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GENDER DIFFERENCES IN ENTREPRENEURIAL INTENTION AMONG POLYTECHNIC STUDENTS: EMPIRICAL STUDIES

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Abstract

This research investigates the variations in entrepreneurship intentions across genders among polytechnic students, and how family business history, artisan skills and Ajzen's theory of planned behavior affect such intentions. This study utilized a cross-sectional research method to collect data from 149 respondents from one polytechnic, and various statistical techniques such as descriptive statistics, EFA and t-tests were used to analyze the data. The results indicate that males have higher entrepreneurial intentions (M = 4.145) than females (M = 3.964), but this difference was not statistically significant at (t(147) = 1.922, p = 0.057) with Cohen's d value being .318. It was found that attitude (β = 0.437, p < 0.001), perceived behavioral control (β = 0.213, p = 0.008) and subjective norms (β = 0.198, p = 0.007) were significant predictors of entrepreneurship intention, with attitude being the strongest one. Gender, age, family business background and artisan skills were not significant predictors of entrepreneurial intention. The regression analysis revealed that the model accounted for 57.8% of the variance in entrepreneurial intention (Adjusted R^2 = .557). This was the state of the exploratory factor analysis that established a clear three-factor model while thematic analysis disclosed that entrepreneurship/self-employment aspiration emerged as a prominent motivation in addition to perceived lack of start-up capital as the main future challenge. The results indicate that entrepreneurial attitudes, perceived capability, and social support are more strongly associated with the intention of starting a company than demographic and background factors considered in the study. The paper provides context-specific results on entrepreneurial intention of polytechnic college students and emphasizes the importance of relevant entrepreneurship education which helps students develop their attitudes, capabilities, and supportive social environment. Future research should take into consideration different polytechnic colleges and educational contexts in order to determine how reliable the findings are in different institutions.

Keywords: *Entrepreneurial Intention; Gender Differences; Polytechnic Students; Theory of Planned Behavior; Entrepreneurship Education; Family Business Background; Artisan Skills.*

Introduction

A large number of researchers believe that entrepreneurship is an important tool for employment, innovation, income and economic development. Besides, entrepreneurship is taught in universities not only as a way of providing business knowledge, but also in terms of understanding the entrepreneurial mindset and competences, as well as skills of discovery and

exploitation of opportunities. Maheshwari *et al* (2023) conducted a systematic literature review and stated that students' entrepreneurial inclinations are affected by psychological, educational, social and contextual factors, which affect career aspirations of students and help them to get acquainted with the principles of entrepreneurship implementation.

Polytechnic institutions and vocational education have a special role in this regard, as their educational programs give the chance to get theoretical knowledge while gaining practical technical skills, thus allowing students to get necessary skills of running business and commercializing their knowledge. The studies show that entrepreneurship education is able to positively affect not only students' intention in this regard. For example, Bahaw *et al* (2024) affirm that vocational students acquire positive attitudes towards entrepreneurship through entrepreneurship education in the system of vocational education.

Even though these possibilities exist, there is no assurance that entrepreneurial intention is evenly distributed among students. Gender continues to be a vital area of investigation into entrepreneurship due to the fact that the influence of various expectations, beliefs and perceptions about abilities and resources, as well as stereotypes surrounding jobs, determines how males and females perceive their career as entrepreneurs. The results of several studies suggest gender inequalities in the area of entrepreneurial intentions in Nigeria.

For example, Olowookere and Asekun (2024) stated that male students, unlike their female counterparts, are more likely to have a higher entrepreneurial intention because of their perceptions related to various gender expectations. Also, research by Omotajo *et al* (2024) revealed that gender factors may shape different subgroups of students from Nigeria when they consider entrepreneurship as a career path. The findings strengthen the importance of gender as a problem to investigate in terms of the influence of entrepreneurship education on entrepreneurial same intentions among students of different genders.

Besides gender, the exposure to family businesses could serve as an important social and experiential basis for entrepreneurship. Learning how the family business works will give students early knowledge of entrepreneurship and help them with buying and serving customers, making entrepreneurial choices, and taking risks. Some researchers report that students, who have families that are involved in business, are more likely to be willing to become entrepreneurs as compared to those individuals who come from a family with no such experience (Georgescu & Herman, 2020). More recent evidence comes from Hungarian students that show that the family business background contributes to entrepreneurial intentions through entrepreneurial knowledge, experience, and skills acquired by students (Szabó & Aranyossy, 2024). Nevertheless, the effects of being involved in family business can vary depending on psychological mechanisms, such as self-efficacy, expected outcomes, and subjective norms (Zaman, 2024).

The impact of craftsmanship and artisanal skills proves to be no less significant in the context of polytechnic schools rather than traditional universities. While students of both types of institutions acquire knowledge and skills in different fields, polytechnic students go through

technical training and gain practical skills, which allows them to be self-employed or to run small businesses in the future. In Nigeria, vocational education has shown that when students possess vocational skills, themselves become more inclined to be self-employed, as well as to start their own businesses (Sylvster, 2024). Nevertheless, the fact of having the necessary technical skills does not automatically result in developing entrepreneurial intentions, since also additional factors such as individuals' confidence, positive attitude, social support, money and knowledge of how to commercialize skills need to be acquired.

One of the theories used to study these factors is Theory of Planned Behavior (TPB) of Ajzen. Based on the theory, intention to adopt any type of behavior relies on attitude towards behavior, subjective norm and perceived control over behavior (Ajzen, 1991). TPB is still relevant for learning about entrepreneurial intentions of students, which have been proven in many studies carried out as well (Maheshwari *et al*., 2023; Hernández & Bañuelos, 2023). It is noteworthy to mention, however, that recent studies in the field of vocational education have also shown the utility of TPB in the study of entrepreneurial intentions of technically oriented students (Carter-Rogers *et al*., 2025).

At present, entrepreneurship education is part of the tertiary and vocational education; there are still gaps in knowledge regarding the effects of gender, family business orientation and craftsmanship on entrepreneurial intentions of polytechnic students. The majority of the existing studies are conducted regarding university population, while not offering much information regarding polytechnic institutions and vocational education settings (Maheshwari *et al*., 2023; Hernández & Bañuelos, 2023).

Entrepreneurship seems to be particularly significant for the gap in Nigeria where polytechnic schools conduct both entrepreneurship courses and vocational technology courses. However, studies on gender characteristics in Nigeria exist (Olowookere & Asekun, 2024; Omotajo *et al*., 2024) but few studies have been directly linked to the intentions of entrepreneurship in the polytechnic school context. Similarly, while researchers have been able to connect family business background to entrepreneurial intentions in other settings (Georgescu & Herman, 2020; Szabó & Aranyossy, 2024), the research has yet to examine the effect that family business background has on entrepreneurial intentions of polytechnic students.

This study seeks to address the gaps presented above by investigating gender differences in entrepreneurial intention, the impact of family background and craft skills in craft entrepreneurship and the impact of Ajzen's Theory of Planned Behaviour with respect to attitude towards entrepreneurship, social norms and perceived control. The study thus contributes to the knowledge of entrepreneurial intention in the context of polytechnic education and offers significant implications on the practice of entrepreneurship education and support of entrepreneurs.

Literature and Empirical Review.

Entrepreneurial intention is an important determinant of entrepreneurial activity, as it is the will to establish a business (Krueger *et al*., 2000). In the student context, it is the educational background, individual characteristics and social contexts that influence the students' self-employment orientation. The psychological, educational, social and contextual aspect of entrepreneurial intention are gaining importance in more studies (Maheshwari *et al*., 2023). This is crucial in Nigeria, as the lack of numbers of formal jobs is attracting attention to entrepreneurship. The role of polytechnics is to equip the students with the requisite techniques and trade skills so that they are able to become self-employed and set up businesses. Ojewumi and Fagbenro (2019) studied the relationship between entrepreneurial intention, self-efficacy and social networking among the polytechnic students in Nigeria. Furthermore, the study by Ladokun and Ajayi (2024) revealed that education on entrepreneurship was one of the factors that significantly influenced entrepreneurial intention of Polytechnic Ibadan students while study of Odebode *et al* (2026) had shown that entrepreneurial intention and entrepreneurial capacity were the two most important outcomes among the polytechnic students in Southwest Nigeria. Based on the present results, the authors believe that besides entrepreneurship education, there are psychological, social and contextual factors that influence entrepreneurial intention; therefore, the following variables, namely gender, family business background and craftsmanship skills should be taken into account in the present study.

Theory of Planned Behavior and entrepreneurial intention.

Theory of Planned Behavior (TPB) has been the main theory used to examine entrepreneurial intention. Ajzen (1991) states that intention is based on attitude toward behavior, subjective norms and perceived behavioral control. Attitude is defined as an individual’s assessment of behaviour, subjective norms reflect perceived social approval and perceived behavioral control refers to the ability to carry out behavior. Rodríguez-Sánchez *et al* (2023).

It has been confirmed by research in vocational education. Using a two-wave longitudinal research design among students, Bahaw *et al* (2024) found that entrepreneurship education has a positive influence on entrepreneurial intention, attitude, subjective norms and perceived behavioral control of the students. The results are consistent with those of Huang *et al* (2024) with 1,197 students in higher vocational education. The authors found a positive relationship between both practical and theoretical aspects of entrepreneurship education, and the presence of creativity as a mediator and social environment as a moderator of some relationships. Thus, the information found in the literature fits with the findings provided in the present paper since regression results produced show a high predictive value of attitude toward entrepreneurship, perceived behavioral control and subjective norms on entrepreneurial intention.

Gender and Entrepreneurial Intention

Gender continues to be a relevant factor in entrepreneurial intention research. There are variations in terms of social expectations, entrepreneurial self-efficacy and opportunities across

different genders. It is possible to identify that there are differences in self-efficacy and career intentions by gender, according to Wilson *et al*., (2007). Moreover, they have pointed out that gender gap in entrepreneurial self-efficacy could be closed by means of entrepreneurship education. However, after doing their study, Haus *et al* (2013) were led to believe that gender differences would depend on such factors as attitude, subjective norms and perceived behavioral control rather than the gender. Likewise, the results of a meta-analysis conducted by Steinmetz *et al*., (2021) indicated that differences related to entrepreneurial intention by gender are smaller compared to what was found in the previous studies.

Evidence from Nigeria is also inconsistent. Olowookere and Asekun (2024) found that the level of entrepreneurial intention was higher among male university students, while the researchers from Business Perspectives (2023), using the sample of 12,485 Nigerian university students, concluded that there was no gender difference in the level of entrepreneurial intention, but education, relational support, risk-taking behavior, self-efficacy and attitudes influenced entrepreneur-related interests significantly. The research conducted among polytechnic students demonstrated a gap in entrepreneurial intentions, but this study reported higher mean values of entrepreneurial intentions among male students that were insignificant.

Family Business Background and Entrepreneurial Intention

Experiences from family businesses can influence entrepreneurship through observation, involvement and learning skills and knowledge. According to Carr and Sequeira (2007), prior family business experience could have both a direct effect on intention to entrepreneurship and through attitudes regarding business ownership, support from family members, and entrepreneurship self-efficacy.

The most recent studies have proven this relation. Georgescu and Herman (2020) studied 617 Romanian students and indicated positive correlation between family background in entrepreneurship and entrepreneurial aspirations. Gbar and Agbim (2023) showed an important relationship between family background and entrepreneurship abilities among entrepreneurs' students in Veritas University, Abuja. Godspower (2023) had research found that family business background and entrepreneurship education are good predictors among Nigerian university students.

However, it can also have an indirect effect. According to Szabó and Aranyossy (2024), a family business background has an impact on entrepreneurial intention via such channels as human capital, knowledge, skills and experiences involved in the business environment, while Zaman (2024) pointed out that the same factors are related to self-efficacy, subjective norms and expectation of outcomes. Additionally, a study carried out in France and Pakistan also indicated a direct impact of family business background with some differences being mentioned (2025). At the same time, in the current regression analysis family business background was not a determining factor, which indicates an insignificant effect of family business background overall though some evidence might point to its direct correlation.

Artisan and Craftsmanship Skills and Entrepreneurial Career Choice

In the case of polytechnics skills used in artisanal and crafty activities are very essential as technical skills can be the fundamentals for self-employment. Possession of the skills, however, does not imply that the students are entrepreneurially intent, as they may have financial, confidence and business management constraints.

There are several vocational studies which validate the importance of possessing practical entrepreneurial competences. At the other extreme, Mack *et al* (2024) emphasised that entrepreneurial competence is important to vocational education. On the other hand, Bahaw *et al* (2024) discovered that entrepreneurship education has a positive impact on the university students' entrepreneurial intention. Huang *et al* (2024) have also confirmed that practical education in entrepreneurship positively impacts entrepreneurial intention of higher vocational students.

The research of Ojewumi and Fagbenro (2019), and Ladokun and Ajayi (2024) in Nigeria have revealed that factors such as self-efficacy, social networks, and entrepreneurship education have been shown to have significant impact on the entrepreneurial intention of polytechnic students. Despite all this, entrepreneurial competence can be an entrepreneurial resource that is not accompanied by entrepreneurial intention. In congruence with the present study finding that after controlling other factors, artisan/craftsmanship skills were found not to be a good predictor of entrepreneurial intention, the artisans/craftsmanship skills were not significantly related to entrepreneurial intention.

Business Education and Social Norms and Entrepreneurial Development

One of the significant areas that can develop knowledge, skills and attitudes about entrepreneurship is education in entrepreneurship and the efficiency of this education depends on the type of education programme and the method of teaching entrepreneurship. But Nabi *et al* (2017) illustrated that self-awareness and attitude towards entrepreneurship can be a result of entrepreneurship education; and Nabi *et al* (2018) explained that learning and inspiration could be an impact of entrepreneurship education on entrepreneurship.

In the case of Nigerian polytechnic system, Ladokun and Ajayi (2024) established a positive effect of entrepreneurship education on entrepreneurial inclination of students at Polytechnic Ibadan while Ademiluyi *et al* (2024) indicated that social capital is one of the critical factors for entrepreneurial readiness among students of public Polytechnic in South-West Nigeria. Moreover, Ladokun and Ajayi (2024) conducted a study which was aimed at establishing relationship between entrepreneurship and social factors. The results of these investigations confirm the theory of planned behavior with respect to the entrepreneurial intentions being based on attitudes and social influences. Thus, this study proves this current hypothesis.

Methodology

Research Design

The methodology of the investigation involved the cross-sectional form of a quantitative survey with regard to the intentions of polytechnic students to become entrepreneurs and their

gender differences, as well as the application of the Theory of Planned Behavior constructs, family background in family business, and craft skills. The methodology involved collecting data at one moment in time, without using experimental manipulation. The research sample consisted of 149 polytechnic students enrolled in entrepreneurship courses. The sample was chosen based on the convenience method, with the survey being voluntary. The collected data helped to learn about gender, age, course and family background concerning business skills and craftsmanship.

The survey was conducted just once using the questionnaire with the format of six sections regarding demographic characteristics, the entrepreneurial intention, attitude toward entrepreneurship, subjective norms, and perceived behavioral control, as well as open questions on entrepreneurship challenges. The Likert scale of five points was used in the study, where 1 means “strongly disagree” and 5 stands for “strongly agree.”

Data Analysis

The data were analyzed using IBM SPSS Statistics and included the following types of statistics: descriptive statistics, such as frequencies, percentages, means, and standard deviations. Cronbach's alpha was utilized to measure consistency, along with exploratory factor analysis (EFA) using principal axis factoring and oblimin rotation. Before performing the factor analysis, the KMO test and Bartlett's test of sphericity were used to check if the data met the requirements for factor analysis. The number of factors to retain was determined by the criteria of eigenvalues, scree plot, and interpretability of the factor solution.

An independent-samples t-test was conducted to determine if there are differences in entrepreneurial intention between genders while Cohen's d was used to measure the size of the effect. Also, multi-linear regression was employed to determine the contribution of individual variables such as attitude towards entrepreneurship, subjective norms, perceived behavioral control, gender, age, family business background, and artisan/craft skills to entrepreneurial intention. The level of significance was set at $p < .05$. The thematic analysis was carried out for the open-ended questions and major motivators for entrepreneurship and barriers were identified.

Ethical Considerations

It was voluntary for the participant to take part in the study, but the goals and the objectives of the research were explained. There was a guarantee of confidentiality and anonymity for the participants, so none of their personal information was collected. The authors used the data only for conducting the research.

Descriptive Analysis

In order to clarify the demographic and socio-economic context, characteristics of the respondents are presented in Table 1. The number of male respondents is 85 (57.0%) while females constitute 64 (43.0%). Therefore, the number of male students is a bit higher than female students. The average age is 19.94 ± 2.74 out of which 83 (55.7%) students belong to 15-20 age group and 66 (44.2%) students belong to 21-25 age group. Therefore, majority of students were young.

In total, 90 (60.4%) students were in the fields of Statistics while 42 (28.2%) studying Chemical Engineering and 17 (11.4%) are part of Civil Engineering. Most of the students were in ND2 programme (139; 93.3%). Major portion of the respondents had family business background (76; 51.0%) while remainder does not have family business experience (73; 49.0%). In similar way, majority of students can perform artisan or craftsmanship work (84; 56.4%) whereas some students cannot do such work (65; 43.6%).

Table 1: Socio-economic Profile of Polytechnic Students

Variables	Scale	N = 149	Perc. (100 %)
Gender	Male	85	57.0
	Female	64	43.0
Age (Mean 19.94 ± SD 2.74 years)	15 – 20 years	83	55.7
	21 – 25 years	66	44.2
Course of Study	Civil Engineering	17	11.4
	Chemical Engineering	42	28.2
	Statistics	90	60.4
Year of Study	ND1	1	0.7
	ND2	139	93.3
	HND1	9	6.0
Family Business Background	Yes	76	51.0
	No	73	49.0
Artisan Skill	Yes	84	56.4
	No	65	43.6

Source: Author's Computation (2026)

Reliability Test

Using the measurement framework as a point of basis, a reliability analysis was conducted. This analysis was aimed at determining the internal consistency of items that measure the four constructs that the study examined and the resulting reliability was found to be suitable for conducting factor analysis and inferential analysis. The findings indicated that the four constructs provided acceptable reliability with the Cronbach alpha coefficients varying between 0.713 and 0.771. The construct measuring Entrepreneurial Intentions for instance which was done using 6 items was reported as 0.713 which is an acceptable level of internal consistency. The next construct Attitude towards Entrepreneurship was reported with the value of 0.754and the coefficients for the third construct Subjective Norms which was done using three items was recorded as 0.747. The last construct which is Perceived Behavior Control recorded the highest measurement in terms of reliability with the coefficient of 0.771 which was derived using four measurements.

Table 2: Cronbach's Alpha Reliability Test Results

S/N	Variables	Number of Items	Cronbach's Alpha Value
1	Entrepreneurial Intention	6	0.713
2	Attitude Toward Entrepreneurship	4	0.754
3	Subjective Norms	3	0.747
4	Perceived Behavioral Control	4	0.771

Source: Author's Computation (2026)

Exploratory Factor Analysis

The results of the assessment of reliability/validity were processed through EFA in order to analyse the dependence of the 17 measuring items. The KMO index for sampling sufficiency was equal to 0.849, which indicates that the index is good, while Bartlett's test of sphericity was significant ($\chi^2 = 924.212$, df = 136, $p < 0.001$), thus providing good reasons for believing that the correlation matrix is suitable for factor analysis. During the analysis, there were revealed 3 factors with eigenvalue exceeding 1 in their value accounting for 53.779% of the variance in total. The scree plot confirmed the sharp decline of variance after the revealing of the third factor thus justifying the decision of introducing three factors.

The most significant amount of variance was in Factor 1 (34.342%), which consisted of 8 items related to entrepreneurial attitudes and perceived entrepreneurial capability. Factor 2 (12.475%) consisted of three items representing social and normative influences. Factor 3 explained 6.962% of the variance, with majority of the factor being entrepreneurial intentions. The loading of the factors that were meaningful to the extracts varied from 0.376 to 0.929.

The reason for using three factors is that they are identified by the Eigen value criterion, scree plot and factors that made sense. A separate analysis was done with the application of the theory known as TPB, which includes four different factors (attitudes, subjective norms, perceived behavioral control and intention). However, a problem emerged while evaluating the fourth factor which had an eigenvalue of 0.960 and just one meaningful item, which led to complications during extraction. Therefore, the four-factor solution was not accepted.

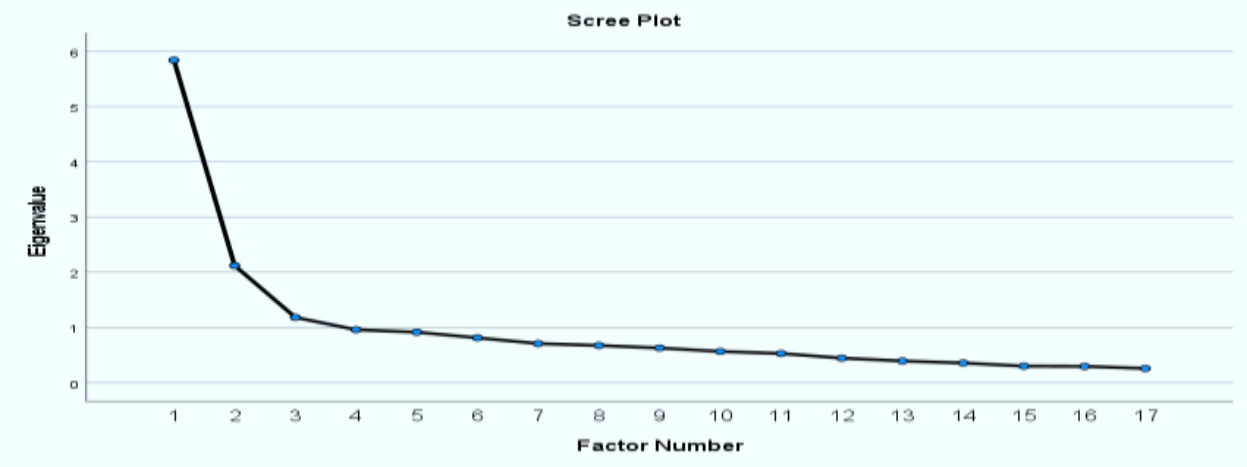
Table 3: Exploratory Factor Analysis of the 17 Measurement Items

Factor	Interpretation	No. of Items	Loading Range	Eigenvalue	Variance Explained (%)
Factor 1	Entrepreneurial Attitude & Perceived Capability	8	0.376–0.695	5.838	34.342
Factor 2	Subjective/Social Norms	3	0.543–0.929	2.121	12.475
Factor 3	Entrepreneurial Intention	6	0.395–0.880	1.183	6.962
Total	**Three-factor structure**	**17**	**0.376–0.929**	**9.142**	**53.779**

Model adequacy: KMO = **0.849**; Bartlett's χ^2 = **924.212**, df = **136**, p < **0.001**.
Extraction: Principal Axis Factoring; Rotation: Oblimin with Kaiser Normalization.
Source: Author's Computation (2026).

The use of the scree plot indicated again the necessity of using the three-factor solution. The results of the scree plot depicted a significant drop in the value of the eigenvalues starting with the first factor (5.838) and ending with the second factor (2.121), and subsequently with the third (1.183), with the curve flattening starting with the fourth factor and indicating only 0.960 for it. Taking into account that all other factors were less than 1, the six-factor solution proved to be the right one from the perspective of visual similarity after the fourth factor.

Figure 1: Scree Plot of the Exploratory Factor Analysis



Gender Differences

Subsequent to the exploratory factor analysis, the independent samples t-test was performed to determine the variance of the entrepreneurial intention among male and female polytechnic students. The outcome of the study indicated that male polytechnic students had greater mean entrepreneurial intention score (M=4.145, SD=0.508) in relation to female students who obtained the score of (M=3.964, SD=0.645). With the recorded mean difference in the results amounting to 0.182. The result of Levene's test was not statistically significant (F=0.255, p=0.614) and thus the assumption of equal variance was not proven to be violated. Since equal variance assumption was met, the obtained result of t-test was t(147)=1.922, p=0.057. Given that the p-value is higher than 0.05 significance level, it implies that the attained difference is not statistically significant.

A Cohen's d value of 0.318 denotes a small gender effect on entrepreneurial intentions. Although male student's score higher than female students on entrepreneurial intention, the findings are not enough to say that there is a notable gender difference regarding entrepreneurial intentions. Thus, the gender variable by itself does not seem to be able to explain entrepreneurial intentions of students, thereby making the analysis of other variables of interest important such as attitudes toward entrepreneurship, subjective norms, and perceived behavior.

Table 3: Independent Samples t-test Results (Male vs Female Entrepreneurial Intention)

Gender	N	Mean ± SD	t(df)	p-value	Mean Difference	Decision
Male	85	4.145 ± 0.508	1.922 (147)	0.057	0.182	Not Significant
Female	64	3.964 ± 0.645				

Levene's test, F = 0.255, p = .614; equal variance assumed.. Cohen's d = 0.318.

Regression Analysis

With the aim of identifying the extent to which the present variables could explain the variations in entrepreneurial intention, multiple linear regression was conducted on the observed gender differences and the previous factor analysis. The results showed that the regression model is statistically significant [$F(7, 139) = 27.253$, $p < 0.001$] indicating that the predictors in total significantly explained the entrepreneurial intention. The seven predictors accounted for 57.8% of the variation in entrepreneurial intention, with the adjusted model accounting for 55.7% of the variation in entrepreneurial intention ($R = 0.761$ and $R^2 = 0.578$). The rest (42.2%) was due to the factors not included in the model and the random variation.

In terms of individual predictors, attitude toward entrepreneurship proved to be the strongest significant predictor ($\beta = 0.437$; $B = 0.381$; $p < 0.001$). This was followed by perceived behavioral control ($\beta = 0.213$, $B = 0.181$, $p = 0.008$) and subjective norms ($\beta = 0.198$, $B = 0.154$, $p = 0.007$). Therefore, when controlling for the other variables, a higher entrepreneurial attitude, perceived entrepreneurial capability and perceived social support were each found to be positively associated with entrepreneurial intention.

In contrast, gender ($\beta = -0.082$, $p = 0.148$), age ($\beta = -0.039$, $p = 0.490$), family business background ($\beta = -0.038$, $p = 0.530$), and artisan/craftsmanship skills ($\beta = -0.061$, $p = 0.285$) did not make statistically significant independent contributions to entrepreneurial intention. The negative coefficients are therefore meaningless since none of them were significant at the 5% level. On average, the psychological and social factors of the model were more powerful predictors of entrepreneurial intention than were the demographic and background factors included in the regression.

The Durbin-Watson statistic of 1.776 was not obviously outside of the range of 1.9 to 2 suggested by Cassel and Saraiya, so there was no immediate cause for concern about the presence of residual autocorrelation problems. The remaining statistics also indicated a close to zero mean residual (as would be expected with ordinary least-squares regression). The standardized residual was between −3.255 and 2.970, however, and at least one of the observations should be investigated to determine if it is an outlier. This does not dismiss the model per se, but should be noted if diagnostics on regression are given.

Table 5: Determinants of Entrepreneurial Intention among Polytechnic Students

Predictor/Statistic	B	β	t	p
Constant	1.827	—	3.389	0.001
Attitude toward Entrepreneurship	0.381	0.437	5.544	<0.001
Subjective Norms	0.154	0.198	2.714	0.007
Perceived Behavioral Control	0.181	0.213	2.679	0.008
Gender	−0.095	−0.082	−1.455	0.148
Age	−0.015	−0.039	−0.692	0.490
Family Business Background	−0.044	−0.038	−0.630	0.530
Artisan/Craftsmanship Skills	−0.071	−0.061	−1.074	0.285
R^2	0.578			
Adjusted R^2	0.557			
F(7,139)	27.253			<.001
Durbin–Watson	1.776			

Source: Author's Computation (2026)

a. Dependent Variable: *Entrepreneurial Intention*

b. Predictors: *(Constant), Gender, Perceived Behavioral Control, Artisan Skills, Family Business Background, Subjective Norms and Attitude towards Entrepreneurship*

Drivers of Entrepreneurial Motivation and Perceived Barriers to Entrepreneurial Entry

The qualitative responses were analyzed using a thematic approach, as a strategy to substantiate the findings of the quantitative analysis on entrepreneurial intentions, in order to seek the major motives that stimulate entrepreneurship interest of students. Table 6 shows the findings to be entrepreneurship and aspiration to become self-employed as the dominant category with 64.4% of all the responses. Such phrases as "to be an entrepreneur", "to be self-employed", or "to be a businessman" reveal that students feel that entrepreneurship is associated with the interest in the self-employed activity.

Another significant motivator is the financial independence and income generation factor (10.1%), which suggests that students regard the independence from other sources of income as a potential motivator. Moreover, the business sustainability and future living (7.4%) indicate that some students understand entrepreneurship as a way to make a sustainable living. The most recent topics that appeared are those of skills, creativity and professional development (5.4%), which indicate some connection between skills, the process of becoming an entrepreneur and the influence of the lecturer on his/her students (3.4%), as it turned out that polytechnic education can increase students' interest in entrepreneurship.

The other motivational aspects included independence, autonomy and achievement in life (3.4%), whereas unemployment and poverty (2.7%) suggest that some respondents viewed entrepreneurship as a means of solving employment and economic problems. These qualitative findings support the results of the regression analysis carried out, especially regarding the role of entrepreneurial attitude, subjective norms and perceived behavioral control.

Table 6: Thematic Analysis of Motivations for Considering Entrepreneurship

Motivations for Considering Entrepreneurship	Frequency 149	Percentage 100(%)
Entrepreneurship/self-employment aspiration	96	64.4
Financial independence and income generation	15	10.1
Business sustainability and long-term livelihood	11	7.4
Skills, creativity and professional development	8	5.4
Lecturer/educational influence	5	3.4
Independence, self-reliance and personal achievement	5	3.4
Unemployment and poverty concerns	4	2.7
Other/unclear responses	5	3.4
Table 7: Thematic Analysis of Anticipated Challenges to Starting a Business		
Lack of start-up capital/limited funding	125	83.9
Limited access to resources/tools	4	2.7
Competition and market access	5	3.4
Business management and risk	4	2.7
Professional transition/experience	3	2.0
Personal/family/environmental constraints	2	1.3
Other/unclear responses	6	4.0

Source: Author's Computation (2026)

After analysing the entrepreneurial motivations of the students, the responses given by the students were scrutinized to find out the key obstacles they expect to face in starting a business. As per the information provided in Table 7, it is very clear that most of the responses were related to start-up capital and fund shortages, as mentioned by 83.9% of respondents. Words like money, funds, capital, and unavailability of capital indicate that the biggest hindrance in terms of starting a business is financing.

All the other obstacles are less highlighted. Competition and market accessibility (3.4%) show the worry that students have concerning clients, competition, and saturated markets, while accessibility to resources and tools (2.7%) concerns the unavailability of materials necessary for business functioning. Business management and risks (2.7%) include the issues of running a business, dealing with risks, and overcoming possible failures. Professional transition and experience (2.0%) suggest learning difficulties of students in terms of practical application of their theoretical knowledge in the establishment of a business, while constraints connected with personal situation, family, and environment (1.3%) come in smaller numbers.

Discussion of Findings

Summary of Key Findings

The research investigated gender differences between entrepreneurial intentions among polytechnic students and also explored the influence of family business background, artisan/craftsmanship skills and the three components of Ajzen's Theory of Planned Behavior (TPB). The results demonstrate that the entrepreneurial intention of male students (M = 4.145, SD = 0.508) is higher than the entrepreneurial intention of female students (M = 3.964, SD = 0.645). The difference was not statistically significant, however, $t(147) = 1.922$, $p = .057$ with a small

effect size (Cohen's d = 0.318). It then follows that there is a slight difference in the male students' entrepreneurial intention but not statistically significant from the female students sampled from the polytechnic when the results of both groups were compared. The finding from this study is quite distinct from the one that was published by Olowookere and Asekun (2024) which was done among Nigerian undergraduates. Thus, it can be concluded that there may be some differences regarding the gender pattern of entrepreneurial intention seen in different educational settings.

The regression results also indicate that the psychological elements of the Theory of Planned Behavior played an important role compared to the socio-demographic and economic factors that were selected for this study. In particular, attitude towards entrepreneurship ($\beta = 0.437$, $p < .001$), perceived behavioral control ($\beta = 0.213$, $p = .008$) and subjective norms ($\beta = 0.198$, $p = .007$) were found to be the most important predictors of entrepreneurial intention. The proposed model was found to explain 57.8% of the variance in the dependent variable ($R^2 = .578$; Adjusted $R^2 = .557$), and the overall regression equation showed significant results ($F(7,139) = 27.253$, $p < .001$).

However, gender ($\beta = -0.082$, $p = .148$), age ($\beta = -0.039$, $p = .490$), family business background ($\beta = -0.038$, $p = .530$) and craft skills ($\beta = -0.061$, $p = .285$) were not seen as significant predictors of entrepreneurial intention within the context of the multivariate analysis. The relationship between descriptive gender pattern and regression coefficient that was not significant is significant. It suggests that, although male students had a higher mean entrepreneurial-intention score, gender was not found to be statistically significant after attitude, subjective norms, perceived behavioral control and the other characteristics were taken into account together.

The analysis of the measurement also showed evidence that the study instrument is adequate. Cronbach's alphas for the four constructs measured were acceptable, ranging from 0.713 to 0.771. The KMO was .849 and the Bartlett's test of sphericity was significant, $\chi^2(136) = 924.212$, $p < .001$, from exploratory factor analysis (Principal Axis Factoring with Oblimin rotation). The three factors accounted for 53.779% of the total variance, where the factors are entrepreneurial attitude and perceived capability, subjective/social norms, and entrepreneurial intention.

Comparison with Existing Literature

According to the findings, the level of entrepreneurial attitude is the strongest predictor of entrepreneurial intention, which is one of the main assumptions of the Theory of Planned Behavior (TPB), meaning that if people have a positive attitude towards entrepreneurship, it will positively affect their intentions to pursue entrepreneurship. The standardized coefficient (β) was the highest for attitude ($\beta = .437$, $p < .001$) which is consistent with the findings of Al-Jubari (2019) and Zhang *et al* (2021) which found that attitude is indeed one of the significant factors that affect entrepreneurial intention among students. The findings show that the attitude of the students towards entrepreneurship is a significant factor in their decision to pursue entrepreneurship as a profession.

Perceived behavioral control also was noteworthy predictor (β = .213, p = .008), indicating that the self-efficacy and perceived control of the students in engaging in entrepreneurial activities are associated with a higher entrepreneurial intention. The outcomes of this are consistent with the outcomes for the study conducted by Al-Jubari (2019) and Zhang *et al* (2021) that were based on the TPB model. The importance of the social influences (family, friends, lecturers) was additionally supported by the significant positive relationship between the entrepreneurial intention and subjective norms (β = .198, p = .007). However, the smaller coefficients of PBC and subjective norms compared to attitude indicate that the personal appraisal of entrepreneurship was more likely to be associated with entrepreneurial intention in the present sample.

The findings revealed that male students exhibited greater entrepreneurial intentions (M = 4.145) than female students (M = 3.964); however, the results did not show significance statistically, t(147) = 1.922, p = .057, while the effect size was very small (Cohen's d = .318). This is inconsistent with the results reported by Olowookere and Asekun (2024), which showed that gender had significant influence on entrepreneurial intentions among Nigerian students. The analysis indicated that no gender effects were found when processing the data of male and female students separately (β = − .082, p = .148). Thus, the findings demonstrate that weak differences exist in terms of gender when it comes to entrepreneurial intentions. However, there is no evidence that gender played an important role in determining the entrepreneurial intentions of polytechnic students.

On the other hand, in relation to the family business experience the study found no significant relationship either (β = −.038, p = .530) unlike the studies conducted by Georgescu and Herman (2020) and others who found that students with entrepreneurial experience in their families tend to have greater chances of becoming entrepreneurs. The same can be said about artisan or craftsmanship skills, which also failed to exert a significant influence on students' entrepreneurial intentions (β = −.061, p = .285). These results indicate that family exposure and/or practical skills are not enough to account for entrepreneurial intention if psychological factors (attitude, perceived behavioral control, and subjective norms) are taken into account at the same time.

In general, the results are more consistent to the psychological variables of TPB, than the background variables and demographic factors that were selected. The results of the regression analysis showed that attitude and perceived behavioral control and subjective norms were important determinants of the variance in entrepreneurial intention (Adjusted R^2 = .557, R^2 = .578). This result therefore validates the importance of TPB factors in the context of polytechnics, and indicates the existence of no independent contribution of gender, age, family business background and artisan/craftsmanship in the proposed model.

Practical Implications

These findings have significance in the research of polytechnic finance entrepreneurship education. Institutions are encouraged to take appropriate steps to foster positive attitude towards

entrepreneurship opportunities by creating conducive environment for starting up a business, visiting entrepreneurs, engaging in business simulations, competitions, and mentoring. Some points should be emphasised here: entrepreneurship education should not stop at completion of the course, but should make students realize it is a viable and viable career.

Thus, the impact of perceived behavioral control equal to $\beta = .213$, $p = .008$ and subjective norms equal to $\beta = .198$, $p = .007$ is also important, which is the reason why it is necessary to teach confidence to students and create a positive environment for students. Mentoring and lecturing can add to the social context of students, and education can involve business areas such as business planning, finance management, market research, digital marketing and risk management.

The gender results indicate that an integrated approach to the support of entrepreneurship is needed instead of a gender-specific approach. Male students had a higher mean entrepreneurial-intention score than female students, but this difference was not found to be statistically significant ($t(147) = 1.922$, $p = .057$) and gender was not a significant independent predictor in the regression model ($\beta = -.082$, $p = .148$). Therefore, institutions are encouraged to ensure that mentorship, incubation, entrepreneurial networks, competitions and other interventions are available to students irrespective of gender, not developed based on a statistically proven difference in gender.

Lastly, the non-significant result of artisan/craftsmanship skills ($\beta = -.061$, $p = .285$) indicates that the technical skills per se might not be enough to produce entrepreneurial intention. Training in market identification, pricing, branding, customer development and financial management and business planning could then be utilized to support polytechnic skills acquisition and help students to see how technical skills can be utilized for business opportunities.

Limitations of the Study

There are some limitations of the study. First, due to the cross-sectional type of design, causal relationships between the explanatory variables and entrepreneurial intention cannot be drawn. Students might revise their goals as they progress to higher education and/or have entered the workforce or faced new economic circumstances. Secondly, the study has limited respondents in a specific polytechnic context, with respondents focused on certain academic programs and levels. This restricts the extent of generalization of the findings to other disciplines or other tertiary institutions in Nigeria and especially other polytechnics.

Thirdly, it was a self-reported questionnaire, meaning that there is a possibility that some of the respondents' answers may have been affected by their perceptions or social desirability. Moreover, the reliability coefficients were satisfactory ($\alpha = .713–.771$) but the EFA did not yield the separate four-factor structure as is hypothesized in the TPB model, as some items related to the TPB form one factor. The three-factor solution accounted for 53.779% of the variance. This means that there is a strong interpretation of the measurement structure but it needs to be further explored and developed in future research. Lastly, the study focused on entrepreneurial intention instead of entrepreneurial behavior. Thus, the results of this study cannot confirm the relationships

between factors and students' intentions and whether the intentions will lead to business creation or to ongoing entrepreneurial activity.

Future Research Directions

Further research is recommended to include longitudinal designs to explore the effect of entrepreneurial intentions with regards to the actual initiation of enterprise among the polytechnic students after graduation. This study would yield more solid evidence of the link between entrepreneurial intention and entrepreneurial action. Further research should also use larger and multi-institutional sample that will include various polytechnics, regions and academic disciplines in Nigeria. Comparative studies would be able to determine if the observed relationships are unique to the institution sampled in the present study or representative of the general pattern of Nigerian tertiary students.

Family business background and artisan/craftsmanship skills did not have a significant effect, so future study should explore whether they have an indirect effect via entrepreneurial knowledge, self-efficacy, access to finance, mentorship or entrepreneurship education. These studies could help to shed light on why background and practical skills were not directly related to entrepreneurial intention in the current model.

Future studies should also further examine gender differences using appropriate group-comparison approaches, particularly with larger and more diverse samples. The present study didn't find a statistically significant gender difference and further studies can examine gender as a moderator in the relationships between attitude, subjective norms, perceived behavioral control and entrepreneurial intention instead of assuming this relationship.

Conclusion

The results show that the attitude towards entrepreneurship, perceived behavioral control and subject norms are significant motivational factors in the determination of entrepreneurial intention among the respondents, polytechnic students. Male students indicated significantly higher entrepreneurial intention than female students but gender did not account for entrepreneurial intention when other explanatory variables were held constant. In the same way, there were no significant direct effects of family business background and artisan skills.

The results indicate that attitudes towards entrepreneurship, self-efficacy and social support received might be more important to students than demographic or experiential characteristics. The outcomes thus confirm the applicability of TPB in a polytechnic setting and the need for entrepreneurship education that integrates positive entrepreneurial attitude, competence and mentorship and access to resources.

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