entrepreneurial ideas at institutional levels. On this premise, ‘Care Passion Centre’ should be introduced where young individuals with creative innovation within and outside the academic community can thrive. This is similar to “contamination lab” in Italy (Secundo *et al.*, 2020). Thus, management attitudes and actions towards entrepreneurial ideas should remain indisputable (Ismail, Md Nawi, Zainol Abidin, & Mohd Yusof, 2019), irrespective of the year and programme of study. Moreover, these students are not equally talented (like those in sports) therefore, educators should devise a means of assessing and encouraging the development of new frontiers to cater for the academically challenged but innovatively fit within the institutions by acknowledging and assisting them to become relevant in society rather appraising them base on their class performances which probably would not measure up with their “brilliant” counterpart.

6.9 Limitations of the Study

In spite of the significant findings of this study, it is not without some limitations, as it is common to every research. Therefore, as this study approaches the final phase, there is a need to consider the limitations of the research. First, this study focuses specifically on the entrepreneurial inclination of students at the institutional level without resorting to real demonstration and commitment to entrepreneurial activities after graduation. A study on entrepreneurial inclination after graduation could present a different result. Notwithstanding, the research introduced biopsychosocial factors as a moderator that shapes the attitude of the university students towards entrepreneurial activities. Second, the study was carried out in Nigeria, an emerging economy. As such, the result could only be applied to other economies with specific features such as Nigeria.

Third, another limitation is that some variables were not captured in the biopsychosocial factors because it is not possible to include all known variables in one study. Therefore, the inclusion of other items to measure the constructs alongside other variables may produce a different result from that of this study. Fourth, a further limiting factor was the use of cross-sectional approach as against

longitudinal approach. Nonetheless, the achievement of research objectives using a cross-sectional approach has yielded appropriate results. Furthermore, the adoption of a longitudinal procedure could not be considered in the context of this study, since time constraints and the consideration of costs remain serious challenges.

Fifth, the questionnaire survey method was used for data collection in this study because of its associated benefits. These benefits include the ability of respondents to respond to questions, the ability to produce large amounts of data, and associated reduced costs. However, the data may easily be affected by respondents' enthusiasm to provide appropriate responses to the questions. It can sometimes be difficult to get cooperation from respondents because the answers are embarrassing or portray respondents in an undesirable way. There is also the potential for response bias, even though it has been sufficiently considered in this study.

Sixth, another limitation is that the study captures the indigenes of the study location more than other geo-political zones. Cultural differences in a pluralistic country like Nigeria can affect the generalization of the results of the study, given that Nigeria's six geo-political zones have different dispositions for entrepreneurial activities. It is however noted that every geo-political zone in Nigeria was captured in the study and the entrepreneurial courses curriculum used by all the universities in Nigeria is that developed by the National Universities Commission.

Seventh, respondents' answers are considered the most appropriate source for measuring entrepreneurial inclination. However, the data collected may be limited as to the likelihood that students' entrepreneurial inclination and experience will vary in the real world. In the light of the above limitations, caution must be taken in generalizing the findings of this study. Nevertheless, they provide evidences as to the cause of graduate unemployment in Nigeria due to entrepreneurial redundancy among university graduates and the weakening effect of biopsychosocial factors on entrepreneurial inclination.

6.10 Further Research

First, this study suggests that future researchers should consider real demonstration and commitment to entrepreneurial activities after graduation. Second, there is the need to validate the findings of this study using a different setting (whether country or respondents). Therefore, another variant of this study should be conducted in other emerging and or developed economies. Third, it should be noted that there may be other variables that were omitted from this study due to time constraints; these should be considered in future research. Furthermore, other items can be used to measure the constructs. Fourth, it is suggested that future researchers should consider a longitudinal survey since there could be changes in the variables over time. These changes could result from government

policies or the entrepreneurship curriculum. It is appropriate to carry out further research on the effectiveness of entrepreneurial education, at least three years after graduation.

Fifth, only the questionnaire survey method was used for data collection in this study, consequently, future research should strive to broaden its scope by supplementing the survey research with an interview. Sixth, in addition, it is suggested that future research should consider post-program evaluation of entrepreneurial inclination to evaluate the efficiency and effectiveness of entrepreneurial education in Nigeria. Such a study can include postgraduate students from both management and non-management background. Seventh, with consideration to the cultural differences in a pluralistic country like Nigeria, future research should also endeavour to assess the same sample size from the six geopolitical zones for a wider coverage. Eighth, with the consideration that this could be the first research to use biopsychosocial factors as a moderator, it is suggested that future researchers could use different scales to measure the latent constructs that comprise the biopsychosocial factors. To the extent that statistical tools can accommodate, other biological, psychological, and environmental variables not included in this study should be considered for inclusion in further studies so as to validate the findings of this study.

6.11 Conclusion

This doctoral dissertation presented a detailed analysis of entrepreneurial inclination and how entrepreneurial education (attitude, knowledge and skills) acquired by Nigerian university students affects it. Emphasis is placed on the moderating influence of biopsychosocial factors on entrepreneurial education and entrepreneurial inclination, as Obschonka and Schiller (2016) underscored the interconnection of biopsychosocial factors in developing entrepreneurs. Although there are few studies on entrepreneurial inclination, however, none has considered the use of biopsychosocial factors as a moderator. Among the past studies are: impact of entrepreneurship education on entrepreneurial inclination (Aboho *et al.*, 2016); entrepreneurial inclinations of prospective teachers (Ali *et al.*, 2009); inclination towards entrepreneurship among university students (Keat *et al.*, 2011); entrepreneurial inclination among university students (Edirisinghe & Nimeshi, 2016; Asamani & Mensah 2013); the effects of self-efficacy on entrepreneurial inclinations (Koloba *et al.*, 2015); and demographic factors, personality and entrepreneurial inclination (Chaudhary, 2017).

It is not an exaggeration to say that a thoughtful perspective and a detailed understanding of entrepreneurial inclination are needed at the university level because of the results of this study. It has demonstrated many critical implications for entrepreneurship research and practice. Firstly, entrepreneurial attitude plays a major role in fostering entrepreneurial inclination among university students. It is consistent with Keat *et al.* (2011) which have shown that in order to foster entrepreneurial culture, a change of attitude is needed on the part of students from higher education

institutions. The findings imply that, in order to foster entrepreneurship at the university level, whether among business students or not, skills and attitudes towards entrepreneurship cannot be undermined.

The educational curriculum for all tertiary institutions in Nigeria (Oguntimehin & Olaniran, 2017) was designed to foster entrepreneurial culture. Nevertheless, unemployment among graduates remain relatively high in Nigeria, unlike other countries with increasing populations (Adekola *et al.*, 2016). The implication is that the panacea for entrepreneurial redundancy in Nigeria goes further than formal entrepreneurship classes. This study explained that biopsychosocial factors dampen the direct positive relationship between entrepreneurial attitude and entrepreneurial inclination. While it is inexpedient to venture into entrepreneurial activities without requisite knowledge and skills, these findings indicate that stakeholders should motivate university students by considering biopsychosocial factors as needful in order to raise entrepreneurially inclined graduates. This is the first study to consider biopsychosocial factors as a moderator variable.

Graduate unemployment has remained a major challenge for all stakeholders in Nigeria, as this category of people represents a large percentage of the country's agile and dynamic population. Therefore, productive engagement in entrepreneurial activities through young graduates could lead to economic growth and development. This dissertation has shown that students in Nigerian universities acquire entrepreneurial attitude and venture creation skills through entrepreneurship education courses. This is consistent with past studies that document a positive relationship between entrepreneurship education and entrepreneurial intention (Rauch & Hulsink, 2015; Dabale & Masese, 2014).

Surprisingly, the positive relationships (entrepreneurial attitude and venture creation skills) were negatively moderated by biopsychosocial factors, meaning that venturing into entrepreneurial inclination entails these factors. The study of Parveen *et al.* (2018) concluded that Saudi Arabia should consider business knowledge side by side with supportive governmental roles to create favourable business environs for budding entrepreneurs to thrive. This perhaps could explain the reason why many of the Nigerian university graduates have not ventured into entrepreneurial activities; rather, they are in search of paid jobs that are not readily available.

However, the inability to raise potential entrepreneurs from the university can be linked to the indispensable missing link (biopsychosocial factors) between entrepreneurial education and entrepreneurial inclination and theoretical entrepreneurial knowledge. On this premise, effective and efficient entrepreneurial education calls for improved curriculum to enhance biopsychosocial factors which this study argues are interdependent. Moreover, value-added teaching strategy among management and non-management students are indispensable. Consequently, to nurture and develop the entrepreneurially inclined through thoughtful consideration of biopsychosocial factors, the following recommendations are suggested as the trajectory to a greater future for the South-West Region.

6.12 Recommendations

Educational curriculum of all tertiary institutions in Nigeria should be designed by policy makers to: (1) enhance entrepreneurial passion and creativity for would-be entrepreneurs to emerge; (2) establish and foster 'passion centre' that can midwife and pilot new frontiers within the institutions; (3) partner with practicing entrepreneurs who are innovators for helpful mentoring and development; (4) absorb in 'passion centre' undergraduates with convincing entrepreneurial vision and passion rather than expelling them as a result of academic challenges to continue actionable behaviour within the university community; (5) consider talented but dispirited youth outside the academic environment by enrolling them at 'passion centre' as special students to checkmate banditry and criminalities being exhibited by school drop-outs in Nigeria and this in turn, will increase enterprising individuals in the South-West. In addition, stakeholders should prioritize supportive environment, just like the athletes are rewarded, novelty in other areas of human endeavour should be encouraged to increase potential entrepreneurs.

Again, favourable geographical conditions for agriculture exist in Nigeria, which is her comparative advantage, but this has been unexplored. Although, Nigerian youths are entrepreneurially inclined, it is important to note that technological advancement in the world at large is more competitive than the archaic method being encouraged by the government among Nigerian youths. Consider Brazil, India and USA having 173, 187 and 273 tractors per 100² km respectively compared to Nigeria with only 7 (Vanghan *et al.*, 2014). The findings of Fawole and Ozkan (2017) acknowledged that most Nigerian graduates from different disciplines are willing to be involved in agribusiness, provided the government could create favourable environment. This view can be attested to in this dissertation as the two measurement items retained in innovativeness which states that 'I believe that to become successful in business you must spend some time every day in developing new opportunities and I believe it is important to continually look for new ways to do things in business'. We can infer from this perspective that developing new ideas or opportunity outside ones discipline such as agribusiness is possible, provided they have access to valued resources (capital and marketing strategy inclusive).

Therefore, to maximize the nation's comparative advantage the government should support the establishment of agribusiness which include; commercial cultivation and processing of crops like cassava, rice, maize, cocoa, coffee, cotton, oil palm and the packaging of organic fruits for export. This will encourage home-grown businesses, which will ultimately boost the economy.

Furthermore, each of the States in the South-West could fix unemployment among graduates in the region by commencing with strategic plans in agribusiness, which is multidimensional. For instance, Ekiti State has been noted for the production of cassava, rice and yam, which could be commercialized, while focus should equally be on lumber processing and development. Moreover, Ondo State could encourage commercial cattle rearing, like Botswana, Argentina and Australia, while

Oyo and Osun States could thwart importation of chicken and turkey by commercializing it.

In addition, the need for farm management companies that could be responsible for preservation and storage of farm produce after harvesting cannot be overemphasised. This is an aspect in agribusiness that has been unexplored till date in Nigeria. Farmers are short changed as supply of farm produce continues to outstrip demand and the overflow of such products reduces their prices below the probability of making profit. Thus, lack of preservation of these produce is rendering investment in agri-business unprofitable as they remain unfit for sale at home and abroad shortly after harvesting. Moreover, production and packaging of organic fruits are in constant demand globally, with adequate preservation such could be exported. Furthermore, the South-West governments could track the path of the developed countries of the world by underscoring research published in reputable journals from different fields in the development of the economy. Moreover, reputable researchers could be sourced to assess further valuable information for effective and efficient performance in the acquisition and transfer of entrepreneurial knowledge in the region and in Nigeria as a country. It is hoped that the implementation of the results and recommendations of this study would help transform the South-West region into an enviable height it was before and after independence.

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APPENDICES

Appendix 1: Research Questionnaire

Dear Respondent,

Thanks for your willingness to participate as one of my respondents. Without you this research will seem inconsequential. I am currently working towards the fulfilment of my PhD programme at the Graduate School of Business & Leadership, University of KwaZulu-Natal, South Africa. The focus of this research is to investigate the influence of biopsychosocial factors on entrepreneurial education and students' entrepreneurial inclination in selected Nigerian universities.

The researcher desires to have a better perspective on students' disposition towards entrepreneurship education and its capability in resolving issues of unemployment. The questionnaire will take approximately 20 minutes of your time and I humbly request you read and tick appropriately. Strict confidentiality of your information remains undeterred, while pseudonym will be used to protect the interest of your nifty institution. Finally, do not hesitate to contact me on glayo20@yahoo.com in case of further enquiries.

Thanks for your unwavering support.

Regards,

ODEWALE Gbemisola Titilayo.

PhD Student

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Mobile: +27818025847

E-mail: glayo20@yahoo.com

CONSENT

I..... (Name is optional please) hereby acknowledge that, participating as one of the respondents in support of this research is not by coercion. I understand the nature of this research and I am willing to participate. I like to affirm that I can decide to withdraw my involvement at will.

Signature of participant.....

Date.....

The questionnaire incorporates three parts. Firstly, Part 1 represents question on demographic characteristics; secondly, Part 2 comprises entrepreneurial attitude, entrepreneurial knowledge, venture creation skills and entrepreneurial inclination (sections A-D). Lastly, Part 3 constitutes question on biopsychosocial factors (sections A-D).

PART 1

This section comprises the demographic information

DEMOGRAPHIC DATA

1.	Gender	Male ☐		Female ☐
2.	Age			
	Below 20 years ☐	20 – 24 years ☐	25 – 29 years ☐	Above 30 years ☐
3.	Self-employed parents	Yes ☐		No ☐
4.	Geo-political zone	South-West ☐	South-East ☐	South-South ☐
		North-West ☐	North-East ☐	North-Central ☐
5.	Programme of study	Business/Management Sciences ☐	Engineering ☐	Science ☐
		Computing ☐	Others ☐	
6.	Work Experience	Yes ☐		No ☐
7.	Family annual income	Below ₦1million ☐	₦1- ₦3million ☐	₦3 - ₦6 million ☐
		₦6 - ₦12million ☐	₦12 - 25 million ☐	Above -25 million ☐

PART 2: THIS PART COMPRISES OF SECTIONS A-D

Instructions: Express your level of agreement with the following statements.

SECTION A: Scale on entrepreneurial attitude

The entrepreneurial courses I attended has enabled me to make the following statements		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	I can sacrifice personal comfort in order to take advantage of business opportunities.					
2.	Being an entrepreneur implies more advantages than disadvantages to me.					
3.	If I had the opportunity and resources, I'd like to start a firm.					
4.	I know that social and economic conditions will not affect my success in business.					

5.	Among various options, I would rather be an entrepreneur.					
6.	I believe that concrete results are necessary in order to judge business success.					
7.	I get a sense of accomplishment from the pursuit of my business opportunities.					
8.	Being an entrepreneur would entail great satisfactions for me.					
9.	I believe it is important to analyze your own weaknesses in business dealings.					
10.	Education at the university is adequate for entrepreneurial success.					

Instructions: Express your level of agreement with the following statements.

SECTION B: Scale on entrepreneurial knowledge

Entrepreneurship courses and programmes I attended have.....		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	empowered my ability to identify and evaluate business opportunities.					
2.	increased my readiness to start a firm and keep it working.					
3.	sharpened my ability to develop business plan and entrepreneurial project.					
4.	enhanced my financial capability and management skills.					
5.	heightened my morale on the probability of succeeding.					
6.	changed my perception about risk taking propensity.					
7.	enhanced my creativity and innovativeness.					
8.	broadened my opportunity recognition.					
9.	increased my understanding of the attitudes, values and motivations of entrepreneurs.					
10.	 inspired my networking and e-business.					

Instructions: Express your level of agreement with the following statements.

SECTION C: Scale on venture creation skills

From entrepreneurship courses and programme I attended I have learnt		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	business strategy skills (value creation, market or target segment, competitive advantage).					
2.	business idea development (specific training, idea lab, business incubator).					
3.	business risk (political instability, commercial risk, risk management).					
4.	business planning (strategic planning, project planning).					
5.	...human resource issues (labour laws, labour productivity, labour turnover).					
6.	macro-environmental issues (inflation, exchange rate, interest rate).					
7.	 marketing related issues (SWOT of competitors, effective market, packaging)					
8.	 financial issues (financial planning, cash flow, obtaining credit facilities, management of consumer credit).					
9.	 management functions (changes in business environment, time management, effective control).					
10.	e-business (understanding e-business, assessing and providing internet information).					

Instructions: Express your level of agreement with the following statements.

SECTION D: Scale on entrepreneurial inclination

Statement		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	I have strong plans to venture into business once I finish my studies.					
2.	I am interested in starting my own business.					
3.	I am always inclined towards entrepreneurship.					
4.	I see myself becoming an entrepreneur some day.					
5.	I have strong desire to be the owner of my own business.					

6.	There are not many business/entrepreneurial opportunities in Nigeria.					
7.	Nigeria socio and economic environment is highly supportive of entrepreneurship.					
8.	I am ready to make every effort to become an entrepreneur.					
9.	My professional goal is becoming an entrepreneur.					
10.	I will make every effort to start and run my own business.					

PART 3: THIS PART COMPRISES OF SECTIONS I-VII

INSTRUCTIONS: In this section, choose the option that is most applicable to you

SECTION I: Gender

	Have you ever considered seriously starting your own business	Male	Female
a.	No, never		
b.	Yes, but I abandoned the idea, due to lack of financial support.		
c.	Yes, I have strong tendency of becoming my own boss in future.		
d.	Yes, I have started my own business.		
e.	Yes, I have feeling and longing to start a viable firm, if I can obtain loan.		
f.	Yes, but I'm afraid of failure.		

Instructions: Express your level of agreement with the following statements.

Scale on psychological factors

SECTION II: Scale on innovativeness

	Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	I feel very energetic working with innovative colleagues in a dynamic business climate.					
2.	Most of my time is spent working on several business ideas at the same time.					
3.	I believe that to become successful in business you must spend some time every day in developing new opportunities.					
4.	I believe it is important to continually look for new ways to do things in business.					

5.	I enjoy finding good solutions for problems nobody has looked at yet.					
6.	I feel terribly restricted being tied down to tightly organized business activities, even when I am in control.					
7.	I believe that in order to succeed, one must conform to accepted business practices.					
8.	I believe that organizations which do not experience radical changes now and then tend to get stuck in a rut.					
9.	I believe in being able to use old business concepts in new ways.					

Instructions: Express your level of agreement with the following statements.

SECTION III: Scale on risk-taking

Statement		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	I see the possibility of starting a new business as a potential opportunity to pursue.					
2.	The probability of a new venture doing poorly is very high.					
3.	I can manage and withstand business risk.					
4.	I see the possibility of starting a business as a potential loss.					
5.	I do not take risk with my health.					
6.	I usually view risks as a challenge.					
7.	Starting a new business is very risky.					
8.	I dislike stress, therefore I prefer to avoid risks					
9.	I would label the option of starting a new business as something positive.					
10.	If I do not start my own business I may be missing a great opportunity.					

INSTRUCTIONS: In this section answer Yes or No

Behavioural factors

SECTION IV: Predisposition towards entrepreneurship

1.	Suppose you unexpectedly inherit ₦100million. How would you invest this money? (TICK ONE ONLY)		
		Yes	No
a	I will invest in my own business		
b	I will invest in a car or house		
c	I will invest in an investment fund		
d	I will deposit in a bank account		
		Yes	No
2.	I have strong predisposition towards entrepreneurial activities. If you answered Yes, please continue with the questions below (TICK ONE ONLY) . If you answered No then go to the next section (Section V).		
	My predisposition towards entrepreneurial activities evolved from.....		
a	family background and financial status		
b	favourable entrepreneurial environment		
c	personality traits		
d	market opportunity		
e	quest for pleasure and personal health		

Instructions: Express your level of agreement with the following statements.

SECTION V: Scale on passion

	Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	It is exciting to figure out new ways to solve unmet market needs that can be commercialized.					
2.	Searching for new ideas for products and services appears enjoyable to me.					
3.	Scanning the environment for new opportunities really excites me.					
4.	Establishing a new company seems exciting to me.					
5.	Pushing myself to make my business better will motivates me.					
6.	Nurturing a new business through its emerging success will be enjoyable.					
7.	Owning my own business will energize me.					
8.	Being the founder of a business could turn out to be an important part of me.					

9.	Reading books on entrepreneurship seems very important to me.					
10.	Passionately longing to start my own venture.					

Instructions: Express your level of agreement with the following statements.

Scale on environmental factors

SECTION VI: Scale on government policy

I will be an entrepreneur if.....		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	government organizations in this country assist individuals with starting their own business.					
2	government sets aside government contracts for new and small businesses.					
3	...local and national governments have special support available for individuals who want to start a new business.					
4	the government sponsors organizations to help new businesses develop.					
5	...even after failing in an earlier business, the government assists entrepreneurs in starting again.					
6	...turning new ideas into businesses is an admired career path in this country.					
7	...entrepreneurs are admired in this country.					
8	...individuals know how to legally protect new business.					
9	...most people know where to find information about markets for their products.					
10	e-government contributes to start up business success and growth.					

Instructions: Express your level of agreement with the following statements.

SECTION VII: Scale on role models

Statement		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1.	There is an entrepreneurial person in my immediate family I am trying to be like in my career pursuit.					
2.	There is an entrepreneurial person particularly inspirational to me in my career path.					
3.	In the career path I am pursuing, there is an entrepreneurial person I admire with passion.					
4.	I have a mentor from real business world as a potential entrepreneurial person.					
5.	Students are encouraged to establish their own business based on active support for the start-up of new businesses by successful entrepreneurs.					
6.	An existing supportive university environment inspires my ideas for new business and entrepreneurial career path.					
7.	The university provides resources to assist and encourage student entrepreneurs.					
8.	Having a personal mentor with good business ideas will increase the start-up of new businesses.					
9.	There are no role models in my immediate environments.					
10.	Entrepreneurial and business educational programmes from real business world would help students to start businesses.					

Your comment(s) with respect to this questionnaire will be appreciated, if any.

.....

.....

.....

.....

I remain grateful for your cooperation and voluntary participation.

God bless you

Appendix 2: Turnitin Report

Odewale

ORIGINALITY REPORT

11%

SIMILARITY INDEX

8%

INTERNET SOURCES

4%

PUBLICATIONS

6%

STUDENT PAPERS

PRIMARY SOURCES

1

Submitted to De La Salle University - Manila

Student Paper

2%

2

Submitted to Universiti Malaysia Perlis

Student Paper

<1%

3

mafiadoc.com

Internet Source

<1%

4

www.emerald.com

Internet Source

<1%

5

cerenc.org

Internet Source

<1%

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Internet Source

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Appendix 3: Ethical Clearance



03 August 2018

Mrs Gbemisola Odewale (217081306)
Graduate School of Business & Leadership
Westville Campus

Dear Mrs Odewale,

Protocol reference number: HSS/0748/018D

Project Title: The influence of biopsychosocial factors on entrepreneurial Education and students' entrepreneurial inclination in selected Nigerian universities

Approval Notification – Expedited Application

In response to your application received 14 June 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Professor Shenuka Singh (Chair)

/ms

Cc Supervisor: Professor Stephen Migiro and Dr Olufemi Patrick Adyeye
Cc Academic Leader Research: Professor Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

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Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville