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Agro-Entrepreneurial Intention: Testing the integrated Model of Psychological and Behavioral (TPB) Approaches

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Abstract: This study explored the influence of behavioural and psychological traits on agro-entrepreneurial intentions among secondary school students. Secondary school students aged 15-19 years were selected. Data were collected using 300 pieces of questionnaire, and structural equation modelling (SEM) was used for analysis. It was found that secondary school students' agro-entrepreneurial intention is significantly and positively related to perceived behavioural control, attitude towards behaviour and tolerance for ambiguity but significantly and negatively related to self-confidence. This study offers evidence of the effects of behavioural and psychological traits of secondary school students on agro-entrepreneurial intentions. This study explicitly focused on secondary school students. The findings provide valuable information for curriculum and policy development.

Keywords: Agro-entrepreneurship; psychological characteristics, TPB, Nigeria

JEL Classification: L26

1. Introduction

Entrepreneurship is the primary driver of the economic growth of every nation (Arkorful & Hilton, 2022; Olaore et al., 2021); it reduces poverty and social vices (Cumming et al., 2020; Morris et al., 2020; Morris & Tucker, 2021). Entrepreneurs are considered the backbones of nations' economies because their business activities increase gross domestic product (GDP) (Pulka et al., 2021). Thus, entrepreneurship gained attention as an established academic programme and curriculum development tool (Eniola & Osigwe, 2021; Kuratko & Morris, 2018; Santos et al., 2019).

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Moreover, there is a significant increase in the number of entrepreneurship-related courses offered by diverse institutions globally (Santos et al., 2019; Scott et al., 2018). Entrepreneurship education has attracted special consideration as an essential area of study (Morris et al., 2013). It has been argued that a set of skills increase an entrepreneur's competency (Obschonka et al., 2017). Also, there is evidence that educational programmes can increase entrepreneurial characteristics positively (Santos et al., 2019) and entrepreneurial intention (Tessema Gerba, 2012). Many entrepreneurship programmes can advance the consciousness of entrepreneurship as a career option and foster positive attitudes toward it among young people (Morris et al., 2013). Specifically, the Nigerian government has made it compulsory for every secondary school student to pass an entrepreneurial subject before graduation, to ensure inclusive entrepreneurial opportunities (Oladejo & Mafimisebi, 2022).

However, researchers and educators continue to face curricular and pedagogical challenges (Ezeh et al., 2020; Kuratko & Morris, 2018) in entrepreneurship education. Ideally, entrepreneurship education should inculcate a wide range of skills and knowledge in young entrepreneurs. Surprisingly, entrepreneurship education in Nigeria rarely focuses on instilling skills, characteristics, and behaviours of successful entrepreneurs in students (Babatunde et al., 2021). It has been argued that identifying factors that spur entrepreneurship will aid educational intuitions in developing a good curriculum (Eniola & Osigwe, 2021; Igwe et al., 2021) for pedagogical effectiveness. Scholars have found that environmental, behavioural and psychological factors influence entrepreneurial intents (Che Embi et al., 2019; Ezeh et al., 2020; Ezeh & Abdulrahman, 2022; Ferreira et al., 2012; Koe, 2016; Koh, 1996; Liñán & Chen, 2009; Nasip et al., 2017). However, only the behavioural and psychological traits can be improved through the pedagogical process.

The behavioural factors (attitude, subjective norm, and perceived behavioural control) influence entrepreneurial intentions (Ajzen, 1991; Fishbein & Ajzen, 2011); also psychological factors (Locus of control, innovativeness, tolerance for ambiguity, propensity to take risk, self-confidence and need for achievement) influence entrepreneurial intentions (Che Embi et al., 2019; Ezeh & Abdulrahman, 2022; Koe, 2016; Koh, 1996; Nasip et al., 2017). Previous scholars have studied behavioural or psychological factors, which did not give a robust understanding of predictors of entrepreneurial intentions. Meanwhile, (Ferreira et al., 2012; Maheshwari, 2021; Vodă & Florea, 2019) have integrated educational support, behavioural and psychological variables to predict entrepreneurial intention. Scholars have found that successful entrepreneur characteristics could be learned (Gibb & Ritchie, 1982). Nevertheless, the process of identifying these characteristics is often rigorous and challenging. Hence, identifying those behavioural and psychological traits that influence agro-entrepreneurial intention will strengthen the curriculum development in Nigeria for agro-entrepreneurship education. Within the reviewed literature, there is a paucity of studies on the relationship between the

elements of behavioural and psychological traits on entrepreneurship, while there are none on agro-entrepreneurship. Therefore, in this study, we extend Ferreira *et al.*, (2012) model to predict the agro-entrepreneurial intention of secondary school students in Nigeria.

Also, this study provides several contributions. First, it advances scientific knowledge in intention research by offering agro-entrepreneurial intention data in a region that is agrarian, and has hitherto been disregarded by researchers. Also, Ezeh *et al.*, (2020) stressed the need for replication in investigating intention research to expand scientific understanding in several areas. This study replicates entrepreneurial intention research and helps in theory development and extension in the area of agro-entrepreneurial intention. Second, the findings may assist secondary school institutions realize the importance of agro-entrepreneurship education and include influencing factors in their curricula. Third, the study's findings may provide policymakers with critical information about the kind of incentives, and support secondary school students may need to grow their agro-entrepreneurial careers. Tessema Gerba, (2012) believes that support programs for potential entrepreneurs should be carefully designed to match their needs. Other researchers may utilize our findings to seek new research projects.

Theoretically, we argued that agro-entrepreneurial intention should be evaluated using an integration of behavioural elements (Attitude, subjective norms and perceived behavioural control) and psychological traits (innovativeness, tolerance for ambiguity, need for achievement, internal locus of control, and risk-taking propensity) (see Figure 1). This paper is divided into the following key sections. The next section is on entrepreneurial intention, focusing on the psychological and behavioural approaches, hypotheses and the resultant structural model (see Figure 1). The third section dwells on the study methodology, the fourth section presents the findings, and the fifth section presents a discussion of findings, implications and conclusion.

2. Literature Review

Numerous research has been conducted to identify the predictors of entrepreneurial intentions (EIs). In the event of studying entrepreneurial intentions, some scholars have engaged the Shapero Model of Entrepreneurial Events (SEE) (Shapero & Sokol, 1982), while others have employed the Theory of Planned Behavior (TPB) (Ajzen, 1991). However, it has been argued that the SEE and TPB models are identical because perceived desire is comparable to attitude toward behaviours, while perceived feasibility is similar to perceived behavioural control (Autio et al., 2001). The fundamental distinction between the two models is the propensity to act and subjective norms (Maheshwari, 2021). Other scholars built on the TPB by indicating

that personality characteristics, attitudes, social norms, economic and environmental factors influence EIs (Ferreira et al., 2012; Luthje & Franke, 2003; Maheshwari, 2021; Vodă & Florea, 2019). The components of TPB and psychological traits are discussed below.

2.1. Theory of Planned Behavior (TPB)

According to TPB, attitude towards behaviour, subjective norms, and perceived behavioural control contribute to the intention to act or engage in certain activities (Ajzen, 1991; Fishbein & Ajzen, 2011).

2.1.1. Personal attitude (PA): Personal attitude (PA) is an individual's positive or negative thoughts towards executing an activity (Fishbein & Ajzen, 2011). A positive attitude will lead to positive behaviour, while a negative attitude to negative behaviour (Fishbein & Ajzen, 1975, p. 9). A person with a positive attitude has a favourable impression of entrepreneurial activities compared to a person with a negative attitude (Phuong et al., 2021). Some studies (Ferreira et al., 2012; Luthje & Franke, 2003; Maheshwari, 2021; Roy et al., 2017) have all supported association between PA and EIs. Specifically, some scholars have found that personal attitude influences agro-entrepreneurial intention (Che Nawi et al., 2022; Sa'adiah et al., 2019; Tiraieyari & Krauss, 2018); giving credence to our first hypothesis, that is:-

H1- Attitude has a positive relationship with Agro-entrepreneurial intention.

2.1.2. Subjective norms (SUBNs): Subjective norms are beliefs that the majority of individuals close to you or referents will approve or disapprove of a behaviour (Ajzen, 1991). It is a belief that people you love think you should or should not execute a given behavior (Fishbein & Ajzen, 1975, p. 16). Thus, (Sa'adiah et al., 2019) in Malaysia, (Ridha et al., 2017) in Indonesia and (Ezeh & Juniadu, 2019) in Nigeria found that subjective norms influence agro-entrepreneurial intention. Accordingly, Tiraieyari and Krauss, (2018) opined that agro-entrepreneurship scholars had established a positive connection between subjective norms and agro-entrepreneurial intention. Meanwhile, most scholars in conventional entrepreneurship found no or weak association between subjective norms and entrepreneurial intention (Ezeh et al., 2020; Roy et al., 2017). This contrast continues to seek an empirical answer. Arguably, this contradiction might be due to cultural and environmental differences. Nevertheless, the contraption helped us to formulate our second hypothesis, which is:

H2- Subjective norms positively relate to Agro-entrepreneurial intention.

2.1.3. Perceived behavioural control (PBC): Perceived behavioural control is a person's belief on how simple or difficult it is to deal with a specific scenario (Ajzen,

1991). Usually, PBC predicts behaviour that influences an individual's goals (Ajzen, 1985). People with more outstanding PBC deal with adversity and difficulty, which results in higher EIs (Al-Jubari, 2019). Several scholars have shown that PBC has a direct influence on agro-entrepreneurial intentions. For instance, Che Nawi *et al.*, (2022) found that PBC influences agro-entrepreneurial intention in Malaysia; Ezeh and Juniadu, (2019) in Nigeria. However, Ridha *et al.*, (2017) discovered that PBC does not affect Indonesian farmers' intention to engage in agribusiness. The differences in these studies provided the ground for the carving of our third hypothesis, that is:-

H3- Perceived Behavioral Control has a positive relationship with Agro-entrepreneurial intention.

2.2. Psychological Traits and Entrepreneurial Intention

Every entrepreneur has a set of psychological traits that distinguish him/her from others (McClelland, 1976). For instance, an entrepreneur's propensity for taking risks, internal locus of control, self-confidence, need for achievement, innovativeness, and tolerance for ambiguity influence entrepreneurial intention (Dehghanzadeh et al., 2016; Nasip et al., 2017; Popescu et al., 2016). They are discussed below.

2.2.1. Internal Locus of Control (ILC): The locus of control examines people's belief on whether their success is influenced more by other forces or by their personal actions (Rotter, 1966). Thus, it refers to how much a person thinks success depends more on their abilities than on luck or the efforts of others. Locus of control is divided into internal and external locus of control (Arkorful & Hilton, 2022). In particular, this study focuses on the internal locus of control. Previous studies on internal locus of control and entrepreneurial intent have inconsistent findings. Some scholars, for instance (Alshebami & Seraj, 2022; Bernardus et al., 2020; Karabulut, 2016; Ndofirepi, 2020; Vodă & Florea, 2019) found that entrepreneurial intention and internal locus of control are related. However, other scholars found no link between internal locus of control and business launch (Dinis et al., 2013; Ferreira et al., 2012; Nasip et al., 2017). Sociocultural context may be the reason for the contradictory results; this is why we develop the fourth hypothesis for this study:

H4: Internal Locus of Control has a positive relationship with Agro-entrepreneurial intention.

2.2.2. Innovativeness: Being original, exceptional, astonishing, or unique means being innovative (Mueller & Thomas, 2001). Innovativeness leads to new enterprises that sell distinctive goods and employs cutting-edge business and marketing strategies (Koh, 1996). Therefore, innovation results in the creation of projects that have the potential to enhance economic growth and development (Alshebami &

Seraj, 2022). Additionally, innovativeness and entrepreneurship go hand in hand (Bell, 2019; Bhatti et al., 2021; Koe, 2016; Nasip et al., 2017). People in collectivistic cultures with solid uncertainty avoidance are less innovative than those in individualistic civilizations with low uncertainty avoidance (Mueller & Thomas, 2001). In light of this, some scholars found no convincing link between innovativeness and entrepreneurial intention (Bernardus et al., 2020; Dinis et al., 2013). The above perspectives provided us with the genuine ground to test our fifth hypothesis, which is:

H5: Innovativeness has a positive relationship with Agro-entrepreneurial intention.

2.2.3. Tolerance for ambiguity: The tendency to find situations with uncertain outcomes enticing rather than risky is known as an ambiguity tolerance (Budner, 1962). It is considered ambiguous when the knowledge provided is insufficient to structure a state. A person's tolerance for ambiguity is revealed by how he/she perceives a confusing situation and arranges the information at hand to deal with the situation (Koh, 1996). How individuals understand and organize information in uncertain situations reflects their ambiguity tolerance (Dinis et al., 2013). Entrepreneurs seem to deal with uncertainty better than others since they have to make essential judgments in a less structured setting (Bhatti et al., 2021; Che Embi et al., 2019; Nasip et al., 2017). Meanwhile, some scholars found no connection between ambiguity tolerance and entrepreneurial aspiration (Dinis et al., 2013; Ferreira et al., 2012), which gave us the conviction to test our sixth hypothesis, which is:-

H6: Tolerance for ambiguity has a positive relationship with Agro-entrepreneurial intention.

2.2.4. Propensity to Take Risks: Individual risk perception and analysis affect his/her propensity to take a risk (Martins et al., 2018). The propensity to take risks is linked to entrepreneurial desire but not performance (Zhao et al., 2010). Thus, risk-taking tendencies influence business aspirations (Alshebami & Seraj, 2022; Bell, 2019; Che Embi et al., 2019; Moraes et al., 2018; Nasip et al., 2017; Ndofirepi, 2020). Although risk-taking is frequently cited as a predictor of entrepreneurial motivation, some studies revealed that secondary school students do not view themselves as risk takers (Dinis et al., 2013; Ferreira et al., 2012). Additionally, it is claimed that a misunderstanding of the term "risk-taking propensity" is to blame for the detrimental impact of risk-taking proclivity on entrepreneurial intention (Lee-Ross, 2015). Also, Bell, (2019) found that business owners stop taking risks after meeting their goals. We, therefore, formulate our seventh hypothesis in this study:

H7: Propensity to take risks has a positive relationship with Agro-entrepreneurial intention.

2.2.5. Need for Achievement: There is much study on need for achievement (McClelland, 1965, 1976). A person has a need for achievement when he/she strives to be the best in all circumstances, especially in competitive contexts (McClelland, 1976). Researchers found a strong connection between the need for achievement and entrepreneurial intention (Che Embi et al., 2019; Ferreira et al., 2012; Karabulut, 2016; Nasip et al., 2017). As opposed to this, other scholars found no connection between need for achievement and entrepreneurial intention (Soomro & Shah, 2022; Vodă & Florea, 2019). Also, need for achievement may not be the driver of entrepreneurial intention (Hansemark, 2003; Koh, 1996). Therefore, we develop our eighth hypothesis, that is:-

H8: Need for achievement has a positive relationship with Agro-entrepreneurial intention.

2.2.6. Self-confidence: Self-confidence influences entrepreneurial intention (Dinis et al., 2013; Martins et al., 2018). Self-confidence in one's abilities that results in success (Gelaidan & Abdullateef, 2017). Thus, self-confidence is a belief in one's capacity to design and carry out a series of activities to achieve specific goals. Studies showed that self-confidence positively impacts entrepreneurial intention (Ferreira et al., 2012; Gelaidan & Abdullateef, 2017; Koh, 1996; Martins et al., 2018; Nasip et al., 2017). Additionally, entrepreneurial education and training programmes demonstrated that they enhanced students' skills, leading to a rise in self-confidence (Bhatti et al., 2021). Some scholars found an inverse relationship between self-confidence and entrepreneurial intention (Che Embi et al., 2019). Thus, we decided to test another hypothesis, which is:

H9: Self-confidence has a positive relationship with Agro-entrepreneurial intention

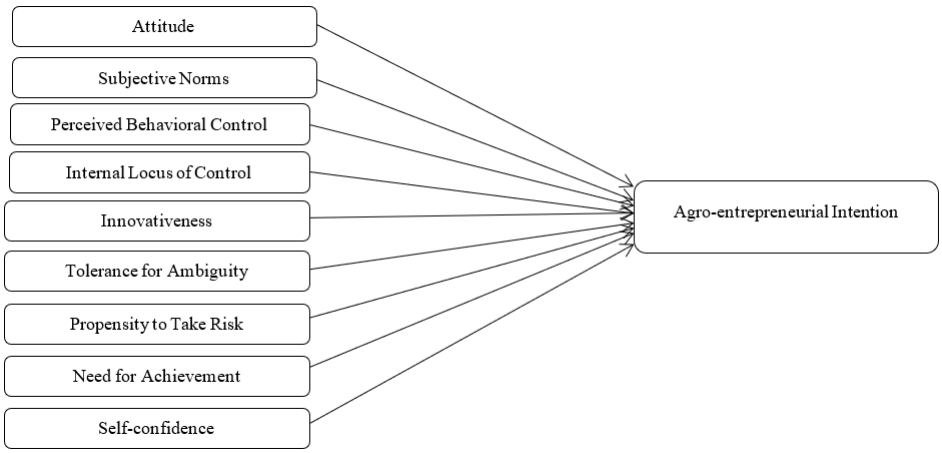

Figure 1. Conceptual Framework of the Study

3. Methodology

3.1. Research Design

This study uses a quantitative approach to assess how behavioural and psychological characteristics influence secondary school students' aspirations for agro-entrepreneurship in Nigeria. Every secondary school student in Nigeria is required to complete one elective subject related to entrepreneurship. One may argue that all secondary school students ought to have acquired entrepreneurial traits that would enable them to succeed as agro-entrepreneurs. The independent variables (attitude, subjective norms, perceived behavioural control, internal locus of control, need for achievement, risk-taking propensity, self-confidence, and ambiguity tolerance) and the dependent variable (agro-entrepreneurial intentions) are tested. In order to do this, the sample for the study was conveniently drawn from four private secondary schools in Gusau, Zamfara State, Nigeria. Students received the self-administered questionnaire. Also, we gathered it through the cross-sectional method. Furthermore, we protected respondents' privacy and adhered to stringent ethical guidelines for our research. By signing a permission form, participants gave consent to participate in the study. A convenient sample of three hundred (300) secondary school students in Zamafara State was chosen from the entire student body. Data were gathered over two weeks in May 2022. Research assistants distributed questionnaires and gathered completed questionnaires during a class session. There were 250 responses, but only 205 were considered for analysis due to their appropriateness.

3.2. Questionnaire Development

The questionnaire comprises variables related to behavioural elements (attitude, subjective norms, and perceived behavioural control) and psychological characteristics (locus of control, need for achievement, risk-taking propensity, innovativeness, self-confidence, and ambiguity tolerance) and agro-entrepreneurial intention. A Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), was used for independent and dependent variables. Thus, the metrics for gauging attitude towards behaviour, subjective norms, perceived behavioural control and entrepreneurial intention were adapted from the following scholars (Ezeh et al., 2020; Liñán & Chen, 2009). Lastly, these scholars were utilized to create measures for assessing psychological traits (Dinis et al., 2013; Karabulut, 2016; Koe, 2016; Koh, 1996; Popescu et al., 2016).

4. Data Analysis and Result

4.1. Psychometric Properties of the Scale

The reliability and validity of the instrument were evaluated. The term "convergent validity" describes how effectively one indicator of an idea links to another (Hair et al., 2019). Convergent validity was examined using the extracted average variance (AVE). An AVE score of at least 50% is advised for convergent validity (Bagozzi & Yi, 2012). Thus, composite reliability, AVE, Cronbach's alpha and indicator factor loadings are displayed in Table 1. In Table 1, the results are all within the given bounds, demonstrating good validity and reliability (Collier, 2020; Fornell & Larcker, 1981; George & Mallery, 2019; Hair et al., 2019). Furthermore, initial models did not satisfy the model fit criteria; hence model enhancement utilizing modification indices was conducted severally. Items with high modification indices were trimmed (Collier, 2020; Thakkar, 2020), in order to arrive at suitable model fit. Indices after model improvement show that the requirements for model fit are met: Comparative Fit Index (CFI) = 0.980, Incremental Fit Index (IFI) = 0.980, Tucker-Lewis index (TLI) = 0.976, and Root Mean Square Error of Approximation (RMSEA) = 0.034 (Collier, 2020; Hu & Bentler, 1999; Schreiber, 2008; Thakkar, 2020). Table 1 illustrates the CFA results, and figure 2 illustrates the calculation of a measurement model with ten latent components. Also, in the structural model, discriminant validity was conducted. Discriminant validity describes how distinct one construct is from the others (Hair et al., 2014, 2019). The Fornell-Larcker criteria were conducted. This current study meets the Fornell-Larcker criterion (Bagozzi & Yi, 2012; Fornell & Larcker, 1981) because the square roots of AVEs were bigger than the shared variance of components in the model (see Table 2).

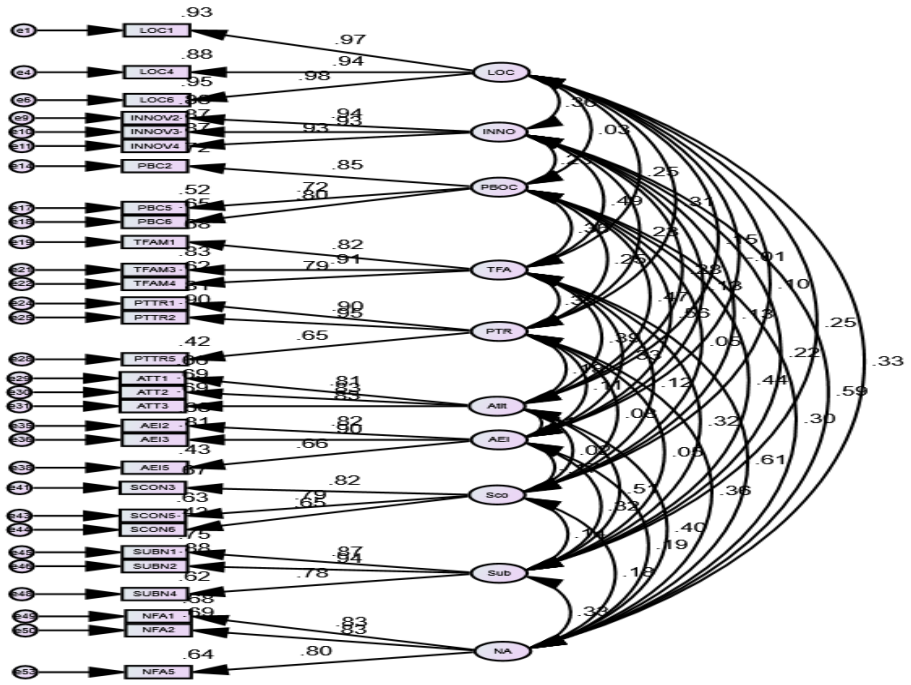

Figure 2. Measurement Model

Table 1. Internal Consistency

Constructs	Estimate	Composite Reliability	AVE	Cronbach Alpha
ILOC1	0.967			
ILOC4	0.936			
ILOC6	0.977	**0.972**	**0.922**	**0.972**
INNOV2	0.938			
INNOV3	0.935			
INNOV4	0.933	**0.954**	**0.875**	**0.954**
PBC2	0.851			
PBC5	0.723			
PBC6	0.804	**0.836**	**0.631**	**0.834**
TFAM1	0.823			
TFAM3	0.909			
TFAM4	0.790	**0.879**	**0.709**	**0.876**
PTTR1	0.898			
PTTR2	0.946			
PTTR5	0.648	**0.876**	**0.708**	**0.867**
ATT1	0.811			
ATT2	0.832			
ATT3	0.832	**0.865**	**0.680**	**0.864**
AEI2	0.823			
AEI3	0.898			

AEI5	0.659	**0.839**	**0.639**	**0.833**
SCON3	0.820			
SCON5	0.792			
SCON6	0.654	**0.801**	**0.576**	**0.795**
SUBN1	0.866			
SUBN2	0.939			
SUBN4	0.784	**0.899**	**0.749**	**0.895**
NFA1	0.826			
NFA2	0.831			
NFA5	0.803	**0.860**	**0.672**	**0.860**

Note = ILOC- Internal Locus of Control, PTTR- Propensity to take risk, SCON- Self-confidence, NFA- Need for Achievement, TFAM- Tolerance for Ambiguity, INNOV- Innovativeness, ATT- Attitude, SUBN- Subjective Norms, PBC- Perceive Behavioural Control, AEI- Agro-entrepreneurial Control

Table 2 Fornell and locker criterion of discriminants validity

Constructs	CR	AVE	ILOC	INNOV	PBC	TFAM	PTTR	ATT	AEI	SCON	SUBN	NFA
ILOC	0.972	0.922	**0.960**									
INNOV	0.954	0.875	0.357	**0.935**								
PBC	0.836	0.631	0.033	0.228	**0.794**							
TFAM	0.879	0.709	0.248	0.487	0.364	**0.842**						
PTTR	0.876	0.708	0.308	0.230	0.250	0.354	**0.841**					
ATT	0.865	0.680	0.152	0.281	0.469	0.386	0.182	**0.825**				
AEI	0.839	0.639	-0.010	0.128	0.559	0.328	0.107	0.406	**0.799**			
SCON	0.801	0.576	0.103	0.133	0.049	0.121	0.078	0.022	-0.165	**0.759**		
SUBN	0.899	0.749	0.247	0.216	0.437	0.319	0.050	0.511	0.323	0.136	**0.865**	
NFA	0.860	0.672	0.330	0.586	0.301	0.615	0.356	0.396	0.193	0.178	0.329	**0.820**

Note = ILOC- Internal Locus of Control, PTTR- Propensity to take risk, SCON- Self-confidence, NFA- Need for Achievement, TFAM- Tolerance for Ambiguity, INNOV- Innovativeness, ATT- Attitude, SUBN- Subjective Norms, PBC- Perceive Behavioural Control, AEI- Agro-entrepreneurial Control

4.2. Structural Equations Model (SEM) Path Analysis

The influence of independent variables (attitude, subjective norms, perceived behavioural control, internal locus of control, innovativeness, tolerance of ambiguity, propensity to take risk, need for accomplishment, and self-confidence) and dependent variable (agro-entrepreneurial intentions) are investigated using SEM. Table 3 and Figure 3 show that attitude towards behavior ($\beta = 0.15$, $p < 0.050$), perceived behavioral control ($\beta = 0.35$, $p < .000$) and tolerance for ambiguity (= 0.166, $p < 0.05$) have positive and significant influence on agro-entrepreneurial intention among secondary school students in Nigeria. In other words, students' agro-entrepreneurial intentions are motivated by their attitude towards behaviour, perceived behavioural control and ability to withstand unpredictability. On the other hand, self-confidence is negative and significantly related to students' agro-entrepreneurial intentions ($\beta = -0.145$, $p < 0.05$). In other words, the more confident secondary school student is, the less they want to engage in agro-entrepreneurship. Additionally, agro-entrepreneurial intentions are not significantly related to subjective norms, internal Locus of control, innovativeness, propensity to take risks, and need for achievement. Therefore, H1, H3 and H6 are approved whereas H2, H4, H5, H7, and H8 are rejected.

Table 3. Path Coefficient

Constructs Relationship				Estimate	S.E.	C.R.	P	Remarks
H1	AEI	<---	Attitude	0.150	0.075	2.099	0.036	**Accepted**
H2	AEI	<---	Subjective norms	0.078	0.075	1.080	0.280	Rejected
H3	AEI	<---	Perceived behavioural control	0.350	0.075	5.085	***	**Accepted**
H4	AEI	<---	Internal Locus of control	-0.046	0.056	-0.685	0.494	Rejected
H5	AEI	<---	Innovativeness	-0.009	0.060	-0.121	0.903	Rejected
H6	AEI	<---	Tolerance for ambiguity	0.166	0.076	2.192	0.028	**Accepted**
H7	AEI	<---	Propensity to take risk	-0.044	0.063	-0.672	0.502	Rejected
H8	AEI	<---	Need for achievement	-0.043	0.080	-0.554	0.580	Rejected
H9	AEI	<---	Self-confidence	-0.145	0.058	-2.412	0.016	**Rejected**

AEI = Agro-entrepreneurial Intention

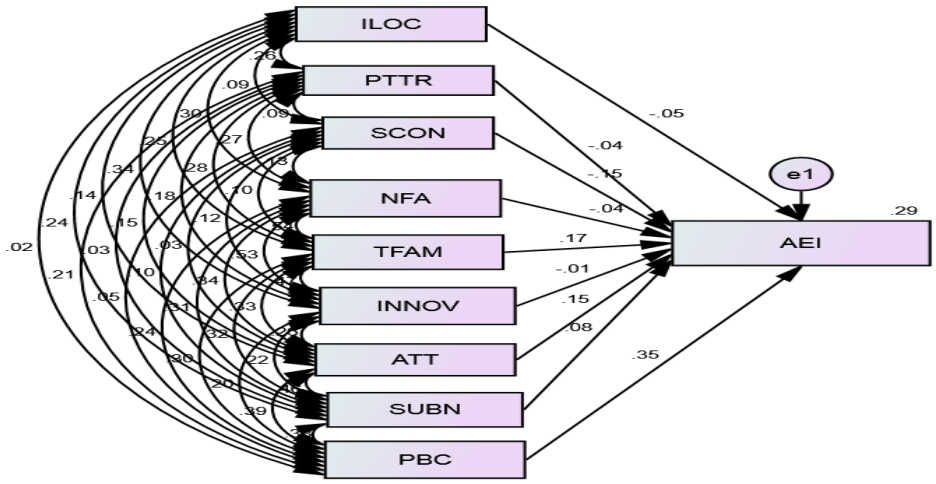

Figure 3. Path Coefficient

5. Discussion

This study evaluated the influence of behavioural factors (attitude, subjective norms, and perceived behavioural control) and psychological traits (internal locus of control, innovativeness, tolerance for ambiguity, propensity to take risk, need for achievement, and self-confidence) on agro-entrepreneurial intention among Nigerian secondary school students. We found that agro-entrepreneurship intention of secondary school students was strongly and favourably related to perceived behavioural control, attitude, and ambiguity tolerance but significantly and negatively related to self-confidence. Therefore, we argue that behavioural factors pull more impact than psychological traits, because two factors out of three factors in TPB influence agro-entrepreneurial intention, while only one factor out of six factors in psychological influence agro-entrepreneurial intention. This study is consistent with (Maheshwari, 2021), who showed that the theory of planned behaviour impacts entrepreneurial intention more than psychological traits. Surprisingly, agro-entrepreneurship intention is not significantly linked to subjective norms, propensity to take risks, internal Locus of control, innovativeness, and need for achievement. The findings that were drawn from this study are discussed below.

The most crucial factor that influences agro-entrepreneurial intention is perceived behavioural control. Thus, scholars argued that individuals with PBC cope better with adversity and difficulty, leading to higher EIs (Al-Jubari, 2019). This study is in line with the findings of (Che Nawi et al., 2022), who discovered that perceived behavioural control significantly predicts Malaysian university students' intention to pursue agricultural entrepreneurship; (Ezeh & Juniadu, 2019) discovered the same

in Nigeria. However, the result of this study differs from (Ridha et al., 2017), who noted that perceived behavioural control had no impact on ambitions for agro-entrepreneurship in Indonesia; they argued that every Indonesian is agricultural savvy.

This study equally found that attitude influences agro-entrepreneurial intentions. This study supports other studies that found attitude as a predictor of young people's desire to start agro-business (Che Nawi et al., 2022; Tiraieyari & Krauss, 2018). However, this study contradicts Ridha *et al.*, (2017) and Ezeh and Juniadu, (2019), who found that attitude does not influence agro-entrepreneurial intention among teenagers in Indonesia and Nigeria, respectively. Surprisingly, this study found that subjective norms do not influence agro-entrepreneurial intention. To the best of our knowledge, this is the only study in agro-entrepreneurship that found such a result. Most scholars found that propensity to engage in agro-entrepreneurship is influenced by subjective norms (Ezeh & Juniadu, 2019; Ridha et al., 2017; Tiraieyari & Krauss, 2018). This contradiction might be due to the robustness of the model tested (integration of behavioural and psychological traits) or the nature respondents, secondary school students.

Furthermore, this study found that tolerance for ambiguity influences agro-entrepreneurial intention. Thus, Nigerian secondary school students' desire for agriculture entrepreneurship is related to ambiguity tolerance. It has been shown that the entrepreneurial mindset, as well as being an entrepreneur, is closely related to ambiguity tolerance (Bhatti et al., 2021; Che Embi et al., 2019; Koh, 1996; Nasip et al., 2017). As a result, an individual likelihood of becoming an agro-entrepreneur increase as his/her capacity to tolerate ambiguity increases. Unexpectedly, some studies found that entrepreneurship and tolerance for ambiguity do not significantly correlate (Dinis et al., 2013; Ferreira et al., 2012). Arguably, the context and timing of earlier studies may be responsible for this discrepancy. Agro-entrepreneurship in Nigeria requires ambiguity tolerance due to unpredictability in the local environment.

Additionally, we found a significant negative relationship between agro-entrepreneurial intention and self-confidence; this result is in line with (Che Embi et al., 2019). In other words, secondary school students are less likely to participate in agro-entrepreneurship the more self-assured they are. This result may be related to poor or no exposure of secondary school students to agriculture entrepreneurship in Nigeria. However, the low mean of the t-test on self-confidence calls for more studies.

Astonishingly, we found that subjective norms, internal Locus of control, innovativeness, propensity to take risks, and need for achievement do not influence agro-entrepreneurial intention. However, (Che Embi et al., 2019; Dinis et al., 2013; Ferreira et al., 2012; Ridha et al., 2017) reported disparate results when examining

the agro-entrepreneurial intention. Thus, the importance of behavioural and psychological traits on agro-entrepreneurial intention cannot be overemphasized. Moreover, scholars have argued on that statistical significant should be carefully interpreted (Gelman & Stern, 2006; Wasserstein et al., 2019). Thus, the primary factors influencing secondary school students' agro-entrepreneurial intention are attitude towards behaviour, perceived behavioural control and ambiguity tolerance. The study advises more investigation into behavioural, psychological traits and agro-entrepreneurial intent in Nigeria.

6. Conclusions

Agro-entrepreneurship is a crucial area for the nation's economic progress, surprisingly there are a paucity of agro-entrepreneurship studies in Nigeria. However, the Nigerian government is working hard to promote entrepreneurship; thus, it becomes imperative to comprehend factors that influence the agro-entrepreneurial aspirations of the younger generation. This study adds some context-based data and information to the extant literature by demonstrating that perceived behavioural control, attitude and tolerance for ambiguity positively influence AEI. In contrast, self-confidence has a negative impact on AEIs. These results show that agro-entrepreneurs are more ready to tolerate chances, have the skills that it takes, and attitude to start new agro-businesses. As a result, it is urged that the government should promote young entrepreneurs and encourage entrepreneurship, as doing so would help agro-entrepreneurs launch new businesses and aid the nation's development. Hence, educators and researchers should update the secondary school curriculum to include the appropriate teaching methods and inculcate behavioural and psychological traits into Nigerian youths at a younger age, especially while still in secondary school. To the best of our knowledge, this is one of the few studies, and the first in Nigeria, that integrated behavioural and psychological traits to examine factors influencing AEIs. Therefore, this study demonstrated that integrating psychological traits and the TPB model are appropriate frameworks for measuring AEIs. More studies are required to authenticate and validate the model.

7. Recommendations for Future Study

A longitudinal study would be more beneficial for future studies to understand agro-entrepreneurship in the Nigerian context since this current study is cross-sectional. After that, future studies can use a larger sample size to generalize the results and strengthen the study. Also, a qualitative study might be designed to ask students in-depth questions about their goals and the support they need to start their agro-businesses, giving a complete picture of agro-entrepreneurship. Future studies can compare the employment insurance (EI) of students with that of graduates who are

working (employed), as well as compare them to the educational curriculum of different institutions where they studied or received their degrees. In order to measure students' AEI, future studies may aim for a mix of responses from public and private universities as well as a balance of gender. Thus, there is a need for more studies for continuous curriculum updates.

Statements and Declarations

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