

Institutional Support and Agripreneurial Intention among Agricultural Education Students in Colleges of Education in North East Nigeria

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ABSTRACT

Institutional support is a critical factor associated with shaping students' entrepreneurial intentions, particularly in conflict-affected regions. This study examined the relationship between institutional support and specifically supportive norms for innovation and innovative culture on Agripreneurial Intention among agricultural education students in colleges of education in North-East Nigeria. A descriptive cross-sectional survey was conducted with 380 NCE III agricultural education students drawn from nine colleges using stratified and simple random sampling. A 30-item questionnaire comprising 10 items for supportive norms, 10 items for innovative culture, and 10 items for Agripreneurial Intention was developed, validated by three experts, and pilot-tested, yielding Cronbach's alpha coefficients of 0.905 for supportive norms and 0.913 for innovative culture. Data were analysed using mean, standard deviation, independent-samples t-tests, and simple linear regression. Results showed that supportive norms ($M = 3.94$) and innovative culture ($M = 3.87$) had a strong influence on Agripreneurial Intention. Regression analysis revealed that supportive norms ($R^2 = 0.262$, $\beta = 0.512$, $p < .001$) and innovative culture ($R^2 = 0.227$, $\beta = 0.476$, $p < .001$) significantly predicted Agripreneurial Intention. Combined, these dimensions accounted for 46% of the variance ($R^2 = 0.460$, $F = 156.78$, $p < .001$). No significant differences were found based on college type (federal vs. state) or gender. The study concluded that institutional support is a significant predictor of Agripreneurial Intention, although financial support and active student organisations remain areas requiring improvement. Recommendations include establishing college-based agribusiness incubation hubs with dedicated seed funding, increasing budgetary allocations for student-led agripreneurship projects, strengthening industry-academia linkages, and investing in faculty mentorship programmes.

Keywords: Agripreneurial Intention, Institutional support, Supportive norms, Innovative culture, Colleges of education, North-East Nigeria

INTRODUCTION

In conflict-affected regions where formal employment opportunities are scarce, higher education institutions bear a dual responsibility: to educate and to catalyse economic recovery through entrepreneurship. North-East Nigeria, devastated by over a decade of insurgency, exemplifies this challenge: rebuilding livelihoods depends as much on entrepreneurial capacity as on physical infrastructure. Higher education institutions are increasingly recognised as engines of economic development, innovation, and job creation, extending beyond their traditional teaching and research roles (Audretsch, 2014). In Nigeria, this expectation is particularly acute given the persistent graduate unemployment crisis. The National Bureau of Statistics (NBS, 2021) reported that Nigeria's unemployment rate stood at 33.3%, with youth unemployment being even higher. The North-East region, which has been ravaged by a decade-long insurgency, faces an even more dire situation: poverty rates of 69%, destruction of infrastructure, and displacement of millions of people (NBS, 2021). In this context, agripreneurship entrepreneurship in agriculture offers a viable pathway to economic recovery, self-reliance, and food security.

Colleges of education in Nigeria, which train teachers for basic education, are also mandated to offer entrepreneurship education as a compulsory course. The National Commission for Colleges of Education

(NCCE) has integrated entrepreneurship into the curriculum of all programmes, including agricultural education. However, the mere presence of entrepreneurship courses does not automatically translate into entrepreneurial intentions or actions. What matters is the institutional support that surrounds those courses—the norms, resources, culture, and practices that either encourage or discourage students from taking entrepreneurial steps.

Institutional support encompasses the array of resources, policies, and cultural values that institutions provide to facilitate entrepreneurial activities. Crucially, this support can be disaggregated into two distinct but complementary forms: tangible support (e.g., funding, equipment, incubation spaces, land access) and intangible support (e.g., mentorship, encouragement, recognition, normative expectations). This distinction is vital because tangible support primarily enhances perceived behavioural control—otherwise acknowledged as the "can I do it?" factor while intangible support shapes attitudes and subjective norms, also referred to as "is it worth it?" and "do others approve?" factors. This distinction is theoretically grounded in the Theory of Planned Behaviour (Ajzen, 1991), wherein tangible support enhances perceived behavioural control, while intangible support shapes attitudes and subjective norms.

This study focuses on two specific dimensions of institutional support that have been identified in the literature as being associated with entrepreneurial intentions: supportive norms for innovation and innovative culture. Supportive norms refer to the extent to which the college actively assists students in developing new business ideas, provides material and financial resources, offers mentorship, and integrates agripreneurship into its strategic plan. Innovative culture refers to the shared values and practices within the college that encourage creativity, risk-taking, collaboration, and exposure to new technologies.

Statement of the Problem

Despite the official mandate for entrepreneurship education, many colleges of education in North-East Nigeria lack the institutional support structures needed to translate that mandate into tangible agripreneurial outcomes. Preliminary discussions with students reveal significant gaps: no college-based incubation centres, no seed funding for student agribusiness ideas, limited mentorship from successful agripreneurs, and few opportunities to interact with modern agricultural technologies. The curriculum remains predominantly theoretical, and the college culture rarely celebrates innovation or tolerates failure, a necessary component of the entrepreneurial process.

The consequences are visible in the low rates of agribusiness venture creation among graduates. Many agricultural education graduates pursue teaching positions or unrelated employment rather than establishing farms, processing units, or agricultural marketing enterprises. This observation aligns with the findings of Anoke et al. (2021), who reported that only 12% of agricultural education graduates in Nigeria pursue agribusiness ventures within three years of graduation. This represents a missed opportunity for economic development in a region desperately needing job creation and food security.

While studies have examined institutional support for general entrepreneurship in Nigerian universities (Tijani, 2017; Adegbite et al., 2021), three critical gaps remain: (1) the specific context of colleges of education has been largely neglected; (2) agripreneurship with its unique capital, land, and seasonal risk requirements has not been separately examined as a dependent variable; and (3) no study has disaggregated institutional support into the theoretically distinct dimensions of supportive norms and innovative culture within the North-East Nigerian context. This study addresses these gaps.

Purpose of the Study

The purpose of this study was to examine the relationship between institutional support and Agripreneurial Intention among agricultural education students in colleges of education in North-East Nigeria. Specifically, the study sought to:

1. Examine the relationship between colleges' supportive norms and students' Agripreneurial Intention.
2. Examine the relationship between colleges' innovative culture and students' Agripreneurial Intention.

3. Compared the perceived relationship between institutional support and on Agripreneurial Intention based on college type (federal vs. state) and gender.

Research Questions

1. What is the relationship between colleges' supportive norms and students' Agripreneurial Intention in colleges of education in North-East Nigeria?
2. What is the relationship between colleges' innovative culture and students' Agripreneurial Intention in colleges of education in North-East Nigeria?
3. Are there significant differences in students' perceptions of institutional support (supportive norms and innovative culture) based on college type (federal vs. state) and gender?

Research Hypotheses

The following null hypotheses were tested at $\alpha = 0.05$:

H₀₁: There is no significant difference between federal and state colleges on the relationship between colleges' supportive norms and Agripreneurial Intention.

H₀₂: There is no significant difference between male and female students on the relationship between colleges' supportive norms and Agripreneurial Intention.

H₀₃: There is no significant difference between federal and state colleges on the relationship between colleges' innovative culture and Agripreneurial Intention.

H₀₄: There is no significant difference between male and female students on the relationship between colleges' innovative culture and Agripreneurial Intention.

LITERATURE REVIEW

Theoretical Framework

This study is grounded in two complementary theories: Social Learning Theory (SLT) and the Theory of Planned Behaviour (TPB).

Social Learning Theory (Bandura, 1977, 1997)

Social Learning Theory posits that learning occurs through observation, imitation, and modelling within a social context. Individuals acquire new behaviours and attitudes by observing others, especially those they perceive as role models, and by experiencing the consequences of their own actions. Bandura (1997) later expanded this framework, emphasising the role of self-efficacy, the belief in one's ability to execute specific behaviours successfully. In institutional contexts, SLT suggests that students' entrepreneurial intentions are shaped by their observations: lecturers who encourage innovation, peers who initiate small agribusiness projects, and alumni who became successful agripreneurs. When the college environment provides positive role models and reinforces entrepreneurial behaviours, students are more likely to develop similar intentions. This study utilises SLT to explain how supportive norms (mentorship, encouragement, recognition) influence Agripreneurial Intention through observational learning, modelling, and reinforcement.

Theory of Planned Behaviour (Ajzen, 1991)

The Theory of Planned Behaviour complements SLT by specifying the psychological mechanisms through which intentions are formed. TPB states that behavioural intention is determined by three psychological components: (1) attitude toward the behaviour, the individual's positive or negative evaluation of performing the behaviour; (2) subjective norm, perceived social pressure to perform or not perform the behaviour; and (3)

perceived behavioural control, the perceived ease or difficulty of performing the behaviour, which reflects past experiences and anticipated obstacles.

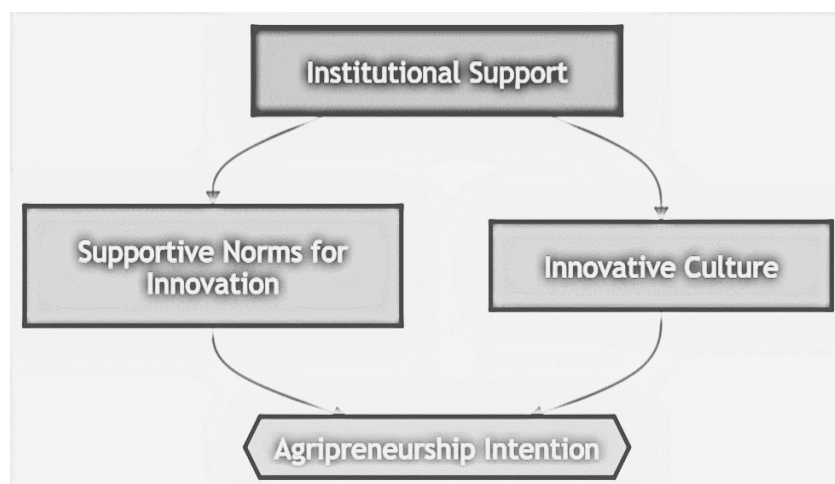
Institutional support can influence all three TPB components. Positive supportive norms improve attitudes by demonstrating the value and desirability of agripreneurship. Observing peers and mentors engaged in agripreneurship shifts subjective norms by signalling social approval. Access to resources (mentorship, funding, technology, incubation spaces) enhances perceived behavioural control by reducing perceived barriers. Therefore, institutions that provide strong supportive norms and an innovative culture are likely to strengthen students' Agripreneurial Intentions.

By integrating SLT and TPB, this study proposes that institutional support operates through both observational learning mechanisms (SLT) and cognitive psychological processes (TPB) to shape students' Agripreneurial Intentions. This integrated framework is particularly relevant in the Nigerian context, where both role models (SLT) and resource availability (TPB) are critical determinants of entrepreneurial behaviour.

Conceptual Framework

Based on the integrated SLT-TPB framework, the study conceptualises institutional support as comprising two distinct but complementary dimensions: supportive norms for innovation and innovative culture that influence Agripreneurial Intention. College type (federal vs. state) and gender are examined as potential moderators.

Fig.1 Conceptual Model of the Study



Source: Conceptualization by the Researcher

The conceptual framework for this study presents institutional support as comprising two distinct but complementary dimensions - supportive norms for innovation and innovative culture - which are hypothesised to influence Agripreneurial Intention among agricultural education students. The framework further incorporates college type (federal vs. state) and gender (male vs. female) as grouping variables for comparative analysis, examining whether students' perceptions of institutional support differ across these demographic categories. It is important to note that the framework treats college type and gender as grouping variables for descriptive comparison, not as moderators that alter the causal relationship between institutional support and Agripreneurial Intention. This distinction is grounded in the study's cross-sectional design, which is suitable for examining associations and group differences but not for testing causal moderation effects (Creswell & Creswell, 2018).

Review of Empirical Studies

Several empirical studies have examined the relationship between institutional support and entrepreneurial intentions. Below, key studies that inform the present research are reviewed, highlighting their findings and limitations.

Tijani (2017) conducted a study on the influence of university support on entrepreneurial intention among students in four private universities in Nigeria. Using a sample of 379 final-year management science students, he measured four dimensions of university support: supportive norms for innovation, innovative culture, technical support, and self-efficacy support. He found that supportive norms for innovation had a significant effect on students' attitudes towards starting a business ($R^2 = 0.119$, $p < 0.05$). However, innovative culture did not have a significant effect on personal values ($R^2 = 0.001$, $p = 0.412$). Technical support had a strong effect on technical ability ($R^2 = 0.442$, $p < 0.05$), and self-efficacy support significantly affected self-efficacy ($R^2 = 0.114$, $p < 0.05$). Tijani's study is methodologically robust (descriptive survey, regression analysis) and directly relevant to the present study. However, it focused on private universities and general entrepreneurship, not on agripreneurship or colleges of education. Moreover, Tijani's finding that innovative culture did not significantly affect personal values contrasts with the expectations of the present study; this may be because private universities in Nigeria have different cultural dynamics than public colleges of education.

More recently, Nwachukwu et al. (2024) examined institutional support for agripreneurship among agricultural students in federal universities in Nigeria, finding that mentorship ($\beta = 0.41$, $p < .001$) and technology access ($\beta = 0.38$, $p < .001$) were the strongest predictors of Agripreneurial Intention. Similarly, Onuoha and Okafor (2023) found that institutional support explained 34% of the variance in Agripreneurial Intentions among university students in Southeast Nigeria. However, both studies focused on universities rather than colleges of education, and neither examined supportive norms and innovative culture as distinct dimensions.

Saeed et al. (2018) examined the role of perceived university support in the formation of students' entrepreneurial intention in Pakistan. They used a sample of 805 university students and structural equation modelling (SEM). They measured perceived educational support, concept development support, business development support, and institutional support. They found that perceived educational support exerted the highest influence on entrepreneurial self-efficacy, followed by concept development support, business development support, and institutional support. Self-efficacy, in turn, had a significant effect on entrepreneurial intention. This study is important because it shows that different types of support have different effects. However, it did not specifically measure supportive norms or innovative culture as separate constructs, and it was conducted in a different cultural context (Pakistan).

Rikwentshe and Ibrahim (2015) evaluated students' attitudes towards entrepreneurship education in selected universities in North-East Nigeria. Using a sample of 400 students, they found that the cognitive component of attitude was rated at 84.3%, affective at 83.3%, and behavioural at 78.7%, with an overall attitude of 82.1%. This suggests that students in the region have generally positive attitudes towards entrepreneurship education. However, their study did not measure institutional support or Agripreneurial Intention specifically. It was also concerned with universities, not colleges of education.

Adegbite et al. (2021) examined the role of institutional support in promoting entrepreneurial intentions among university students in Nigeria. They found that mentorship and networking, financial support, and incubators/accelerators significantly influenced students' entrepreneurial intentions. This study is relevant because it highlights the importance of tangible support mechanisms. However, it did not separate supportive norms from innovative culture, and it was conducted in southwestern Nigeria, not the North-East.

Diaconu and Dutu (2015) discussed the role of the modern university in supporting the entrepreneurial ecosystem. They argued that universities must go beyond teaching and research to provide incubation, technology transfer, and industry partnerships. This conceptual paper supports the idea that institutional support is multifaceted, but it does not provide empirical data.

Henderson and Palm (2015) studied business education and enterprising tendencies using the General Enterprising Tendency (GET) test. They compared business and non-business students and found that business students scored higher on need for achievement, autonomy, drive, and risk-taking, but lower on creative tendency. This study suggests that educational background matters, but it did not examine institutional support or agripreneurship.

The reviewed studies consistently show that institutional support positively influences entrepreneurial intentions. However, very few studies have focused on colleges of education (as opposed to universities). None have specifically examined supportive norms for innovation and innovative culture as separate dimensions in the context of agripreneurship in North-East Nigeria. Moreover, most studies used general entrepreneurial intention measures, not agri-specific ones. The present study therefore fills a significant gap by covering this unique context and by disaggregating institutional support into theoretically meaningful dimensions.

METHODOLOGY

The study employed a descriptive cross-sectional survey design to collect quantitative data from a large sample at a single point in time, allowing for the description of existing conditions and relationships (Creswell & Creswell, 2018). The study was conducted in North-East Nigeria, covering the six states of Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe—a predominantly agricultural region that has experienced severe socio-economic disruption due to insurgency.

The target population consisted of all NCE III agricultural education students in nine colleges of education during the 2024/2025 academic session (total $N = 2,850$). Using Krejcie and Morgan's (1970) table, a sample of 380 students was selected through a stratified proportional sampling technique, followed by simple random sampling within each stratum.

A structured questionnaire titled "Agripreneurial Intention Questionnaire (AIQ)" was developed for data collection. The questionnaire consisted of four sections: Section A: Demographic information (age, gender, college type, state of origin) Section B: Supportive Norms for Innovation - 10 items (items 1-10) measuring students' perceptions of institutional assistance in developing new business ideas, provision of material and financial resources, faculty mentorship, and integration of agripreneurship into the college's strategic plan. Section C: Innovative Culture - 10 items (items 11-20) measuring students' perceptions of the college's encouragement of risk-taking, collaboration, celebration of innovation, exposure to modern agricultural technologies, and the vibrancy of student agripreneurship organisations. Section D: Agripreneurial Intention - 10 items (items 21-30) adapted from Liñán and Chen's (2009) Entrepreneurial Intention Questionnaire, measuring students' conscious commitment to pursue agricultural business ventures after graduation. Sample items include: "I am determined to start an agribusiness after graduation" and "I will make every effort to become an agripreneur." All items were rated on a five-point Likert scale ranging from "Very High Extent" (5) to "Very Low Extent" (1).

Agripreneurial Intention was operationalised as the conscious commitment and psychological readiness of agricultural education students to pursue agricultural business ventures after graduation. This was measured using a 10-item scale adapted from Liñán and Chen's (2009) Entrepreneurial Intention Questionnaire (EIQ), which was specifically modified to reflect the agricultural context. The scale assessed three dimensions of intention: (1) desire to start an agribusiness (e.g., "I have a strong desire to start my own agricultural business"); (2) determination to pursue agribusiness (e.g., "I am determined to start an agribusiness after graduation"); and (3) effort commitment (e.g., "I will make every effort to become an agripreneur"). Respondents rated each item on a five-point Likert scale from "Very High Extent" (5) to "Very Low Extent" (1). The total score for Agripreneurial Intention was computed as the mean of the 10 items, with higher scores indicating stronger intentions to pursue agribusiness ventures.

Descriptive statistics (mean and standard deviation) were used to answer the research questions, with a benchmark mean of 3.00 (the midpoint of the five-point scale). Independent t-tests were employed to test the hypotheses at $\alpha = 0.05$, and Levene's test was used to check for equality of variances. Simple linear regression and multiple regression analyses were conducted to determine the predictive relationship between institutional support and dimensions on Agripreneurial Intention. This methodological approach ensured the reliability and validity of the findings on institutional support and Agripreneurial Intention.

RESULTS

Research Question One

What is the influence of supportive norms on students' Agripreneurial Intention in Colleges of Education in North-East Nigeria?

Table 1: Analysis of Mean Responses on the relationship between supportive norms and students' Agripreneurial Intention in Colleges of Education in North-East Nigeria

S/N	Questionnaire Items	Mean	SD	Rmk
1	College renders assistance in developing new business ideas	3.98	0.72	High
2	Material resources are devoted to encourage innovation in my college	3.98	0.71	High
3	Financial support is provided to improve creative ideas in my college	3.75	0.8	High
4	Faculty members provide guidance and mentorship for agripreneurial ventures	4.12	0.68	High
5	Students are granted time to pursue creative ideas	3.82	0.75	High
6	College encourages students to explore innovative agribusiness opportunities	4.03	0.7	High
7	Agripreneurship is integrated into the college's strategic plan	3.88	0.73	High
8	The college's curriculum incorporates experiential learning in agripreneurship	3.92	0.72	High
9	College provides agribusiness incubation services	3.8	0.78	High
10	Alumni network and industry connections support current students' agripreneurial ventures	3.85	0.76	High
	Grand Mean	3.94	0.71	High

Source: Field Survey, 2026

Results from Table 1 show the mean ratings and standard deviations for the influence of supportive norms on students' Agripreneurial Intention in Colleges of Education in North-East Nigeria. The table revealed that the mean values of all ten items ranged from 3.75 to 4.12, which were all above the benchmark mean of 3.00. This indicated that the respondents generally perceived colleges' supportive norms as having a high influence on students' Agripreneurial Intention. Item 4: Faculty members provide guidance and mentorship for agripreneurial ventures (Mean = 4.12). This was the highest-rated item, indicating that students greatly valued the guidance and mentorship received from their lecturers. This aligns with Social Learning Theory (Bandura, 1977), which emphasises that learning occurs through observation and modelling of mentors and role models.

Item 6: College encourages students to explore innovative agribusiness opportunities (Mean = 4.03). This suggested that when colleges actively promoted agripreneurship through encouragement and support, students were more likely to develop stronger intentions to pursue agribusiness careers. Item 3: Financial support is provided to improve creative ideas in my college (Mean = 3.75). This was the lowest-rated item, indicating a relative gap in funding for student agripreneurial projects. Item 9: College provides agribusiness incubation services (Mean = 3.80). This relatively low score suggested that most colleges may have limited dedicated spaces where students can test and develop their agribusiness ideas.

The standard deviation values ranged from 0.68 to 0.80, indicating relatively low variability in the respondents' ratings. This suggested that the respondents held reasonably similar views regarding the supportive norms

provided by their colleges. The lowest standard deviation (0.68) was recorded for Item 4, indicating the highest consensus among respondents regarding faculty mentorship. The grand mean of 3.94, which was well above the benchmark of 3.00, indicated that supportive norms had a high influence on students' Agripreneurial Intention in Colleges of Education in North-East Nigeria.

Research Question Two

What is the influence of innovative culture on students' Agripreneurial Intention in Colleges of Education in North-East Nigeria?

Table 2: Analysis of Mean Responses on the relationship between supportive norms and students' Agripreneurial Intention in Colleges of Education in North-East Nigeria

S/N	Questionnaire Items	Mean	SD	Rmk
1	My college encourages risk-taking in trying new agricultural methods	3.84	0.74	High
2	Failure in agribusiness projects is seen as a learning opportunity rather than a setback	3.82	0.76	High
3	Students are encouraged to collaborate with each other on agribusiness ideas	3.96	0.72	High
4	Lecturers challenge us to question and improve traditional farming practices	3.9	0.73	High
5	The college publicly celebrates students who start successful agribusinesses	3.83	0.77	High
6	Exposure to innovative agricultural technologies on campus inspires me to develop new business ideas	4.05	0.69	High
7	Participation in agribusiness competitions and fairs is highly encouraged	3.88	0.74	High
8	The college provides platforms (e.g., bulletin boards, social media) for sharing innovative ideas	3.85	0.75	High
9	Student organisations actively promote agripreneurship activities	3.78	0.79	High
10	Regular events (workshops, seminars, field days) on agripreneurship are held on campus	3.8	0.78	High
	Grand Mean	3.87	0.73	High

Source: Field Survey, 2026

Results from Table 2 show that the mean values of all ten items ranged from 3.78 to 4.05, which were all above the decision benchmark of 3.00. This indicated that respondents generally perceived the innovative culture fostered in their colleges as having a high influence on students' Agripreneurial Intention. Item 6: Exposure to innovative agricultural technologies on campus inspires me to develop new business ideas (Mean = 4.05). This was the highest-rated item and indicated the importance respondents attached to exposure to modern agricultural technologies. Item 3: Students are encouraged to collaborate with each other on agribusiness ideas (Mean = 3.96). This suggested that peer collaboration and teamwork were valued and promoted within the colleges.

Item 4: Lecturers challenge us to question and improve traditional farming practices (Mean = 3.90). This indicated that lecturers encouraged students to engage in critical thinking and innovation. Item 9: Student organisations actively promote agripreneurship activities (Mean = 3.78). This was the lowest-rated item and suggested that the student-led entrepreneurial ecosystem could be strengthened. Item 10: Regular events such as

workshops, seminars and field days on agripreneurship are held on campus (Mean = 3.80). This indicated that although such events were organised, there was room for greater frequency and impact.

The standard deviation values ranged from 0.69 to 0.79, indicating relatively low variability in the responses and suggesting that the respondents' opinions were reasonably close to one another. The lowest standard deviation (0.69) for Item 6 indicated the highest consensus among respondents regarding the inspirational value of technology exposure. The grand mean of 3.87, which was above the benchmark of 3.00, indicated that innovative culture had a high influence on students' Agripreneurial Intention in Colleges of Education in North-East Nigeria.

Hypotheses Testing

H₀₁: Supportive Norms by College Type

Table 3: t-test for Supportive Norms by College Type

College Type	N	Mean	SD	t	df	P	Decision
Federal	201	3.96	0.7	0.92	378	0.358	Retain H ₀₁
State	179	3.92	0.73	—	—	—	—

The result in Table 3 showed that there was no statistically significant difference in students' perceptions of supportive norms based on college type. Students in federal colleges recorded a mean score of 3.96 with a standard deviation of 0.70, while students in state colleges recorded a mean score of 3.92 with a standard deviation of 0.73. The calculated t-value of 0.92 at 378 degrees of freedom produced a p-value of 0.358, which was greater than the 0.05 level of significance, Cohen's d = 0.09 (negligible effect). Therefore, the null hypothesis (H₀₁), which stated that there was no significant difference in supportive norms between students in federal and state colleges, was retained. This indicated that students in federal and state colleges had similar perceptions of the supportive norms provided by their respective institutions.

H₀₂: Supportive Norms by Gender

Table 4: t-test for Supportive Norms by Gender

Gender	N	Mean	SD	t	df	p	Decision
Male	206	3.95	0.72	0.27	378	0.787	Retain H ₀₂
Female	174	3.93	0.71	—	—	—	—

The result in Table 4 showed that there was no statistically significant difference in students' perceptions of supportive norms based on gender. Male students recorded a mean score of 3.95 with a standard deviation of 0.72, while female students recorded a mean score of 3.93 with a standard deviation of 0.71. The calculated t-value of 0.27 at 378 degrees of freedom yielded a p-value of 0.787, Cohen's d = 0.03 (negligible effect). Therefore, H₀₂ was retained. This indicated that male and female students did not differ significantly in their perceptions of the supportive norms provided by their colleges.

H₀₃: Innovative Culture by College Type

Table 5: t-test for Innovative Culture by College Type

College Type	N	Mean	SD	t	df	P	Decision
Federal	201	3.89	0.74	0.52	378	0.603	Retain H ₀₃

State	179	3.85	0.76	—	—	—	—
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The result in Table 5 revealed that there was no statistically significant difference in students' perceptions of innovative culture based on college type. Students in federal colleges recorded a mean score of 3.89 and a standard deviation of 0.74, whereas students in state colleges recorded a mean score of 3.85 and a standard deviation of 0.76. The calculated t-value of 0.52 with 378 degrees of freedom produced a p-value of 0.603, Cohen's $d = 0.05$ (negligible effect). Consequently, H_{03} was retained. This implied that students in federal and state colleges had similar perceptions of the innovative culture within their institutions.

H_{04} : Innovative Culture by Gender

Table 6: t-test for Innovative Culture by Gender

Gender	N	Mean	SD	t	df	P	Decision
Male	206	3.89	0.73	0.48	378	0.632	Retain H_{04}
Female	174	3.86	0.75	—	—	—	—

The result in Table 6 indicated that there was no statistically significant difference in students' perceptions of innovative culture based on gender. Male students recorded a mean score of 3.89 with a standard deviation of 0.73, while female students recorded a mean score of 3.86 with a standard deviation of 0.75. The calculated t-value of 0.48 at 378 degrees of freedom yielded a p-value of 0.632, Cohen's $d = 0.04$ (negligible effect). Therefore, H_{04} was retained. This indicated that male and female students had similar perceptions of the innovative culture provided by their colleges.

Simple Linear Regression: Supportive Norms

A simple linear regression was performed to determine whether supportive norms significantly predict Agripreneurial Intention. The regression model was statistically significant, $F(1, 378) = 134.15$, $p < .001$. Supportive norms explained 26.2% of the variance in Agripreneurial Intention ($R^2 = 0.262$; adjusted $R^2 = 0.260$). The unstandardised coefficient ($B = 0.485$, $SE = 0.042$) indicates that for each one-unit increase in perceived supportive norms, Agripreneurial Intention increases by 0.485 units. The standardised coefficient ($Beta = 0.512$, $p < .001$) demonstrates a moderate-to-strong positive effect.

Table 7: Simple Regression Analysis - Supportive Norms as Predictor of Agripreneurial Intention

Model Summary					
R	R^2	Adjusted R^2	Std. Error	F	p
0.512	0.262	0.26	0.487	134.15	< .001

Predictor	B	Std. Error	Beta (β)	t	p	95% CI
(Constant)	1.845	0.214		8.62	< .001	[1.424, 2.266]
Supportive Norms	0.485	0.042	0.512	11.58	< .001	[0.403, 0.567]

Simple Linear Regression: Innovative Culture

A second simple linear regression was conducted to determine whether innovative culture significantly predicts Agripreneurial Intention. The regression model was also statistically significant, $F(1, 378) = 111.02$, $p < .001$. Innovative culture explained 22.7% of the variance in Agripreneurial Intention ($R^2 = 0.227$; adjusted $R^2 = 0.225$).

The unstandardised coefficient ($B = 0.453$, $SE = 0.043$) and standardised coefficient ($Beta = 0.476$, $p < .001$) confirm a moderate positive effect.

Table 8: Simple Regression Analysis - Innovative Culture as Predictor of Agripreneurial Intention

Model Summary					
R	R ²	Adjusted R ²	Std. Error	F	p
0.476	0.227	0.225	0.498	111.02	< .001

Predictor	B	Std. Error	Beta (β)	t	p	95% CI
(Constant)	1.967	0.228		8.63	< .001	[1.519, 2.415]
Innovative Culture	0.453	0.043	0.476	10.54	< .001	[0.369, 0.537]

Multiple Regression Analysis: Combined Model

A multiple regression analysis was conducted with supportive norms and innovative culture entered simultaneously as predictors of Agripreneurial Intention. The overall model was highly significant, $F(2, 377) = 156.78$, $p < .001$, with an R^2 of 0.460 (adjusted $R^2 = 0.457$). This indicates that the two dimensions together explain 46.0% of the variance in Agripreneurial Intention. The Variance Inflation Factor (VIF) values were 2.10 for both predictors, well below the threshold of 10, indicating no concern of multicollinearity.

In the combined model, both predictors remained statistically significant: supportive norms ($Beta = 0.334$, $p < .001$) and innovative culture ($Beta = 0.310$, $p < .001$). The slightly larger Beta coefficient for supportive norms suggests this dimension has a marginally stronger influence when both are considered simultaneously.

Table 9: Multiple Regression Analysis – Combined Model

Model Summary					
R	R ²	Adjusted R ²	Std. Error	F	p
0.678	0.46	0.457	0.416	156.78	< .001

Predictor	B	Std. Error	Beta (β)	t	p	VIF
(Constant)	1.234	0.185		6.67	< .001	
Supportive Norms	0.317	0.048	0.334	6.6	< .001	2.1
Innovative Culture	0.294	0.047	0.31	6.25	< .001	2.1

The regression results provide strong statistical evidence for the predictive influence of both institutional support dimensions on Agripreneurial Intention. The combined R^2 of 0.46 indicates that institutional support is a substantial determinant, explaining nearly half of the variance in students' intentions. Supportive norms demonstrated a slightly stronger effect ($Beta = 0.334$) compared to innovative culture ($Beta = 0.310$) in the multiple regression model, suggesting that tangible support mechanisms (mentorship, resources, encouragement) may be more immediately impactful than cultural values, particularly in resource-constrained contexts.

DISCUSSION OF FINDINGS

The finding that supportive norms have a high influence (grand mean = 3.94) is consistent with the work of Saeed et al. (2018) and Tijani (2017), who found that perceived educational support and supportive norms significantly predicted entrepreneurial self-efficacy and intention. In the present study, the highest-rated item was faculty mentorship (mean = 4.12). This aligns with Social Learning Theory: students learn entrepreneurial behaviours by observing and interacting with mentors who provide guidance, feedback, and encouragement. Mentorship is particularly important in agripreneurship because the sector involves practical, location-specific knowledge that is not easily captured in textbooks. The regression analysis further confirmed this relationship, with supportive norms explaining 26.2% of the variance ($R^2 = 0.262$) in Agripreneurial Intention. This represents a moderate-to-large effect size, exceeding the typical benchmarks for social science research (Cohen, 1988), and underscores the practical significance of institutional support in shaping students' career aspirations.

The relatively low score for financial support (mean = 3.75) is a concerning finding. It suggests that colleges are not providing adequate seed funding, grants, or access to microcredit for student agripreneurial projects. This gap has been noted in other studies (e.g., Adegbite et al., 2021; Anoke et al., 2021). Without financial support, even highly motivated students may be unable to translate their ideas into ventures, especially in a region where poverty rates are high and family resources are limited. The low score for incubation services (mean = 3.80) indicates that most colleges lack dedicated spaces where students can test and develop their agribusiness ideas. Incubation centres provide not only physical space but also mentorship, networking, and sometimes seed funding. Their absence is a significant missed opportunity. The non-significant difference between federal and state colleges ($p = 0.358$) suggests that the lack of adequate supportive norms is not a function of institutional ownership. Both federal and state colleges face similar constraints: limited budgets, competing priorities, and a lack of specialised staff for agripreneurship support. This finding implies that solutions should be system-wide rather than targeting only one type of institution.

The grand mean of 3.87 confirms that innovative culture also plays a significant role in shaping Agripreneurial Intention. The highest-rated item was exposure to innovative agricultural technologies (mean = 4.05). This is a very positive finding: it indicates that colleges are making efforts to expose students to modern farming technologies, such as improved seeds, irrigation systems, processing equipment, and digital tools. This exposure can demystify technology and reduce perceived risk, encouraging students to adopt innovations in their own ventures. Studies have shown that technology exposure significantly increases entrepreneurial self-efficacy (Bandura, 1997). The finding that technology exposure was the highest-rated item in innovative culture ($M = 4.05$) is particularly significant given the region's context. In North-East Nigeria, where insurgency has disrupted agricultural extension services and technology demonstration centres, colleges of education may have become the primary source of exposure to modern agricultural technologies for many students. This positions these institutions as critical intermediaries for agricultural modernisation and recovery.

The relatively low scores for active student organisations (mean = 3.78) and regular events (mean = 3.80) suggest that the student-led entrepreneurial ecosystem is underdeveloped. Student organisations (e.g., Agripreneurs Club, Enactus) can provide peer support, organise workshops, and facilitate networking. Their weakness may be due to a lack of faculty advisors, limited funding for activities, or low student interest. This finding echoes Tijani's (2017) result that innovative culture did not significantly affect personal values in private universities; however, in the present study, the overall mean for innovative culture was still above 3.00, indicating a positive influence, albeit with room for improvement.

The non-significant gender difference ($p = 0.632$) is encouraging. It suggests that the college's innovative culture is inclusive and does not favour male students over females. This is important because in many traditional societies, women are often excluded from agricultural technology training and entrepreneurship opportunities. The finding implies that colleges of education in North-East Nigeria may be acting as equalising institutions, at least in terms of exposure to innovative culture.

The findings of this study are broadly consistent with the literature. Saeed et al. (2018) found that perceived educational support had the highest influence on self-efficacy, which aligns with the present study's high rating for faculty mentorship. Tijani (2017) found that supportive norms significantly affected attitudes, but innovative

culture did not. The present study found that both dimensions had a significant influence (as indicated by means above 3.00), but the mean for supportive norms (3.94) was slightly higher than for innovative culture (3.87). This suggests that while both are important, tangible support (mentorship, encouragement, resources) may be more immediately impactful than cultural values. The low scores for financial support and incubation are consistent with the findings of Adegbite et al. (2021) and Anoke et al. (2021), who identified funding as a major barrier to youth agripreneurship. This appears to be a systemic issue across Nigerian higher education institutions, not limited to the North-East.

The non-significant differences across federal and state colleges (H_{01} & H_{03} , $p > 0.05$) suggest that the inadequacies in institutional support are systemic rather than ownership-dependent. Both types of institutions face similar fiscal constraints and policy implementation challenges, implying that interventions should be system-wide rather than targeted solely at one category. Similarly, the non-significant gender differences (H_{02} & H_{04} , $p > 0.05$) are encouraging, indicating that the influence of institutional culture and support structures is equitable. This contrasts with traditional societal norms that often marginalize women in agriculture, suggesting that colleges of education in the North-East may be functioning as equalising platforms, at least in shaping entrepreneurial aspirations.

CONCLUSION

The study demonstrated that institutional support, in the form of supportive norms for innovation and innovative culture, significantly predicted Agripreneurial Intention among agricultural education students in colleges of education in North-East Nigeria. Students perceived faculty mentorship ($M = 4.12$), technology exposure ($M = 4.05$), college encouragement ($M = 4.03$), and collaboration opportunities ($M = 3.96$) as particularly influential factors. The regression analysis showed that supportive norms ($R^2 = 0.262$, $\beta = 0.512$) and innovative culture ($R^2 = 0.227$, $\beta = 0.476$) were significant predictors of Agripreneurial Intention, with the combined model accounting for 46% of the variance in Agripreneurial Intention. However, financial support ($M = 3.75$), incubation services ($M = 3.80$), student organisations ($M = 3.78$), and regular events ($M = 3.80$) represented areas requiring improvement. The non-significant differences between federal and state colleges and between male and female students indicated that the identified challenges and opportunities were broadly shared across the region.

RECOMMENDATIONS

Based on the findings, the following recommendations are made:

1. Establish dedicated agribusiness incubation hubs. The finding that incubation services received a relatively low mean score ($M = 3.80$) indicates a significant gap in the college's support infrastructure. Colleges of education should establish agribusiness incubation centres that provide students with physical workspace, access to basic processing equipment, mentorship from successful agripreneurs, and networking opportunities with industry stakeholders. These centres should be supported by annual seed funding of ₦100,000--₦500,000 to enable students to pilot small-scale agribusiness projects.
2. Increase financial support for student agripreneurship. Financial support was the lowest-rated item ($M = 3.75$), suggesting that students perceive limited access to funding for their agribusiness ideas. Colleges should allocate dedicated budgets for student-led agripreneurship projects, establish partnerships with microfinance institutions and agricultural banks, and facilitate access to government youth empowerment programmes and agricultural loan schemes.
3. Strengthen industry--academia linkages. The findings demonstrate the value students place on mentorship ($M = 4.12$). Colleges should formalise mentorship programmes that connect students with practicing agripreneurs, agricultural extension officers, and industry professionals through field trips, internships, guest lectures, and mentor-mentee matching platforms.
4. Invest in modern agricultural technologies. Exposure to innovative technologies was the highest-rated item for innovative culture ($M = 4.05$). Colleges should therefore invest in demonstration farms, modern

processing equipment, digital agricultural tools, and partnerships with agricultural technology companies to provide students with hands-on experience with innovative technologies.

5. Revitalise student organisations and events. The relatively low scores for student organisations ($M = 3.78$) and regular events ($M = 3.80$) indicate underdeveloped student-led entrepreneurial ecosystems. Colleges should support the formation and sustainability of agripreneurship clubs such as Enactus and the Agripreneurs Club, allocate funding for club activities, and organise regular workshops, seminars, competitions, and field days on agripreneurship.
6. Adopt a system-wide approach to institutional support. The non-significant differences between federal and state colleges suggest that institutional support challenges are systemic rather than institution-specific. The National Commission for Colleges of Education (NCCE) and the Federal Ministry of Education should therefore develop national guidelines and standards for institutional support for agripreneurship, ensuring that all colleges, regardless of ownership, provide adequate mentorship, resources, technology exposure, and incubation services.
7. Implement monitoring and evaluation mechanisms. Colleges should establish systems to monitor the effectiveness of their agripreneurship support programmes, including tracking the number of student-led agribusiness ventures, graduate outcomes, and student satisfaction with institutional support. This evidence should inform continuous improvement of support services.
8. Engage students as co-creators of agripreneurship initiatives. Students should be empowered to take ownership of agripreneurship activities by forming and leading agripreneurship clubs, actively participating in competitions, seeking mentors among faculty and local agripreneurs, and utilising college resources such as land, equipment, and library facilities to test small-scale agribusiness projects while still in school.

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