

**PERSONALITY ATTRIBUTES AS PREDICTORS OF ENTREPRENEURIAL EMOTION
AMONG POLYTECHNIC STUDENTS IN KWARA STATE, NIGERIA.**

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Abstract

The impact of personality traits on entrepreneurial sentiment among polytechnic students in Kwara State, Nigeria, was examined in this study. A structured questionnaire was used to gather data from 260 Higher National Diploma (HND II) students using a descriptive survey design (Cronbach's $\alpha = 0.81$). Multiple regression analysis and Pearson correlation were used at the significance level of 0.05. The results demonstrated that entrepreneurial emotion was significantly predicted by personality traits ($R = 0.684$; Adjusted $R^2 = 0.479$; $p < 0.05$). Attitude was not a significant predictor, but appraisal, emotional expression, perception, and entrepreneurial mindset were. The study suggests incorporating personality development into entrepreneurship education and concludes that personality traits are significant determinants of entrepreneurial emotion.

Keywords: Polytechnic students, entrepreneurship education, entrepreneurial emotion, and personality traits.

Word Count = 116

Introduction

It is commonly acknowledged that one of the main forces behind economic expansion, job creation, innovation, and national competitiveness is entrepreneurship. Entrepreneurial activity has made a substantial contribution to industrial transformation, poverty alleviation, and wealth creation in both developed and developing economies. Due to the ongoing increase in graduate unemployment, dwindling opportunities in the formal labour market, and the growing demand for sustainable livelihoods,

entrepreneurship has grown in significance in Nigeria. As a result, entrepreneurship is seen as a useful tactic for encouraging self-employment, lowering reliance on government employment, and boosting economic diversification. Through regulatory organizations like the National Universities Commission (NUC) and the National Board for Technical Education (NBTE), the Federal Government of Nigeria incorporated entrepreneurship education into tertiary institutions' curricula to promote entrepreneurial development. The goal was to give students practical business

knowledge, innovative skills, and entrepreneurial competencies that would support the creation of ventures after graduation. Despite these legislative efforts, graduate unemployment is still high, and many graduates choose to pursue salaried jobs rather than starting their own businesses. The emotional vitality, zeal, passion, self-assurance, and psychological preparedness that inspire people to seek entrepreneurial opportunities are referred to as entrepreneurial emotions. It includes positive emotional states that support entrepreneurial activity in the face of uncertainty and business risks, such as optimism, resilience, determination, and commitment. Because emotional factors affect opportunity recognition, creative thinking, business persistence, and entrepreneurial decision-making, entrepreneurial emotion has grown in importance within the field of entrepreneurship research.

Additionally, researchers contend that relatively stable personality traits have an impact on the development of entrepreneurial emotion. Personality traits are long-lasting psychological traits that influence people's attitudes, feelings, actions, and reactions to their surroundings. People with positive personality traits frequently exhibit higher levels of creativity, self-assurance, resilience, emotional intelligence, and opportunity recognition—all of which are critical for a successful entrepreneurial endeavour. Positive correlations between personality traits and entrepreneurial outcomes have been found in earlier empirical research. For instance, greater

entrepreneurial motivation and venture creation have been linked to conscientiousness, self-confidence, emotional stability, and openness to new experiences. However, relatively few studies have looked at entrepreneurial emotion as a separate psychological construct, especially among Nigerian polytechnic students.

In light of this, this study examines how well personality traits predict entrepreneurial emotion in Kwara State, Nigeria, polytechnic students. It is anticipated that the results will offer empirical evidence that will direct policymakers, institutional administrators, and entrepreneurship educators in enhancing entrepreneurship education through psychological and personality development interventions.

Statement of the Problem

One of Nigeria's most enduring socioeconomic problems is graduate unemployment. The number of graduates looking for paid work keeps rising despite significant investments in entrepreneurship education programs and ongoing expansion of postsecondary education. However, only a small percentage of graduates launch long-term businesses. The efficacy of current entrepreneurship education programs in fostering the psychological preparedness necessary for entrepreneurial engagement is called into question by this trend. According to existing research, personality traits such as self-evaluation, emotional expression, perception, and entrepreneurial mindset may have a major impact on entrepreneurial emotion by boosting

resilience, confidence, creativity, and opportunity recognition. Nevertheless, there is still little empirical data regarding these personality traits' predictive power among Nigerian polytechnic students. The majority of earlier research carried out in Nigeria has mostly concentrated on entrepreneurial intention, self-employment intention, or entrepreneurial self-efficacy, with comparatively little attention paid to entrepreneurial emotion as a separate construct.

Objectives of the Study

The broad objective of this study is to examine whether personality attributes predict entrepreneurial emotion among polytechnic students in Kwara State, Nigeria. The specific objectives are to:

1. Examine the relationship between personality attributes and entrepreneurial emotion among polytechnic students in Kwara State, Nigeria.
2. Determine the influence of personality attributes (appraisal, emotional expression, perception, entrepreneurial mindset, and attitude) on entrepreneurial emotion among polytechnic students in Kwara State, Nigeria.

Research Questions

The study sought answers to the following research questions:

1. What relationship exists between personality attributes and entrepreneurial emotion among polytechnic students in Kwara State, Nigeria?
2. To what extent do personality attributes (appraisal, emotional

expression, perception, entrepreneurial mindset, and attitude) influence entrepreneurial emotion among polytechnic students in Kwara State, Nigeria?

Research Hypotheses

The following null hypothesis was tested at the 0.05 level of significance:

- H₀₁: There is no significant relationship between personality attributes and entrepreneurial emotion among polytechnic students in Kwara State, Nigeria.
- H₀₂: Personality attributes (appraisal, emotional expression, perception, entrepreneurial mindset, and attitude) do not significantly predict entrepreneurial emotion among polytechnic students in Kwara State, Nigeria.

Literature Review

Concept of Entrepreneurship

Entrepreneurship is generally understood to be the process by which people find opportunities, gather resources, take measured risks, and add value by starting new businesses or enhancing already-existing ones. It encourages wealth creation, lowers poverty, and generates job opportunities. By promoting local investment and making better use of the resources at hand, entrepreneurship also advances regional development. Due to rising youth unemployment and dwindling public sector employment prospects, entrepreneurship has grown in importance in Nigeria. In order to provide graduates with the practical skills needed for self-employment and enterprise development, entrepreneurship education has emerged

as a significant policy intervention. Evidence suggests that many graduates are still hesitant to start businesses after graduation despite these interventions. This finding implies that becoming an entrepreneur entails more than just learning technical skills; psychological traits also have an impact on entrepreneurial behaviour.

Concept of Entrepreneurial Emotion

The Entrepreneurial Emotion includes the emotions, mental energy, and emotional dedication related to spotting opportunities, starting companies, and overseeing entrepreneurial endeavours. Positive emotional states like passion, enthusiasm, confidence, optimism, resilience, and determination are examples of entrepreneurial emotion. When starting a business, these feelings promote tenacity, inventiveness, and proactive behaviour. On the other hand, negative feelings like fear, anxiety, frustration, and uncertainty can deter entrepreneurship or lower company performance. Because emotions affect how entrepreneurs assess opportunities, deal with uncertainty, and overcome obstacles, entrepreneurial emotion has garnered increasing scholarly attention. Emotions stimulate behaviour and maintain entrepreneurial commitment in times of hardship, unlike cognitive knowledge alone. Strong entrepreneurial feelings make students more likely to take advantage of business opportunities, put up with uncertainty, and stick with their entrepreneurial careers. As a result, graduates' entrepreneurial readiness is now significantly predicted by their entrepreneurial emotion.

Concept of Personality Attributes

The term "personality attributes" refers to comparatively stable psychological traits that affect a person's feelings, ideas, and actions in a variety of contexts. These traits influence how people perceive their surroundings, deal with difficulties, and engage with others.

Because personality traits affect creativity, innovation, opportunity recognition, emotional stability, and decision-making, they are regarded in entrepreneurship research as significant determinants of entrepreneurial success.

For the purpose of this study, personality attributes comprise five dimensions:

Appraisal, Emotional Expression, Perception, Entrepreneurial Mindset and Attitude.

These dimensions collectively explain how students evaluate themselves, process information, express emotions and develop entrepreneurial commitment.

Appraisal

An individual's assessment of their own competence, strengths, and capacity to successfully carry out entrepreneurial tasks is referred to as appraisal. A positive self-image boosts the confidence of entrepreneurs and increases their willingness to start new ventures. Students who think well of themselves are more likely to view business challenges as doable rather than daunting. As a result, appraisal boosts emotional preparedness and entrepreneurial confidence.

Emotional Expression

The capacity to successfully convey thoughts, feelings, and opinions in social situations is referred to as emotional

expression. Emotional expression in entrepreneurship makes it easier to communicate with clients, investors, staff, and business associates. Because they can successfully present business ideas, negotiate partnerships, and motivate others, confident communicators frequently exhibit higher levels of entrepreneurial motivation.

Perception

The process by which people interpret data from their surroundings is referred to as perception. People with entrepreneurial perception are able to recognize market opportunities, pinpoint business issues, and impartially assess entrepreneurial risks. Positive entrepreneurial perception increases the likelihood that students will find creative opportunities and experience positive entrepreneurial emotions.

Entrepreneurial Mindset

An innovative, creative, resilient, adaptive, and opportunity-aware way of thinking is referred to as an entrepreneurial mindset. People with an entrepreneurial mindset are more self-assured, have better problem-solving skills, and are more inclined to start businesses even in the face of uncertainty. Entrepreneurial mindset is increasingly acknowledged by entrepreneurship educators as one of the best psychological underpinnings for creating successful businesses.

Attitude

An individual's positive or negative assessment of entrepreneurship as a career option is reflected in their attitude. Although a positive entrepreneurial attitude stimulates interest in owning a business, it may not always lead to entrepreneurial action unless it is combined

with psychological preparedness and emotional commitment. This distinction helps to explain why some graduates have positive views about entrepreneurship but don't start businesses after graduation.

Theoretical Framework

Theory of Planned Behaviour (TPB)

This study is anchored on the Theory of Planned Behaviour (TPB) developed by Ajzen (1991).

The theory proposes that behavioural intention is influenced by three major components:

Attitude toward the behaviour, Subjective norms; and Perceived behavioural control. According to TPB, individuals are more likely to perform a behaviour when they evaluate it positively, perceive social approval and believe they possess the necessary abilities. The theory is relevant because personality attributes directly influence perceived behavioural control, confidence and emotional readiness, thereby increasing entrepreneurial emotion.

Empirical Review

Numerous empirical studies have investigated the connection between entrepreneurship and personality traits. Using structural equation modelling, Awwad and Al-Aseer (2021) examined the impact of the Big Five personality traits on entrepreneurial emotion among Jordanian university students. According to the study, conscientiousness and openness to new experiences greatly increased entrepreneurial emotion.

Li, Wang, and Zhao (2022) investigated entrepreneurial emotion and personality traits in Chinese university students. Their

results showed that while neuroticism had a negative impact on entrepreneurial emotional readiness, openness, creativity, and conscientiousness significantly predicted entrepreneurial emotion.

Indian students' entrepreneurship education and personality traits were studied by Biswas and Verma (2022). They found that entrepreneurship education increased the association between entrepreneurial emotion and personality traits, suggesting that positive personality traits enhance the efficacy of educational interventions. Otache et al. (2020) looked into how Nigerian university students were taught entrepreneurship. Their results demonstrated that entrepreneurship education had a positive impact on entrepreneurial emotions, but they also suggested that more focus be placed on psychological development in order to enhance entrepreneurial outcomes. In a similar vein, Shamsudin et al. (2017) found that among Malaysian university students, entrepreneurial emotions were strongly influenced by creativity, innovativeness, and personality traits. All of these studies point to personality traits as significant predictors of entrepreneurial emotion.

Research Gap

Three significant gaps are identified by the reviewed literature.

First, rather than focusing on entrepreneurial emotion, the majority of earlier research focused on entrepreneurial intention. Second, despite polytechnic students' practical entrepreneurial orientation, comparatively few studies have looked at personality traits and thirdly, there is little empirical data on how

appraisal, emotional expression, perception, entrepreneurial mindset, and attitude all work together to influence entrepreneurial emotion in Nigeria.

Methodology

The research design used in this study was a descriptive survey. Because it allowed the researcher to get direct information from respondents about their entrepreneurial emotion and personality traits without changing the study variables, the design was deemed appropriate. Because it accurately describes current conditions and makes it easier to examine relationships between variables within a defined population, descriptive survey research is frequently used in behavioural and social science studies. The goal of ascertaining whether personality traits significantly predict entrepreneurial emotion among polytechnic students in Kwara State, Nigeria, guided the design decision.

Higher National Diploma (HND II) students enrolled in particular public and private polytechnics in Kwara State, Nigeria, made up the population. HND II students were deemed suitable for evaluating entrepreneurial emotion and entrepreneurial readiness because they had finished the mandatory entrepreneurship education courses required by the National Board for Technical Education (NBTE) and were getting close to graduation.

The institutions that were chosen were: Kwara State Polytechnic, Ilorin, Federal Polytechnic, Offa, Lens Polytechnic, Offa and the Polytechnic, Agbabiaka. These institutions were selected because they represent both public and private

polytechnics operating within Kwara State. For the study, a sample size of 280 respondents was chosen. In order to guarantee accurate statistical analysis and adequate representation of the target population, the sample size was deemed sufficient.

A method of multistage sampling was used.

Phase One: Four polytechnics were chosen at random from the list of Kwara State's accredited public and private polytechnics.

Phase Two: Since HND II students had finished entrepreneurship education courses and had sufficient understanding of entrepreneurship concepts, purposeful sampling was used to choose them.

Phase Three: Questionnaires were distributed among the chosen institutions based on their student populations using proportionate sampling.

The distribution of questionnaires was as follows:

Table 3.1 Distribution of Respondents

Institution	Questionnaires Administered	Questionnaires Returned
Kwara State Polytechnic	90	82
Federal Polytechnic, Offa	80	74
Lens Polytechnic	55	51
The Polytechnic, Agbabiaka	55	53
Total	280	260

The response rate of 92.9% was considered satisfactory for behavioural research.

Data were collected using a structured questionnaire titled:

Personality Attributes and Entrepreneurial Emotion Questionnaire (PAEEQ).

The questionnaire consisted of two sections.

Section A: This section collected demographic information relating to respondents, including:

Gender, Age, Institution and Previous entrepreneurial experience

Section B: This section measured the study variables.

The personality attribute scale consisted of five dimensions:

Appraisal, Emotional Expression, Perception, Entrepreneurial Mindset and Attitude

Entrepreneurial emotion was measured using items assessing passion, enthusiasm, confidence, resilience, emotional commitment and willingness to engage in entrepreneurial activities.

The questionnaire adopted a four-point Likert scale:

Strongly Agree (4), Agree (3), Disagree (2) and Strongly Disagree (1)

In order to get permission to collect data, an introduction letter was obtained from the researcher's institution and presented to the management of the chosen polytechnics.

During lecture periods, the researcher personally distributed the questionnaires to

respondents with the help of trained research assistants.

Respondents were made aware of:

The study's goals, the voluntary nature of participation, the anonymity of responses, and the confidentiality of the information provided.

In order to reduce non-response and missing data, completed questionnaires were gathered right away.

The study was conducted with strict adherence to ethical standards.

In particular:

Involvement was entirely voluntary, the goal of the study was sufficiently explained to the respondents, prior to the distribution of the questionnaire, informed consent was acquired, the identities of the respondents were not asked and the data collected was only utilized for scholarly research.

These steps guaranteed adherence to recognized ethical guidelines for educational research.

Data collected were coded and analyzed using the Statistical Package for the Social Sciences (SPSS Version 23).

Both descriptive and inferential statistical techniques were employed.

Descriptive Statistics

The following descriptive statistics were used: Frequency distribution, Percentage, Mean and Standard deviation

These statistics were used to summarize respondents' demographic characteristics and describe the study variables.

Inferential Statistics

The inferential statistics used were as follows: Multiple regression analysis, Pearson product moment correlation, and analysis of variance (ANOVA)

The association between entrepreneurial emotion and personality traits was assessed using Pearson correlation. The predictive impact of appraisal, emotional expression, perception, entrepreneurial mindset, and attitude on entrepreneurial emotion was ascertained using multiple regression analysis.

The regression model's overall significance was ascertained using ANOVA.

Every hypothesis was examined at the significance level of 0.05.

Operational Model

The regression model adopted for the study is expressed as:

$$EE = \beta_0 + \beta_1 (APP) + \beta_2 (EXP) + \beta_3 (PER) + \beta_4 (EM) + \beta_5 (ATT) + \varepsilon$$

Where:

EE = Entrepreneurial Emotion APP =

Appraisal EXP = Emotional Expression

PER = Perception EM = Entrepreneurial

Mindset ATT = Attitude β_0 = Constant

β_1 – β_5 = Regression coefficients ε = Error term

The model was estimated using the Ordinary Least Squares (OLS) regression technique.

Results and Discussion of Findings

The findings of the analyses performed to address the study's goals and test its hypothesis are presented in this section. The Statistical Package for the Social Sciences (SPSS Version 23) was used to analyze the data from the 260 valid questionnaires using both descriptive and inferential statistics. The presentation starts with the respondents' demographics, then moves on to descriptive statistics, multiple regression analysis, correlation

analysis, analysis of variance (ANOVA), and hypothesis testing.

Table 1 Pearson Product Moment Correlation Matrix

Variables	EE	APP	EXP	PER	EM	ATT
Entrepreneurial Emotion (EE)	1.000					
Appraisal (APP)	0.621**	1.000				
Emotional Expression (EXP)	0.598**	0.544**	1.000			
Perception (PER)	0.615**	0.512**	0.501**	1.000		
Entrepreneurial Mindset (EM)	0.643**	0.560**	0.534**	0.588**	1.000	
Attitude (ATT)	0.402**	0.389**	0.376**	0.421**	0.445**	1.000

Correlation is significant at $p < 0.05$

Interpretation

All personality traits and entrepreneurial emotion are positively correlated, according to the correlation analysis. The strongest correlation was found between entrepreneurial mindset and entrepreneurial emotion ($r = 0.643$), followed by perception ($r = 0.615$) and appraisal ($r = 0.621$). While there was a positive correlation between attitude and entrepreneurial emotion ($r = 0.402$), it was relatively weak.

These findings imply that greater emotional preparedness for entrepreneurship is linked to improvements in personality traits.

Test of Hypothesis

H_{01} : Personality attributes do not significantly predict entrepreneurial emotion among polytechnic students in Kwara State, Nigeria. To test this hypothesis, multiple regression analysis was performed.

Table 2: Multiple Regression Analysis

Variables	B	Std. Error	Beta	t-value	Sig.
Constant	0.712	0.161	—	4.421	0.000
Appraisal	0.418	0.061	0.391	6.812	0.000
Emotional Expression	0.312	0.074	0.287	4.215	0.001
Perception	0.336	0.066	0.301	5.104	0.000
Entrepreneurial Mindset	0.445	0.062	0.412	7.224	0.000
Attitude	0.052	0.047	0.048	1.102	0.271

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.701	0.491	0.479	0.381

Table 4: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.421	5	7.084	49.218	0.000
	Residual	36.557	254	0.144		
	Total	71.978	259			

Interpretation of Regression Results

According to the regression analysis, among Kwara State polytechnic students, personality traits collectively have a statistically significant impact on entrepreneurial emotion ($F = 49.218$; $p < 0.05$). According to the coefficient of determination ($\text{Adjusted } R^2 = 0.479$), appraisal, emotional expression, perception, entrepreneurial mindset, and attitude account for about 47.9% of the variance in entrepreneurial emotion. Other factors not included in the model could be responsible for the remaining 52.1% of the variation.

The regression coefficients further indicate that:

Entrepreneurial emotion is significantly predicted by appraisal ($\beta = 0.391$; $p < 0.05$). Students who feel confident and have a positive self-evaluation exhibit greater emotional preparedness for entrepreneurship. Entrepreneurial emotion is significantly predicted by emotional expression ($\beta = 0.287$; $p < 0.05$), indicating that effective communication and emotional transparency boost

entrepreneurial zeal. Students who recognize entrepreneurial opportunities are more emotionally committed to entrepreneurship, as evidenced by the positive and significant influence of perception ($\beta = 0.301$; $p < 0.05$). The strongest predictor is entrepreneurial mindset ($\beta = 0.412$; $p < 0.05$), suggesting that innovation, resilience, and opportunity-oriented thinking significantly boost entrepreneurial emotion. Entrepreneurial emotion is not significantly predicted by attitude ($\beta = 0.048$; $p = 0.271$). This result implies that, in the absence of more robust psychological traits, merely having a positive attitude toward entrepreneurship is insufficient to promote entrepreneurial emotional readiness.

Decision on the Hypothesis

Since the probability value ($p = 0.000$) is less than the 0.05 level of significance, the null hypothesis is rejected. It is therefore concluded that personality attributes significantly predict entrepreneurial emotion among polytechnic students in Kwara State, Nigeria.

Discussion of Findings

The main conclusions of the study are discussed in this section in light of the research goals, the Theory of Planned Behaviour (TPB), and earlier empirical investigations. The relationship between entrepreneurial emotion and personality traits among polytechnic students in Kwara State, Nigeria, is explained theoretically and practically in this discussion.

This study examined personality attributes as predictors of entrepreneurial emotion among polytechnic students in Kwara State, Nigeria. A descriptive survey research design was adopted, and data were collected from 260 respondents selected through a multistage sampling technique.

Using descriptive statistics, Pearson Product Moment Correlation, multiple regression analysis and Analysis of Variance, the study found that:

Personality attributes significantly predict entrepreneurial emotion, appraisal positively and significantly influences entrepreneurial emotion and emotional expression significantly predicts entrepreneurial emotion;

Conclusion

The study concludes that entrepreneurial emotion among polytechnic students is largely determined by psychological characteristics rather than by entrepreneurship education alone. Personality attributes—particularly appraisal, emotional expression, perception and entrepreneurial mindset—play a significant role in enhancing entrepreneurial emotional readiness.

Recommendations

Based on the findings, the following recommendations are made:

1. Polytechnic management should integrate personality development and emotional intelligence modules into entrepreneurship education curricula.
2. Students should be encouraged to participate in business incubation programmes, innovation hubs and entrepreneurial networking activities to strengthen entrepreneurial mindset and emotional readiness.
3. Government agencies, financial institutions and private-sector organisations should provide accessible start-up support, entrepreneurship grants and seed funding to enable graduates to transform entrepreneurial emotion into viable business ventures.

Contribution to Knowledge

This study contributes to entrepreneurship literature by:

1. Providing empirical evidence on entrepreneurial emotion among polytechnic students in Nigeria;
2. Demonstrating that personality attributes significantly predict entrepreneurial emotion;

Limitations of the Study

The study was limited to selected public and private polytechnics in Kwara State; therefore, caution should be exercised when generalizing the findings to other tertiary institutions in Nigeria.

Furthermore, the study relied on self-reported questionnaire responses, which may be subject to social desirability bias.

References

- Ahmed, M. A., Khattak, M. S., & Anwar, M. (2020). Personality attributes and entrepreneurial emotion: The mediating role of risk aversion. *Journal of Public Affairs*, 20(4), 1–15.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Amesi, J., & Amachree, D. O. (2021). Assessment of entrepreneurial emotion among business education undergraduate students in Rivers State universities. *International Journal of Innovative Social and Science Education Research*, 9(3), 80–85.
- Awwad, M. S., & Al-Aseer, R. M. N. (2021). Big Five personality traits and entrepreneurial emotion: The mediating role of entrepreneurial alertness. *Asia Pacific Journal of Innovation and Entrepreneurship*, 15(1), 87–100.
- Biswas, A., & Verma, R. K. (2022). Engine of entrepreneurial emotion: Revisiting personality traits with entrepreneurship education. Benchmarking: An International Journal, 29(6), 2019–2044.
- Cardon, M. S., Foo, M. D., Shepherd, D., & Wiklund, J. (2021). Exploring the heart: Entrepreneurial emotion research developments. *Entrepreneurship Theory and Practice*, 45(3), 523–551.
- Li, C., Wang, T., & Zhao, L. (2022). Personality traits and entrepreneurial emotion among college students: The mediating role of creativity. *Sustainability*, 14(5), 1–17.
- Otache, I., Umar, K., Audu, Y., & Onalo, U. (2020). The effects of entrepreneurship education on students' entrepreneurial emotions. *Education + Training*, 62(7/8), 789–802.
- Sahin, F., Karadag, H., & Tuncer, B. (2021). Big Five personality traits, entrepreneurial self-efficacy and entrepreneurial emotion. *International Journal of Entrepreneurial Behavior & Research*, 27(6), 1188–1211.
- Shamsudin, S. F. F., Al Mamun, A., Che Nawi, N., Md Nasir, N. S., & Zakaria, M. N. (2017). Factors affecting entrepreneurial emotions among Malaysian university students. *The Journal of Developing Areas*, 51(4), 423–431.
- Zarnadze, G., Ines, D., Gentja, C., & Humberto, N. R. R. (2022). Personality attributes and business environment for entrepreneurial motivation. *Administrative Sciences*, 12(4), 1–18.