SELF-RELIANCE AND ENTREPRENEURIAL INTENTION OF 3MTT TRAINEES IN SELECTED SOUTHWEST REGION STATES IN NIGERIA

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Abstract

As in modern economies, particularly in developing countries like Nigeria, entrepreneurship is critical in reducing unemployment, alleviating poverty, and encouraging self-reliance. This research examines the link between risk-taking ability, problem-solving skills, and the entrepreneurial intentions of the 3MTT trainees in Lagos, Oyo, and Ogun states, Nigeria. Surveys were used to collect quantitative data through structured questionnaires. The total population was 4,410, while a sample size of 367 trainees was used in these regions through the Taro Yamane formula. Data analysis and the study of the predictive power of risk-taking ability and problem-solving skills on entrepreneurial intentions were conducted using descriptive and inferential statistics. The results showed that risk-taking ability and problem-solving skills are significant factors influencing entrepreneurial intention, with the latter being more influential than the former. This result emphasises the need to cultivate these skills in entrepreneurial learning and training programmes to promote entrepreneurial activities. The study concluded that teaching risk-taking and problem-solving skills to trainees could potentially enhance their entrepreneurial intentions. Thus, implications for policymakers, educators, and trainers in the region are greatly important. Recommendations include incorporating targeted training programmes designed to develop these skills in preparation to support the entrepreneurial goals of the trainees.

Keywords: Self-Reliance, Risk-Taking Ability, Problem-Solving Skills, Entrepreneurial Intentions.

Introduction

Enterprise is a linchpin in economic growth, innovation, and job creation. It enables people to convert ideas into commercial ventures, promote socio-economic improvement, and minimise unemployment. In modern economies, especially in developing nations like Nigeria, it is through entrepreneurship that rising unemployment is tackled and poverty alleviated, fostering self-reliance. In this regard, the study of factors influencing young Nigerians with entrepreneurial intent- especially those in vocational and technical training, such as the 3 million technical talent (3MTT) initiative cannot be overemphasized.

Entrepreneurial intention is the desire, motivation or plan to start a new business. This intention is independent of entrepreneurial action and is affected by various psychological, social, and educational factors. Under the Theory of Planned Behaviour advanced by Ajzen (1991), the intention is the immediate antecedent of behaviour. Three primary constructs work to shape it: attitudes towards the behaviour, subjective norms and perceived behavioural control (self-efficacy). In entrepreneurship, these constructs come in the form of individual motivation, confidence, skills, risk perception and ability to solve problems and overcome challenges.

Self-reliance is the leading psychological factor for an entrepreneur's behaviour, as it is distinguished by independence, self-direction, and the ability to make decisions without consistent external help (Ezenwanne, 2022). Self-reliance tells people to believe in themselves, take calculated risks, and withstand business challenges. This work explores self-reliance in two significant ways. Risk-taking ability and problem-solving skills. These variables critically impact the entrepreneurial intention of 3MTT trainees – young people with technical and digital skills for Nigeria's vitalising innovation economy. Salami et al. (2023) state that self-efficacy is the belief in one's ability to arrange and perform actions required to control prospective situations, a sub-component of self-reliance. High self-efficacy people are more likely to form entrepreneurial intentions and venture into business activities since they believe in their capability to cope with challenges and accomplish desirable outcomes. This means that training people on self-reliance through specific training related to risk-taking and problem-solving may improve entrepreneurial results among trainees.

The recent initiatives by the Nigerian government and development agencies to form a digital workforce through the 3MTT programme will help curb youth unemployment and lead to job creation through digital skills, entrepreneurship, and innovation. However, mere acquisition of technical skills may not determine success in entrepreneurship without necessitating important personal traits, such as taking a risk, creativity, confidence, and independence. Against this background, the present study examines the association between the self-reliance (measured by way of risk-taking and problem-solving skills) and entrepreneurial intentionality among 3MTT trainees in Lagos State.

The growing emphasis on education in entrepreneurship and empowerment programmes for youth in Nigeria indicates the need to instil entrepreneurial spirit in young people. Entrepreneurship education provides learners with the

knowledge, skills, and motivation to develop their entrepreneurial capacities (Ogbuanya et al., 2021). This idea is supported by evidence worldwide. For example, training and communication have been identified as the leading mechanisms for encouraging entrepreneurial behaviour by the Global Entrepreneurship Monitor and Australia's National Youth Entrepreneurship Attitude Survey (Ács et al., 2017). Therefore, any programme aimed at enhancing youth entrepreneurship must consider the psychological, educational, and contextual factors that shape intention and action.

Furthermore, self-employment has increasingly become relevant in Nigeria's difficult economic environment. As the unemployment rate increases, graduates and vocational trainees must be imbued with technical skills and the zeal and attitude to start their businesses. As Constantine et al. (2024) explain, self-employment is associated with the generation of income by one's business activities, independently of one's employer. This job provides a means of exit from poverty, independence, and promotion of socio-economic development. However, the perceived intention to be self-employed is more often influenced by an individual's belief in confidence and readiness to deal with uncertainties, risks, and business threats. Poor perception of risks, lack-lustre social influence, or weak problem-solving power can crush entrepreneurial intentions (Al-Mamary & Alshallaqi, 2022). Contrarily, exposure to structured entrepreneurial education and strong mentorship can instil resilience, creativity, and opportunity identification among the trainees.

Moreover, it has been revealed that self-reliance and entrepreneurship are interrelated. The nature of entrepreneurship education should emulate actual scenarios to instil confidence and foster a job-creating mindset (Chukwurah & Atah, 2019). This strategy corresponds to the objective of the 3MTT initiative, which aims to create a generation of Nigerian youths who can use their technical skills to develop viable businesses. Entrepreneurial behaviour has also attracted global attention as an important factor affecting economic resilience and competitiveness. Scholars like Bogatyreva et al. (2022), Gikunda and Miriti (2025), and Ogbuanya et al. (2021) highlighted the aspect of intention in entrepreneurial action; they pointed out the role of motivation, preparation, and contextual support in this purpose. Malawu and Waghid (2024) shared that knowing the antecedents of an entrepreneurial intention is important for preparing interventions. Entrepreneurs constantly face market changes, operation reverses, resource constraints, and strategic quandaries in this dynamic and quick-moving business arena. Unless these problems are solved effectively, even the most promising enterprises may fail.

Despite the Nigerian government's earnest attempt to curb youth unemployment through setups such as the 3MTT programme, translating technical skill acquisition to entrepreneurship is daunting. Various trainees continue to favour white-collar employment or shy away from self-initiatives because of fear of failure, low self-confidence, and bad problem-solving skills. This compassionate gap indicates that the trainees of the 3MTT may experience the influence of skill learning and internal psychological elements, such as the ability to take risks and problem-solving skills—elements of self-reliance—into the entrepreneurial process. Nevertheless, a few empirical studies identify how such personal characteristics shape the entrepreneurial disposition of the beneficiaries of 3MTT in Lagos State.

Knowledge of the connection between self-reliance and entrepreneurial intention is important in formulating meaningful entrepreneurial learning, coaching, and enabling schemes. Without such knowledge, training programmes might not be able to deliver much in promoting innovation, self-employment, and nation-building. The policymakers will be awarded knowledge of how individual traits such as self-reliance impact entrepreneurship, allowing them to implement more targeted youth empowerment programmes. In contrast, training institutions such as 3MTT coordinators can reform curricula to accentuate risk-taking, decision-making, and problem-solving. The study is on 3MTT trainees in selected states Lagos, Ogun and Osun in the southwest region of Nigeria: trainees in Cohort One passed the training. It explicitly examines two aspects of self-reliance, including risk-taking ability and problem-solving skills, and their effect on entrepreneurship intention.

This study investigates the effects of self-reliance on the culmination of entrepreneurial intrusion among 3MTT trainees in Lagos State. The specific objectives are to:

i. investigate the influence of risk-taking ability on the entrepreneurial intention of 3MTT trainees.
ii. analyse the impact of problem-solving skills on entrepreneurial intention.

Research Questions

i. To what extent does risk-taking ability influence the entrepreneurial intention of 3MTT trainees?
ii. Do problem-solving skills impact the entrepreneurial intention of 3MTT trainees?

Literature Review

This section gives a broad review of relevant literature for the study. It examines theoretical and empirical bases that underpin the research, particularly highlighting key ideas such as self-reliance, entrepreneurial intention, risk-taking ability, and problem-solving skills. The review operationalises findings from previous studies in identifying gaps and relationships among variables and a general illustration framework of how constructs act upon each other.

Risk-Taking Ability

Risk-taking ability is an important entrepreneurial attribute that represents the cognitive, emotional, and behavioural aptitude for making choices and taking actions under uncertainty, loss, and unknown outcomes undertaken in search of chances for doing business. It is more than just willingness to take risks; it involves the calculated consideration of risk, the ability to cope with uncertainty, and the ability to react flexibly when outcomes differ from expected.

Li and Ahlstrom (2020) refer to their studies that risk-taking propensity is a relatively stable inclination to entertain uncertainty in decision-making, especially in an entrepreneurial context. This concept has become what could now be termed a risk-taking ability. This attribute encompasses a predisposition tendency and the skill set and mindset of assessing, embracing, and strategically navigating through risky circumstances intrinsic to the entrepreneurial process.

From a psychological and behavioural perspective, entrepreneurs are distinguished from non-entrepreneurs by their improved risk orientation. Mukherjee (2023) and Elston (2024) argue that those who embark on entrepreneurship have some distinct personality traits, whereby self-initiative and boldness are strongly pronounced. These people do not view risks as barriers but as channels towards innovation, competitiveness, and value creation. Thus, risk-taking ability reflects both an attitudinal position and a capability that affects how people respond to indeterminate entrepreneurial settings. Gikunda and Miriti (2025) opined that risk-taking ability demonstrates how an individual approaches situations that require bold decision-making with uncertain outcomes. It lies at the heart of entrepreneurial thinking, which involves venturing into the unknown, launching new enterprises, introducing innovative products, or entering new markets. Entrepreneurs must make

decisions based on incomplete information, necessitating strong judgment and a keen sense of risk-taking.

Gifford (2010) states that entrepreneurship is difficult without risk. Therefore, a fair risk-taking ability is required and beneficial. It enables resilience and persistence in the face of ventures' financial, market, or operational difficulties. Zhuang and Sun (2024) confirm that individuals with possible entrepreneurial competencies vary in their perception and reaction to risk. They are more optimistic regarding the outcomes, confident of their capacities, and are initiating the addressing of uncertainties. In addition, Asravor and Acheampong (2024) reveal that most entrepreneurs often practise moderate and calculated risk-taking instead of traditional risk-averse managers. Entrepreneurs take risks as they are concerned in terms of finances, reputation, social status, and even emotional well-being. According to Zekeri et al. (2024), several dimensions of the risk of entrepreneurship include, among others, personal and social ones, which are handled better by individuals with a high level of risk propensity. Risk-taking ability is highly correlated with entrepreneurial intention – the conscious state of mind that guides and prepares for entrepreneurial action (Gikunda & Miriti, 2025).

In summary, risk-taking ability goes beyond being a personality type—it is a multidimensional entrepreneurial capability that allows people to take action in unclear situations. It reflects the courage to innovate, the strength to withstand failures, and the shrewdness to scan opportunities against possible threats. Therefore, nurturing the opportunity to take risks in education, mentorship, and experience is essential in increasing the intention and development of emerging entrepreneurs, especially in developing economies.

Problem-Solving Skills

Problem-solving refers to an individual’s ability to recognise, analyse, and resolve issues or obstacles and use logic, creativity, and decision-making. In the entrepreneurial environment, this competence becomes indispensable because entrepreneurship involves uncertainty, change, and complex issues that require constant re-adjustment and creative response.

Strong problem-solving skills among entrepreneurs put them in a better position to convert problems into opportunities, converting adversity into a way forward for growth and innovation (Constantine et al., 2024). These people not only identify the presence of a task but also divide the problem into

its root causes, estimate the possible solutions and implement the most viable one in resource and time constraints.

Problem-solving skills aid in integrating many cognitive and behavioural aspects of functioning, such as critical thinking, emotional regulation, foresight, and resilience (Ezenwanne, 2022). These elements help entrepreneurs remain calm under pressure, reframe problems constructively, and act decisively. Such agility in thinking and action helps resolve crises and fosters an environment of innovation, where problem-solving becomes a constant activity of improvement and adaptation.

Kuratko et al. (2021) continue to add that the entrepreneurial mindset flourishes on hindrance. A successful entrepreneur who can find solutions for obstacles is likely to build a breakthrough in product differentiation, market disruption or efficiency in operation. Therefore, problem-solving is not a survival skill but a strategic catalyst for innovation and competitive advantage. Strategic decision-making relies explicitly upon the capacity to balance options, predict results, and select actions based on a business's long-term vision. Business development needs solutions for customer acquisition, product design, business scaling, and financial sustainability. Both domains require a high level of problem-solving ability that ensures that decision-making is not merely reactive but also future-oriented and progressive.

Ultimately, the ability to solve problems lies at the heart of entrepreneurial success. It demonstrates an entrepreneur's effectiveness in managing ambiguity, transforming obstacles into learning opportunities, and adding value to stakeholders. In an increasingly complex and competitive global marketplace, fostering such abilities is crucial for individual entrepreneurs and institutions that nurture entrepreneurial talent and promote economic development.

Entrepreneurial intention

The intention to be an entrepreneur can be considered motivation to start a commercial venture. It is an inclination that prepares individuals for conducting business. Zekeri et al. (2024) argue that entrepreneurial intentions are fueled by acknowledging one’s desire and aspiration to start a new business. Factors affecting this intention include personal characteristics such as self-efficacy, risk-taking, previous entrepreneurial experience, and external contextual factors like social and resource availability (Idowu & Zekeri, 2023).

Zemlyak et al. (2022) argue that entrepreneurial intention is not just a state of mind but also an impetus that pushes individuals towards actionable steps regarding starting a business. According to Ogbuanya et al. (2021), entrepreneurial intention is associated with the individual's desire to initiate a business. Such intention is an important predictor of future entrepreneurial behaviour based on the wish to establish a commercial enterprise (Gikunda. & Miriti, 2025).

Entrepreneurial intention is, therefore, a key factor in the entrepreneurial process. It acts as a motivating force that prompts people to take the necessary steps to start and run a business. Knowledge about entrepreneurial intention, its causes, and the factors responsible for its occurrence is essential for an in-depth understanding of how individuals prepare for and engage in entrepreneurial activities. Entrepreneurial intention also aids educators, policymakers, and aspiring entrepreneurs in establishing business opportunities by fostering the mindset and environment that can ensure successful business ventures.

Underpinning Theory

This research will utilise the Theory of Planned Behaviour (TPB). Among the most widely used models for predicting and explaining human behaviour is the Theory of Planned Behaviour (TPB) developed by Ajzen (1991). It asserts that the most immediate predictor of behaviour is an individual's intention to engage in that behaviour. However, three core constructs shape this intention. These constructs are attitude toward the behaviour, subjective norms, and perceived behavioural control. Attitude reflects the extent to which one evaluates the behaviour positively or negatively. Subjective norms refer to perceived social pressure from significant others to perform or not perform the behaviour. Perceived behavioural control relates to how the individual perceives the feasibility of performing the behaviour and is conceptually similar to self-efficacy.

This study applies the TPB framework to acquire knowledge of the entrepreneurial intentions of 3MTT trainees in Lagos State. In doing so, self-reliance is operationalised through risk-taking ability and problem-solving skills. These two variables are of great significance regarding the perceived behavioural control aspect of the TPB. The more self-reliant individuals are-measured by their confidence to take well-calculated risks and solve problems effectively- the more they will believe that they can launch and manage

entrepreneurial ventures effectively. Therefore, they tend to have stronger entrepreneurial intentions.

Risk-taking ability is another measure of an individual's confidence in dealing with uncertainty a key entrepreneurial characteristic. Trainees who believe they can manage risks are likelier to think they can start and sustain a business. This belief enhances their behavioural control, boosting their entrepreneurial intention. Problem-solving skills are crucial for identifying opportunities, addressing obstacles, and changing situations – vital skills in entrepreneurial contexts. Strong problem-solving trainees tend to have a greater perception of control over their entrepreneurial outcomes, reaffirming their sense of efficacy and thus increasing their likelihood of taking entrepreneurial action.

In this way, the TPB provides a robust explanatory framework for understanding how self-reliant traits such as risk-taking and problem-solving contribute to the larger mechanism that shapes entrepreneurial intention. This is particularly significant in the Nigerian context, where, despite United Nations policy stipulating that every American should have access to work at least 35 hours per week to earn a living, the reality is far from this ideal. Unemployment and underemployment rates remain high, and entrepreneurship is increasingly encouraged as a viable pathway to economic empowerment. Although the TPB has been applied in various studies related to consumer behaviour, health, education, and the environment, its application in decoding entrepreneurial behaviour- especially among vocational and technical trainees- remains relatively unexplored. This study integrates the TPB into this under-researched area by providing insight into how perceived behavioural control, manifested through self-reliant characteristics, influences entrepreneurial intention among 3MTT trainees in Lagos State.

Empirical Review

Salami et al. (2023) investigated the relationship between self-efficacy and the entrepreneurial aspirations of Nigerian university graduates in Ogun State. The study's specific goals were to determine how social influence and vicarious experience affected the inclination to start a business. Since the study was exploratory and employed cross-sectional analysis, a survey research design was utilized to gather population data. The population under investigation consisted of 71,173 university undergraduates from the three senatorial districts in Ogun State, Nigeria, during the 2019–2020 and 2020–2021 academic years. To gather data for the study, 398 questionnaires were

distributed to university students in Ogun State, Nigeria; of these, 318 were recovered and deemed suitable for analysis. Descriptive and inferential statistics were used as part of the data analysis techniques. The study's findings indicate that mutual persuasion (R = 0.279, R2 = 0.078, P < 0.05) and experience gained from others (R = 0.398, R2 = 0.158, P < 0.05) significantly and positively impacted the entrepreneurial goals of university students in Ogun State, Nigeria, as correlated with their level of self-efficacy.

Zhuang and Sun (2024) developed the idea based on institutional and human capital theories and explored the relationship between perceptions of the institutional environment, risk-taking tendencies, and start-up preparedness. A total of 580 respondents aged between 18 and 40 participated using an online assessment for data collection. The perceived regulatory and cognitive contexts influence risk-taking propensity, which in turn affects start-up readiness, according to SmartPLS software. Furthermore, risk-taking tendencies positively impact start-up preparedness, which is moderated by prior entrepreneurial experience. However, the study found no direct or moderating influence from entrepreneurial education. This research contributes theoretically to the fields of institutional theory, human capital theory, and entrepreneurial behaviour through the self-developed concept of "start-up readiness."

Ezenwanne (2022) found that students studying food and nutrition benefited from a problem-solving approach to developing their entrepreneurial abilities. The study's population included 21,658 Senior Secondary School II (SSII) students from 254 secondary schools drawn from the six educational zones of Anambra. A sample size of two hundred and forty (240) students was selected. The mean (x) and standard deviation were used for the ratings. The intra-class correlational technique ascertained the degree of inter-rater agreement. To test the null hypotheses, the current study utilized the analysis of covariance (ANCOVA), a general linear model combining regression and ANOVA, at the 0.05 level of significance. The results showed that secondary students taught using the problem-solving technique demonstrated greater development of their entrepreneurial skills in the food and nutrition domains compared to their peers who were educated through traditional lecture methods. In summary, the problem-solving method provides students studying food and nutrition with extensive learning opportunities through psychomotor domain tasks.

Constantine et al. (2024) examined the relationship between entrepreneurial self-efficacy, problem-solving abilities, and the quality of commercial decision-

making and intentional innovation. This quantitative study involved 195 students currently engaged in starting their businesses. Respondents were expected to have experience with issue resolution and making critical business decisions. SEM-PLS was used as the basis for data analysis. The study found that an entrepreneur's creativity could enhance their self-efficacy by preventing them from becoming proficient in problem-solving techniques. Conversely, entrepreneurial self-efficacy can improve problem-solving abilities, positively impacting the quality of company decision-making. Ogbuanya et al. (2021) investigated the correlation between self-efficacy and entrepreneurial goals among technical college electronics students in Southeast Nigeria. This correlational survey research included a sample of 33 female and 187 male RTVE students. Depending on how the instrument was created, the researchers employed three different instruments for their investigation: the Entrepreneurial Intention Questionnaire (EIQ), the Entrepreneurial Self-efficacy Scale (ESES), and the Self-efficacy Scale (SES). Multiple regressions were performed to test the hypotheses, while the data collected was examined to address the study objectives. A weakly positive correlation was shown between self-efficacy and entrepreneurial inclinations among technical college electronics students. Additionally, a moderately favourable correlation was found between these students' entrepreneurial goals and their levels of self-efficacy as entrepreneurs. Recommendations and instructional implications were drawn from these findings. Christensen et al. (2023) explored how entrepreneurial self-efficacy and intention arise from formal design instruction and adaptive cognition. It has been suggested that the cognitive processes underlying design and entrepreneurial thinking are comparable, making them relevant to commercial ventures. Conversely, the differences in formal schooling between design and business imply distinct forms of "entrepreneurial self-efficacy." We report a survey (N = 296) of design and business students that examined how different entrepreneurial self-efficacy and intentions arise from adaptive cognition and structured training. According to the study, adaptive cognition predicts entrepreneurial self-efficacy differently in design students than in business students, although the style of education has a distinct impact. Entrepreneurial intentions to launch a firm are positively predicted by entrepreneurial self-efficacy in both groups.

Al-Mamary and Alshallaqi (2022) explored how various aspects of entrepreneurial orientation impacted Saudi university students' inclination to start new firms. The authors collected information on demographics, entrepreneurs' attitudes, and behavioral intentions towards entrepreneurship using a 21-item questionnaire on a 5-point Likert scale. The sample comprised

341 business students from two Saudi public colleges. Business students were specifically selected for the study due to their aspirations of becoming entrepreneurs. The research model was analyzed using AMOS software and structural equation modeling methods. The results indicated that high levels of autonomy, inventiveness, risk-taking, and proactiveness were strongly correlated with entrepreneurial ambition. However, the correlation with aggressive and competitive attitudes was not always closely linked to business goals. These findings contribute to the body of knowledge on entrepreneurial orientation in general and university business students in particular, offering fresh insights into the factors shaping future entrepreneurs.

Gikunda and Miriti (2025) discovered that students' entrepreneurial ambitions at universities in Meru and Tharaka Nithi counties were influenced by their propensity for taking risks. This study was conducted among university students who had completed entrepreneurship training in preparation for becoming business owners. They utilized descriptive research. The study's target demographic included eight hundred students, and questionnaires were completed by 267 respondents—specifically, third- and fourth-year students who had taken entrepreneurial studies as a unit or major course. Data analysis was conducted using SPSS with inferential statistics. Multiple regression analysis examined the association between the variables at a 95% confidence level. The study found a p-value of $0.000 < 0.05$ and a regression coefficient of 0.187 for risk-taking propensity. Consequently, entrepreneurial ambitions were positively and significantly impacted by a predisposition for taking risks. Universities should provide appropriate environments that inspire self-confidence, enabling students to believe in their capabilities, recognise available opportunities, and act upon them.

Yoopetch (2021) researched the variables affecting entrepreneurial ambitions, aiming to identify the key elements that most influence the desire to start one's own business. Female employees from various hospitality sectors, including restaurants, lodging facilities, and wellness services, comprised the sample for this study. Before data collection, the questionnaire's reliability—based on earlier studies—was examined. A total of 416 valid samples from female employees with a minimum of one year of experience in hospitality establishments (such as restaurants and hotels) agreed to participate in the study to represent early to mid-level professional women in the industry. The results demonstrated that women's entrepreneurial intentions in the hotel business are significantly influenced by their attitudes towards risk-taking, self-efficacy, subjective norms, and empowerment. The data analysis indicated that

the desire to become an entrepreneur is most significantly influenced by one's attitude towards taking risks.

Despite earlier research offering valuable insights into entrepreneurial intentions and related elements, gaps still remain in the literature. While Salami et al. (2023) aimed to investigate the concept of self-efficacy and its impact on the entrepreneurial tendencies of university graduates in Ogun State, Nigeria, the study could not determine the significance of risk-taking ability, which is vital in entrepreneurs' decision-making processes. Zhuang and Sun (2024) explored start-up readiness and risk-taking propensity, but they overlooked how individual traits such as problem-solving skills and entrepreneurial goals interacted. Moreover, the limited research on the moderating effects of entrepreneurial education highlights the need for further investigation into how education influences these interactions. Ezenwanne (2022) emphasised the importance of problem-solving techniques for skills among secondary school-aged children but did not elaborate on its applicability beyond food and nutrition in business. Several studies, including those by Constantine et al. (2024) and Ogbuanya et al. (2021), have examined the correlation between entrepreneurial self-efficacy and entrepreneurial intentions. However, their research primarily focuses on self-efficacy without adequately addressing for the interplay of risk-taking and problem-solving skills, whereas Gikunda and Miriti (2025) investigated the role of risk-taking propensity. Their analyses did not consider the multifaceted nature of entrepreneurial attributes, especially the combination of social, emotional, and cognitive skills in determining entrepreneurial outcomes. These discrepancies underscore the need for more comprehensive studies examining a wider range of entrepreneurial characteristics and their collective influence on entrepreneurial goals, particularly in culturally diverse contexts like Nigeria.

Methodology

This research employed a descriptive survey design since it is considered appropriate because it involves collecting and analysing data from the sample population to find the relationship between self-reliance and entrepreneurial intention among 3MTT trainees. With the survey method, the researcher can collect data through prepared questionnaires and analyse results numerically. This study population consists of the 3 million technical talent (3MTT) trainees in three southwest geopolitical zone Nigerian states, i.e., Lagos State – 2,040 trainees, Oyo State 1,327 trainees, and Ogun State, 1,043 trainees These states were chosen because of the increased number of trainees in the region hence the total number of trainees were 4,410. The sample size was generated based

on Yamane's formula (1967), which was used to calculate the sample size, and involved a total sample of 367 trainees. In order to provide for proportional representation, proportionate stratified sampling was used to distribute the sample: Lagos State: 170, Oyo State: 111 trainees, and Ogun State: 86 trainees. Sample selection on the respondents in each state used simple random sampling, meaning that each trainee had an equal opportunity to be selected. The questionnaire was validated across content and face validity tests by experts on entrepreneurship and educational measurement experts. A pilot test was done with 30 trainees (out of the sample), and internal consistency was measured using Cronbach's Alpha, giving a coefficient of 0.78, meaning the instrument was reliable. The researcher conducted the questionnaires through an electronic system, thus obtaining consent from all of the participants and keeping anonymity during the process. Coded and analysed data collected used the Statistical Package for the Social Science (SPSS) version 26. Below are the statistical tools used: Descriptive statistics (mean, standard deviation) to create a summary of the characteristics of the respondents and regression analysis (multiple linear regression) to find the predictive power of self-reliance (risk-taking ability and problem-solving skills) on entrepreneurial intention.

Data Presentation and Findings

This section describes the outcome of the data collected for the study, specifically the analysis of the relationships between the variables under investigation. In a structured survey, the data collected was then analysed for descriptive and inferential statistics. According to the research objectives, the findings are presented in an organised manner across separate sections. The results provide insights into risk-taking ability, problem-solving skills, and other factors influencing entrepreneurial intention and behaviour. The results reveal patterns and the statistical significance of the relationships among these variables – valuable insights into studying entrepreneurial processes.

Table 1 ***Descriptive Statistics***

	Mean	Std. Deviation	N
Entrepreneurial intention	3.56	1.220	367
Risk-taking ability	3.80	.916	367
Problem-solving skills	3.71	1.035	367

Source: SPSS OUTPUT 26

The table presents the mean and standard deviation for three key variables in the study: entrepreneurial intention, risk-taking ability, and problem-solving

skills, based on responses from 367 trainees. Entrepreneurial intention has a mean of 3.56 and a standard deviation of 1.220. This indicates that respondents expressed a moderately high level of entrepreneurial intention on average. However, the relatively high standard deviation (1.220) suggests a wide variation in responses, meaning some trainees have strong entrepreneurial intentions while others may be undecided or less inclined. Risk-taking ability has a mean of 3.80 and a standard deviation of 0.916. This shows that most respondents perceive themselves as relatively capable of taking risks, a key trait for entrepreneurship. The lower standard deviation indicates less variation in responses, suggesting that many trainees share a similar self-assessment of this trait. Respondents also rated themselves relatively high in problem-solving abilities, as the average score indicates. The moderate standard deviation shows some variability in responses, but most respondents generally perceive themselves as having good problem-solving skills. The descriptive statistics suggest that the 3MTT trainees in the selected Southwest states exhibit relatively strong self-reliance attributes (risk-taking and problem-solving) and a moderate-to-high level of entrepreneurial intention. The findings imply that fostering these self-reliance traits may be key to enhancing entrepreneurial orientation among the trainees.

Table 2 ***Model Summary***

				Std. Error of the	Change Statistics				
Model	R	R Square	Adjusted R Square	Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.787[a]	.619	.617	.755	.619	296.300	2	364	.000

a. Predictors: (Constant), problem-solving skills, risk-taking ability

Source: SPSS OUTPUT 26

The model summary shows that risk-taking ability and problem-solving skills combined have a large degree of predictability about entrepreneurial intention among 3MTT trainees with a value of R at 0.787. The R Square of 0.619 implies that these two self-reliance traits can account for about 61.9% of the variance in entrepreneurial intention. The Adjusted R Square (0.617) confirms that the model is reliable when considering the number of predictors. The measure of average deviation between the actual and predicted values, being the standard error of the estimate (0.755), has been observed. The F change value, 296.300 significance level of 0.000 tells that the model is statistically significant, i.e., the combination of risk-taking ability and problem-solving skills significantly predicts entrepreneurial intention.

Table 3 ***ANOVA***[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	337.375	2	168.687	296.300	.000[b]
	Residual	207.230	364	.569		
	Total	544.605	366			

a. Dependent Variable: entrepreneurial intention

b. Predictors: (Constant), problem-solving skills, risk-taking ability

Source: SPSS OUTPUT 26

The results from ANOVA show that the regression model of using risk-taking ability and problem-solving skills to predict entrepreneurial intention has a probability of occurring by chance of less than 4 per cent. The F-value of 296.300 and p-value of 0.000 ($p<0.05$) show that the model has a good fit with data of data and that the independent variables, collectively, significantly predict the intention to be an entrepreneur among the 3MTT trainees. The value of the regression sum of squares (337.375) divided by the residual sum of squares (207.230) demonstrates that the model explains a significant amount of the variance of the entrepreneurial intention. This supports the conclusion that self-reliance traits (risk-taking and problem-solving skills) play a significant role in entrepreneurial intention.

Table 4 ***Coefficients***[a]

Model	Unstandardised Coefficients		Standardised Coefficients			95.0% Confidence Interval for B		Correlations		
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part
1(Constant)	.508	.205		2.478	.014	.105	.911			
Risk-taking ability	-.114	.044	-.085	-2.610	.009	-.200	-.028	.039	-.136	-.084
Problem-solving skills	.938	.039	.796	24.313	.000	.863	1.014	.783	.787	.786

Source: SPSS OUTPUT 26

The regression coefficients indicate that problem-solving skills significantly impact entrepreneurial intention among the 3MTT trainees, demonstrating a strong positive correlation with a standardised beta coefficient of 0.796, a t-value of 24.313, and a p-value of 0.000. This implies a substantial inclination

with each unit to increase problem-solving skills. Conversely, risk-taking ability has a negative and significant effect (β = -0.085, t = -2.610, p = 0.009); therefore, higher levels of risk-taking ability correspond to a minor negative impact on entrepreneurial intention in this context. The model's constant is also important (B = 0.508, p = 0.014). Based on this finding, it can be suggested that problem-solving skills are the stronger predictor. At the same time, risk-taking may represent a complex or contextual influence on the trainees' entrepreneurial intention.

Discussion of Findings

The results of this study demonstrate that problem-solving skills positively and significantly predict entrepreneurial intention; however, the ability to risk-taking shows a significant negative influence. This highlights the centrality of cognitive skills and rationality in avoiding impulsive risk-taking as determinants of entrepreneurial behaviour among trainees of 3MTT in Southwest Nigeria. These findings align with those of Ezenwanne (2022), who concluded that problem-solving techniques are crucial for improving entrepreneurial skills among secondary school students. Constantine et al. (2024) found that problem-solving skills lead to entrepreneurial self-efficacy, positively influencing business decision-making. The impact of this study on problem-solving skills is compelling and supports the belief that entrepreneurial competence is represented through performance in strategic thinking and decision-making.

However, the negative relationship between risk-taking and entrepreneurial intention differs from several studies, such as Gikunda and Miriti (2025) and Al-Mamary and Alshallaqi (2022), which noted a positive relationship between risk-taking propensity and entrepreneurial intention. This discrepancy might indicate differences in context, such as socio-economic limitations, training settings, or varying assessments of risk among the 3MTT trainees. This suggests that risk aversion may be a protective factor rather than an absence of enterprising zeal.

As Salami et al. (2023) indicated their importance for entrepreneurial intention, the findings suggest that internal cognitive elements, such as problem-solving ability, are important components of entrepreneurial self-efficacy. Adaptively, Christensen et al. (2023) validate that adaptive cognition, guided by training and background in studies, supports entrepreneurial intention — an idea replicated here in rooting for skill-based self-reliance. Although this study diverges from the case of Zhuang and Sun (2024), which

established direct links between institutional environment and risk-taking viability to start-up readiness, it prompts questions about institutional and training contexts moderating these relationships. For example, a structured and skill-based strategy applied to the 3MMT initiative may discourage rash risk-taking, leading to a focus on stability and planning.

The present research supports the assertion that real cognitive skills such as problem-solving impact the emerging groups' entrepreneurial intention better than risk-taking. The results of these findings have important implications for policymakers and educators. In their effort to train entrepreneurs, the programmes should emphasise analytical, planning and creative problem-solving approaches rather than promoting kudos for taking risks, especially when it comes to structured empowerment set up as 3MTT.

Conclusion and Recommendations

This study determined the effects of self-reliance indicators, namely risk-taking ability and problem-solving skills, on the entrepreneurial intentions among 3MTT trainees in selected states in southwest Nigeria. Results showed that while problem-solving skills significantly positively affected entrepreneurial intentions, risk-taking ability had a negative yet statistically significant relationship. These results suggest that practical cognitive capabilities dominate entrepreneurial intentions in 3MTT trainees more so than boldness or risk propensity. The study aligns with earlier literature indicating the significance of self-efficacy, cognitive adaptability, and problem-solving in predicting entrepreneurial intention while highlighting the necessity of considering contextual risk perception in entrepreneurship.

Based on the findings, the research recommends that stakeholders of the 3MTT programme include more experiential studies, simulations, and real-life challenges in the curriculum to enhance the problem-solving abilities of trainees, which are known to drive entrepreneurial intentions. Additionally, instead of discouraging risk-taking altogether, the programme should focus on calculated risk-taking and risk-management strategies. This could help trainees differentiate between reckless choices and strategic risks that promote innovation. Finally, future studies should explore other psychological and contextual factors such as resilience, innovation capacity, funding opportunities, and socio-cultural influences to create a more comprehensive conceptualisation of entrepreneurial intentions among trainees in technical and vocational programmes.

In conclusion, it is essential to first focus on strategic thinking, problem-solving in the real world, and adaptive learning in highlighting the 3MTT program to build a successful pipeline of future entrepreneurs while finding the balance in the narrative around risk-taking in contextually viable and empowering ways.

References

Ács, Z. J., Szerb, L., & Autio, E. (2017). *Global entrepreneurship and development index 2017* (Vol. 49, No. 1, pp. 1-10). Cham, Swizterland: Springer International Publishing.

Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behavior and Human Decision Processes*, *50*(2), 179-211.

Al-Mamary, Y. H., & Alshallaqi, M. (2022). Impact of autonomy, innovativeness, risk-taking, proactiveness, and competitive aggressiveness on students' intention to start a new venture. *Journal of Innovation & Knowledge*, *7*(4), 100239.

Asravor, R. K., & Acheampong, V. (2024). Factors influencing risk attitudes of entrepreneurs in Ghana: The role of gender. *Journal of Small Business & Entrepreneurship*, *36*(1), 29-52.

Bogatyreva, K., Laskovaia, A., & Osiyevskyy, O. (2022). Entrepreneurial activity, intrapreneurship, and conducive institutions: Is there a connection?. *Journal of Business Research*, *146*, 45-56.

Christensen, B. T., Arendt, K. M., McElheron, P., & Ball, L. J. (2023). The design entrepreneur: How adaptive cognition and formal design training create entrepreneurial self-efficacy and entrepreneurial intention. *Design Studies*, *86*, 101181.

Constantine, W., Thedy, P. A., Claudia, J., Anggriawan, C., Angdris, J. F., & Ardyan, E. (2024). How do young entrepreneurs enhance problem-solving skills and quality business decision making? Understanding the Driver Factors. *Jurnal Entrepreneur dan Entrepreneurship*, *13*(2), 135-148.

Elston, T. (2024). *Understanding and improving public management reforms*. Policy Press.

Ezenwanne, D. N. (2022). Implications of the problem-solving approach on the development of entrepreneurial skills among food and nutrition students in Anambra State, Nigeria. *Human Nature Journal of Social Sciences*, *3*(3), 12-20.

Gifford, S. (2010). Risk and uncertainty. *Handbook of entrepreneurship research: An interdisciplinary survey and introduction*, 303-318.

Gikunda, K. K. & Miriti, G. B. (2025). Effect of risk-taking propensity on entrepreneurial intentions among students undertaking

entrepreneurial courses in universities in Meru and Tharaka Nithi Counties. *Special Issue on Economics, Management, Sociology, Communication, Psychology*, *IX*(1), 243-250.

Idowu, G. O., & Zekeri, A. (2023). Assessment of undergraduate students' attitude towards entrepreneurship mindset re-orientation: A study of some selected institutions in Kwara State, Nigeria. *African Journal of Management and Business Research*, *12*(1), 124-133.

Kuratko, D. F., Fisher, G., & Audretsch, D. B. (2021). Unraveling the entrepreneurial mindset. *Small Business Economics*, *57*(4), 1681-1691.

Li, Y., & Ahlstrom, D. (2020). Risk-taking in entrepreneurial decision-making: A dynamic model of venture decision. *Asia Pacific Journal of Management*, *37*(3), 899-933.

Malawu, N., & Waghid, Z. (2024). Exploring the influence of lecturers' teaching on student's entrepreneurial intentions at a South African TVET College. *South African Journal of Higher Education*, *38*(4), 150-170.

Mukherjee, D. V. (2023). *At the edge of tomorrow: unleashing human potential in the AI Era*. Notion Press.

Ogbuanya, T. C., Okeke, C. I., & Ozoagu, F. (2021). Self-efficacy and entrepreneurial intentions of technical college electronics students in Southeast Nigeria. *Journal of Critical Reviews*, *8*(2), 1616-1628.

Salami, A. O., Tella, A.R., & Badiru, N, I (2023). Impact of self-efficacy on entrepreneurial intention of university graduates in Ogun State, Nigeria. *Journal of Technology and Operations Management, 18*(2), 72-86. https://doi.org/10.32890/jtom2023.18.2.6

Yoopetch, C. (2021). Women empowerment, attitude toward risk-taking and entrepreneurial intention in the hospitality industry. *International Journal of Culture, Tourism and Hospitality Research*, *15*(1), 59-76.

Zekeri, A., Kowo, S. A., & Tunde-Arigbede, O. T. (2024). Efficiency of small business: the case of Nigeria. *Foreign trade: economics, finance, law*, *136*(5), 110-126.

Zemlyak, S., Naumenkov, A., & Khromenkova, G. (2022). Measuring the Entrepreneurial Mindset: The Motivations behind the Behavioral Intentions of Starting a Sustainable Business. *Sustainability*, *14*(23), 15997.

Zhuang, J., & Sun, H. (2024). Perceived institutional environment and entrepreneurial behaviour: The mediating role of risk-taking

propensity and moderating role of human capital factors. *Sage Open*, *14*(1), 21582440241233950.