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## **Bridging Informal Learning and Sustainable Development: The Mediating Role of Entrepreneurial Mindset in Shaping SDG-Oriented Entrepreneurial Intention**

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### **ABSTRACT**

This study examines the role of informal entrepreneurship education in shaping SDG-oriented entrepreneurial intention, with entrepreneurial mindset as a mediating variable among students of the Department of Economics and Development Studies, Faculty of Economics, Universitas Tadulako. Using a quantitative approach, data were collected from 90 respondents and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that informal entrepreneurship education does not have a significant direct effect on SDG-oriented entrepreneurial intention. However, it has a positive and significant effect on entrepreneurial mindset, which in turn significantly influences SDG-oriented entrepreneurial intention. Furthermore, the findings reveal that entrepreneurial mindset fully mediates the relationship between informal entrepreneurship education and SDG-oriented entrepreneurial intention. These results highlight that informal learning alone is insufficient to foster sustainable entrepreneurial intention unless it is transformed into a strong entrepreneurial mindset. This study contributes to the literature by emphasizing the critical role of entrepreneurial mindset as a key mechanism linking informal learning and sustainability-oriented entrepreneurial intention. The findings also provide practical implications for educators and policymakers in designing entrepreneurship programs that support the achievement of the Sustainable Development Goals (SDGs).

**Keywords:** Informal Entrepreneurship Education, Entrepreneurial Mindset, SDG-Oriented Entrepreneurial Intention, Sustainable Entrepreneurship

### **1. INTRODUCTION**

Entrepreneurship has long been recognized as a key driver of economic growth, innovation, and job creation. In recent years, however, the orientation of entrepreneurship has shifted toward sustainability, giving rise to the concept of sustainable entrepreneurship, which integrates economic, environmental, and social value creation within business activities (Alwakid et al., 2021; Rosário et al., 2022; Shabbir, 2023). This paradigm aligns closely with the Sustainable Development Goals (SDGs), where entrepreneurial activities are expected not only to generate profit but also to contribute to long-term sustainable development outcomes, including environmental protection and social well-being (Clemente et al., 2020; Shabbir, 2023).

Despite its importance, the development of SDG-oriented entrepreneurial intention remains a significant challenge, particularly among university students. Existing evidence suggests that although higher education institutions play a strategic role in promoting sustainability, the level of SDG awareness and integration within universities is often fragmented, uneven across disciplines, and not fully embedded in students' learning experiences (Cembranel et al., 2024; Filho et al., 2021; Habib et al., 2021; Nelles et al., 2021). As a result, students may be exposed to sustainability concepts, yet such exposure does not always translate into sustainability-oriented entrepreneurial intentions (Fanea-Ivanovici & Baber, 2022; Laspita et al., 2024).

To address this issue, entrepreneurship education has been widely promoted as a key instrument to foster entrepreneurial intention and capabilities. A substantial body of literature demonstrates that entrepreneurship education can positively influence entrepreneurial intention, mindset, and self-efficacy (Amankwah & Şeşen, 2021; Bayar et al., 2022; Li et al., 2023; Xu et al., 2023). However, empirical findings remain inconsistent, as several studies report that entrepreneurship education improves knowledge and skills but does not necessarily lead to a significant increase in entrepreneurial intention (Aljaouni et al., 2020; Koropogui et al., 2023; Treanor et al., 2021). This inconsistency indicates that the relationship between entrepreneurship education and entrepreneurial intention is complex and may depend on underlying psychological mechanisms (Fröhlich & Welpel, 2024; Yi & Duval-Couetil, 2021).

Furthermore, prior studies predominantly focus on formal entrepreneurship education, while informal entrepreneurship education such as learning through family, peers, experience, and digital platforms has received relatively limited attention. This is particularly relevant in developing countries, where informal learning often serves as a primary source of entrepreneurial knowledge due to limited access to structured education (Essien, 2021; Savastano et al., 2022). Informal learning enables individuals to acquire practical skills through observation, imitation, and hands-on experience, which are essential for entrepreneurial development (Biney, 2023; Jabbari et al., 2022).

However, informal entrepreneurship education tends to emphasize practical and economic aspects of entrepreneurship, without explicitly integrating sustainability values such as environmental responsibility and social impact. As a result, its direct contribution to SDG-oriented entrepreneurial intention remains unclear. Existing literature suggests that knowledge and exposure alone are insufficient to shape intention; rather, cognitive and psychological factors such as mindset and self-efficacy play a crucial role in transforming learning into behavioral intention (Li et al., 2023; Peng et al., 2021).

In this regard, entrepreneurial mindset emerges as a key mediating factor. It reflects an individual's ability to recognize opportunities, take risks, and think innovatively, and has been widely recognized as an important mechanism linking entrepreneurship education to entrepreneurial intention (Huang et al., 2024; Jung & Lee, 2020; Li et al., 2023). From the perspective of Human Capital Theory, both formal and informal learning contribute to the development of individual competencies; however, these competencies must be internalized into cognitive frameworks such as entrepreneurial mindset before influencing behavior (Aboobaker & Renjini, 2020; Essien, 2021; Yami et al., 2021).

Nevertheless, despite the recognized importance of entrepreneurial mindset as a cognitive mechanism, limited studies have examined how this mechanism operates within the context of informal entrepreneurship education, particularly in shaping sustainability-oriented entrepreneurial intention. Existing research tends to focus predominantly on formal entrepreneurship education, while the role of informal learning in fostering SDG-oriented entrepreneurial intention remains underexplored. Moreover, the inconsistent findings regarding the direct relationship between entrepreneurship education and entrepreneurial intention highlight the need to further investigate the underlying mechanisms that explain this relationship (Amankwah & Şeşen, 2021; Koropogui et al., 2023; Xu et al., 2023).

Therefore, this study seeks to fill these gaps by examining the effect of informal entrepreneurship education on SDG-oriented entrepreneurial intention, with entrepreneurial mindset serving as a mediating variable. This approach aims to contribute to the literature on sustainable entrepreneurship, Human Capital Theory, and the Theory of Planned Behavior, while offering practical insights for higher education institutions in fostering entrepreneurial capabilities that are aligned with sustainability objectives.

Human Capital Theory explains that education and learning processes, both formal and informal, play a crucial role in enhancing individuals' knowledge, skills, and competencies, which ultimately influence their economic behavior and productivity. This theory emphasizes that investments in education and experience contribute to the development of human capabilities

that can improve individual performance in various economic activities (Urban et al., 2022; Yami et al., 2021).

In the context of entrepreneurship, Human Capital Theory suggests that learning experiences whether obtained through formal education or informal channels such as family, social interaction, and practical experience serve as important determinants in shaping entrepreneurial capacity. Informal entrepreneurship education, in particular, provides individuals with experiential knowledge that enhances their ability to recognize opportunities, adapt to uncertainty, and develop entrepreneurial competencies (Aboobaker & Renjini, 2020).

Thus, this theory underpins the relationship between Informal Entrepreneurship Education and Entrepreneurial Mindset, where learning experiences are expected to shape individuals' cognitive and behavioral readiness in entrepreneurship.

Theory of Planned Behavior (TPB) explains that an individual's intention to perform a behavior is influenced by three main factors, namely attitude toward the behavior, subjective norms, and perceived behavioral control. These components collectively determine the strength of an individual's intention, which is considered the most immediate predictor of actual behavior (Amofah & Saladrighes, 2020; Liu & Peng, 2025; Maheshwari et al., 2022).

In the context of entrepreneurship, TPB is widely recognized as a dominant theoretical framework for explaining entrepreneurial intention, particularly among university students. Empirical evidence consistently shows that attitude and perceived behavioral control (often associated with entrepreneurial self-efficacy) are the most robust predictors of entrepreneurial intention, while subjective norms tend to show more inconsistent effects across contexts (Lopes et al., 2022; Shi et al., 2020; Vásquez et al., 2023).

Furthermore, entrepreneurial mindset can be linked to the cognitive components of TPB, particularly attitudes and perceived behavioral control, as it reflects individuals' confidence, readiness, and way of thinking toward entrepreneurial activities. Individuals with a strong entrepreneurial mindset tend to have more positive attitudes and higher perceived capability, which in turn strengthens their intention to engage in entrepreneurial behavior.

Thus, TPB provides a theoretical foundation for understanding the relationship between Entrepreneurial Mindset and SDG-Oriented Entrepreneurial Intention, where mindset plays a key role in shaping individuals' intention to engage in entrepreneurial activities aligned with sustainable development goals.

Sustainable Entrepreneurship Theory explains that entrepreneurial activities are not only aimed at generating economic profit but also at creating social and environmental value. This perspective emphasizes the integration of economic growth, social inclusion, and environmental protection within entrepreneurial activities, in line with the principles of sustainable development (Huđek & Hojnik, 2020; Roomi et al., 2021).

In the context of the Sustainable Development Goals (SDGs), sustainable entrepreneurship is considered a key mechanism for addressing global challenges such as poverty, inequality, and climate change. Therefore, SDG-Oriented Entrepreneurial Intention becomes an important concept, as it reflects individuals' readiness to engage in entrepreneurial activities that are not solely profit-driven but also oriented toward social and environmental impact (Agu et al., 2021; Baber et al., 2023; Malhotra & Kiran, 2024).

Furthermore, the formation of sustainable entrepreneurial intention is influenced not only by knowledge but also by values, attitudes, and individuals' cognitive readiness to integrate sustainability principles into economic activities. In this regard, entrepreneurial mindset plays a crucial role, as it reflects individuals' ability to recognize and develop business opportunities that align with sustainable development goals.

Thus, this theory provides a theoretical foundation for understanding SDG-Oriented Entrepreneurial Intention as the dependent variable, where individuals are motivated to engage in entrepreneurial activities that balance economic, social, and environmental dimensions within the framework of sustainable development.

Entrepreneurship education is not solely acquired through formal institutions but also through informal learning processes such as family influence, peer interactions, personal experiences, and digital platforms. Informal entrepreneurship education refers to the acquisition of entrepreneurial knowledge, skills, and competencies outside structured curricula, which plays a significant role in shaping individuals' entrepreneurial capacity (Biney, 2023; Essien, 2021; Jabbari et al., 2022). From the perspective of Human Capital Theory, both formal and informal learning experiences contribute to the accumulation of knowledge, skills, and competencies that enhance individuals' productivity and economic behavior (Aboobaker & Renjini, 2020; Urban et al., 2022; Yami et al., 2021).

In many developing countries, informal learning serves as a dominant source of entrepreneurial knowledge, particularly for individuals with limited access to formal education. Through observation, imitation, and experiential learning, individuals develop practical entrepreneurial skills such as opportunity recognition, problem-solving, and adaptability in dynamic environments (Essien, 2021; Jabbari et al., 2022). Prior studies have emphasized that informal entrepreneurship education significantly contributes to entrepreneurial development by strengthening task-specific human capital and enhancing individuals' ability to engage in entrepreneurial activities (Aboobaker et al., 2023; Yami et al., 2021).

However, informal entrepreneurship education does not necessarily lead directly to sustainability-oriented entrepreneurial intentions. This is because informal learning is often practice-oriented and focused on short-term economic outcomes rather than explicitly integrating sustainability values such as environmental responsibility, social impact, and long-term development goals embedded in the Sustainable Development Goals (SDGs) (Agu et al., 2021; Sharma et al., 2023). As a result, individuals may possess entrepreneurial skills but lack the cognitive orientation and value-based perspective required to engage in SDG-oriented entrepreneurship.

In this context, entrepreneurial mindset becomes a crucial mechanism that bridges the gap between learning experiences and sustainability-oriented intentions. Entrepreneurial mindset reflects individuals' cognitive orientation, attitudes, and readiness to engage in innovative and opportunity-driven activities, including those aligned with sustainable development. Previous studies indicate that cognitive and competency-based factors play an essential role in shaping entrepreneurial intentions, particularly when sustainability values are involved (Malhotra & Kiran, 2024; Nițu-Antonie et al., 2022). Based on this reasoning, the following hypotheses are proposed:

**H1:** Informal Entrepreneurship Education affects SDG-Oriented Entrepreneurial Intention

**H2:** Informal Entrepreneurship Education affects Entrepreneurial Mindset

Entrepreneurial mindset refers to an individual's way of thinking, attitudes, and cognitive orientation toward entrepreneurial activities, including the ability to recognize opportunities, take risks, and engage in innovation. Within the framework of the *Theory of Planned Behavior (TPB)*, entrepreneurial mindset can be associated with attitude and perceived behavioral control, which are key determinants in the formation of behavioral intention (Liu & Peng, 2025; Lu et al., 2021; Maheshwari et al., 2022). Individuals with a strong entrepreneurial mindset tend to possess higher self-confidence and a more positive orientation toward entrepreneurial activities, which enhances their intention to engage in such activities.

In the context of sustainable development, entrepreneurial mindset plays a crucial role in shaping entrepreneurial intentions that are not only economically driven but also oriented toward social and environmental objectives. Individuals with a well-developed entrepreneurial mindset are more responsive to global challenges such as poverty, inequality, and climate change, which are central to the Sustainable Development Goals (SDGs). Previous studies have shown that individual attitudes and perceived capabilities are key factors in promoting sustainability-oriented entrepreneurial intentions (Agu et al., 2021; Malhotra & Kiran, 2024).

Furthermore, empirical studies consistently highlight that entrepreneurial mindset has a significant influence on entrepreneurial intention, both in general and in the context of

sustainable entrepreneurship. The role of mindset becomes increasingly important when individuals face the complexity of sustainability challenges, which require the integration of cognitive capabilities, values, and long-term orientation (Baber et al., 2023; Nițu-Antonie et al., 2022). Therefore, a stronger entrepreneurial mindset is expected to increase individuals' propensity to develop SDG-oriented entrepreneurial intentions. Based on this reasoning, the following hypothesis is proposed:

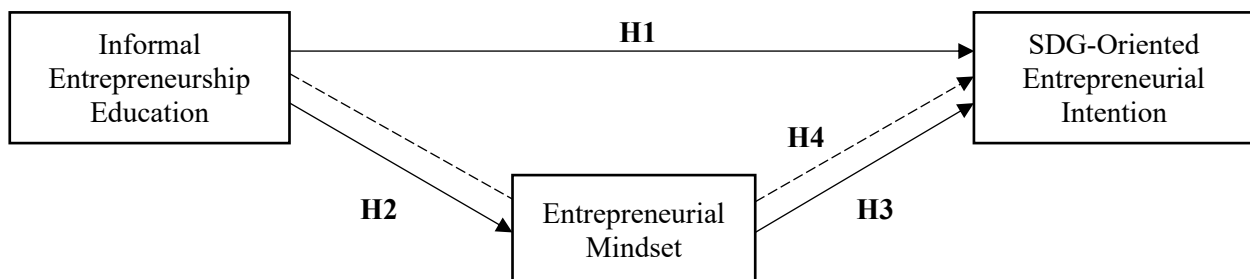
**H3:** Entrepreneurial Mindset affects SDG-Oriented Entrepreneurial Intention

Although informal entrepreneurship education contributes to the development of entrepreneurial knowledge and skills, its influence on entrepreneurial intention is not always direct. From the perspective of Human Capital Theory, knowledge and skills acquired through learning processes must first be internalized into cognitive and behavioral capacities before influencing individual decision-making (Aboobaker & Renjini, 2020; Yami et al., 2021).

In this context, entrepreneurial mindset serves as a key mechanism that transforms learning experiences into entrepreneurial intentions. Informal entrepreneurship education contributes to shaping individuals' cognitive orientation, attitudes, and readiness, which in turn influence their intention to engage in entrepreneurial activities. This is particularly relevant in the context of the SDGs, where individuals require not only technical skills but also a mindset that integrates sustainability values into economic activities.

Previous studies emphasize the importance of mediating variables in explaining the relationship between education and entrepreneurial intention. The presence of entrepreneurial mindset as a mediator indicates that learning alone is insufficient unless it is translated into cognitive readiness and behavioral orientation (Malhotra & Kiran, 2024; Nițu-Antonie et al., 2022). Therefore, entrepreneurial mindset plays a critical role in bridging the effect of informal entrepreneurship education on SDG-oriented entrepreneurial intention. Based on this reasoning, the following hypothesis is proposed:

**H4:** Entrepreneurial Mindset mediates the relationship between Informal Entrepreneurship Education and SDG-Oriented Entrepreneurial Intention



**Figure 1.** Research Model

## 2. METHOD

This study adopts a quantitative approach using a structured questionnaire as the primary data collection instrument. The study examines three main variables: informal entrepreneurship education as the independent variable (X), entrepreneurial mindset as the mediating variable (Z), and SDG-oriented entrepreneurial intention as the dependent variable (Y).

The population of this study consists of students from the Department of Economics and Development Studies, Faculty of Economics, Universitas Tadulako. The sampling technique used is purposive sampling, where respondents are selected based on specific criteria relevant to the research objectives, namely active students who have been exposed to entrepreneurship-related learning or activities, either formally or informally. Data were collected through an online questionnaire. The research instrument consists of 15 indicators representing the three variables, measured using a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5).

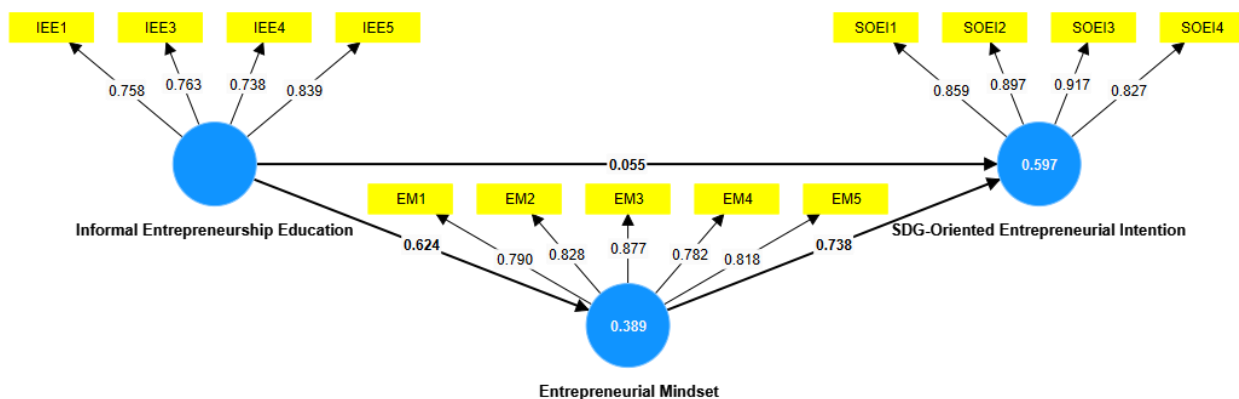
The sample size was determined based on the rule of thumb in PLS-SEM, which suggests a minimum of 5–10 times the number of indicators used in the research model (Hair et al., 2021). With a total of 15 indicators, the recommended sample size ranges from 75 to 150 respondents. Therefore, the final sample size of 90 respondents in this study meets the minimum requirement for SEM-PLS analysis. Data analysis in this study was conducted using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) with the assistance of SmartPLS software. This method is considered appropriate as it allows for the analysis of complex relationships among latent variables and is suitable for predictive research models involving mediating variables (Hair et al., 2021).

The analysis procedure consists of two main stages: the evaluation of the measurement model (outer model) and the structural model (inner model). The measurement model is assessed to evaluate the validity and reliability of the constructs, including convergent validity, discriminant validity, composite reliability, and Cronbach's alpha. The structural model is evaluated to examine the relationships between variables through path coefficients, coefficient of determination ( $R^2$ ), effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ). The significance of the relationships is tested using a bootstrapping procedure (Sarstedt et al., 2019).

### 3. RESULTS AND DISCUSSION

#### Result

This study evaluates the reflective measurement model using several key criteria, namely convergent validity, discriminant validity, and construct reliability. Convergent validity is assessed based on outer loading values ( $\geq 0.70$ ) and Average Variance Extracted ( $AVE \geq 0.50$ ), while construct reliability is evaluated using composite reliability ( $\geq 0.70$ ) and Cronbach's alpha ( $\geq 0.60$ ) (Hair et al., 2019). In addition, discriminant validity is examined using the Fornell-Larcker criterion, where the square root of AVE for each construct must be greater than its correlations with other constructs. The following is an image of the measurement model evaluation as follows:



**Figure 2.** Reflective Measurement Model (Outer Model)

Based on Figure 2, it can be seen that the Convergent Validity test, model design, data input and PLS Algorithm results show that there is indicator elimination. The Informal Entrepreneurship Education (X) is represented by indicators IEE1, IEE3, IEE4, IEE5. The Entrepreneurial Mindset (Z) is represented by indicators EM1, EM2, EM3, EM4 EM5. SDG-Oriented Entrepreneurial Intention (Y) is represented by indicators SOEI1, SOEI2, SOEI3, SOEI4.

**Table 1.** Measurement model calculation

Variables	Items	Outer Loading	Cronbach's Alpha	Rho_C	AVE
Informal Entrepreneurship Education (X)	IEE 1	0,758	0,781	0,858	0,601
	IEE 3	0,763			
	IEE 4	0,738			
	IEE 5	0,839			
Entrepreneurial Mindset (M)	EM 1	0,790	0,878	0,911	0,672

	EM 2	0,828			
	EM 3	0,877			
	EM 4	0,782			
	EM 5	0,818			
SDG-Oriented Entrepreneurial Intention (Y)	SOEI 1	0,859	0,898	0,929	0,767
	SOEI 2	0,897			
	SOEI 3	0,917			
	SOEI 4	0,827			

The results of the convergent validity test indicate that all indicators for the variables Informal Entrepreneurship Education, Entrepreneurial Mindset, and SDG-Oriented Entrepreneurial Intention have outer loading values ranging from 0.738 to 0.917. These values exceed the minimum threshold of 0.70, indicating that all indicators are valid in measuring their respective constructs. Furthermore, the AVE values for each construct Informal Entrepreneurship Education (0.601), Entrepreneurial Mindset (0.672), and SDG-Oriented Entrepreneurial Intention (0.767) are all above 0.50, confirming that the constructs meet the criteria for convergent validity.

The reliability test results presented in Table 1 show that the composite reliability values range from 0.858 to 0.929, exceeding the recommended threshold of 0.70. Similarly, Cronbach's alpha values range from 0.781 to 0.898, which are also above the minimum acceptable level of 0.60. These findings indicate that all constructs demonstrate good internal consistency and are reliable. Therefore, the variables Informal Entrepreneurship Education, Entrepreneurial Mindset, and SDG-Oriented Entrepreneurial Intention are considered reliable in measuring the constructs used in this study.

**Table 2.** Discriminant Validity

Variables	EM	IEE	SOEI
Entrepreneurial Mindset	0,820		
Informal Entrepreneurship Education	0,624	0,776	
SDG-Oriented Entrepreneurial Intention	0,772	0,515	0,876

Furthermore, the results of the discriminant validity test using the Fornell-Larcker criterion show that the square root of AVE for each construct Entrepreneurial Mindset (0.820), Informal Entrepreneurship Education (0.776), and SDG-Oriented Entrepreneurial Intention (0.876) is greater than the correlations with other constructs. This indicates that each construct has good discriminant validity and can be empirically distinguished from the others in the model.

Overall, the results of the measurement model evaluation indicate that all constructs in this study meet the criteria for convergent validity, discriminant validity, and reliability. Therefore, the measurement model is considered valid and reliable, and suitable for further analysis in the structural model evaluation.

Hypothesis testing in this study was conducted using the bootstrapping procedure in PLS-SEM, by examining the *t-statistics* and *p-values*. A hypothesis is considered supported if the *t-statistic* exceeds 1.96 and the *p-value* is below 0.05.

**Table 3.** Hypothesis Testing

Hypothesis	Model	Standard deviation	T-Statistics	P values	Results
H <sub>1</sub>	IEE (X) -> SOEI (Y)	0,140	0,389	0,697	Insignificant
H <sub>2</sub>	IEE (X) -> EM (M)	0,056	11,073	0,000	Significant
H <sub>3</sub>	EM (M) -> SOEI (Y)	0,095	7,768	0,000	Significant
H <sub>4</sub>	IEE (X) -> EM (M) -> SOEI (Y)	0,081	5,705	0,000	Significant

The results of hypothesis testing are presented in Table 4. The findings indicate that the direct effect of *Informal Entrepreneurship Education* on *SDG-Oriented Entrepreneurial Intention* is not significant ( $t = 0.389$ ;  $p = 0.697$ ). Therefore, H<sub>1</sub> is not supported. This result suggests that informal entrepreneurship education does not directly influence individuals' intention to engage in SDG-oriented entrepreneurial activities.

In contrast, the effect of *Informal Entrepreneurship Education* on *Entrepreneurial Mindset* is positive and significant ( $t = 11.073$ ;  $p < 0.001$ ). Thus, H2 is supported. This indicates that informal learning experiences play an important role in shaping individuals' entrepreneurial mindset.

Furthermore, the relationship between *Entrepreneurial Mindset* and *SDG-Oriented Entrepreneurial Intention* is also positive and significant ( $t = 7.768$ ;  $p < 0.001$ ). Therefore, H3 is supported. This finding implies that individuals with a stronger entrepreneurial mindset are more likely to develop intentions toward sustainable and SDG-oriented entrepreneurship.

Additionally, the mediation analysis reveals that *Entrepreneurial Mindset* significantly mediates the relationship between *Informal Entrepreneurship Education* and *SDG-Oriented Entrepreneurial Intention* ( $t = 5.705$ ;  $p < 0.001$ ). Hence, H4 is supported. Given that the direct effect is insignificant while the indirect effect is significant, this result indicates a full mediation effect. This means that informal entrepreneurship education influences SDG-oriented entrepreneurial intention only through the development of an entrepreneurial mindset.

## Discussion

The results of this study indicate that Informal Entrepreneurship Education does not have a direct effect on SDG-Oriented Entrepreneurial Intention. This finding suggests that informal entrepreneurial learning is not sufficient to directly encourage individuals to develop intentions toward sustainability-oriented entrepreneurship. Conceptually, this can be explained by the nature of informal learning, which tends to be practical and experience-based but does not necessarily integrate sustainability values explicitly, such as environmental and social dimensions that are central to the Sustainable Development Goals (SDGs) (Alwakid et al., 2021; Rosário et al., 2022; Shabbir, 2023). This result is consistent with prior studies indicating that entrepreneurship education does not always directly influence entrepreneurial intention, but often operates through underlying cognitive or psychological mechanisms (Agu et al., 2021; Fanea-Ivanovici & Baber, 2022; Sharma et al., 2023). Thus, individuals may acquire basic entrepreneurial skills without necessarily developing a sustainability-oriented entrepreneurial intention.

However, the findings reveal that Informal Entrepreneurship Education has a positive and significant effect on Entrepreneurial Mindset. This suggests that informal learning plays an important role in shaping entrepreneurial thinking, including opportunity recognition, risk-taking ability, and self-confidence in initiating business activities (Aboobaker & Renjini, 2020; Biney, 2023). This result aligns with the perspective of Human Capital Theory, which posits that both formal and informal learning contribute to enhancing individual capabilities in economic activities (Urban et al., 2022; Yami et al., 2021). In this context, family background, entrepreneurial experience, and social interactions serve as key sources of learning that foster specific entrepreneurial competencies, such as innovation and opportunity recognition (Savastano et al., 2022).

Furthermore, Entrepreneurial Mindset is found to have a positive and significant effect on SDG-Oriented Entrepreneurial Intention. This finding highlights that entrepreneurial mindset is a critical factor in encouraging individuals not only to engage in entrepreneurship but also to incorporate sustainability considerations into their business activities. Individuals with a strong entrepreneurial mindset tend to be more adaptive, innovative, and aware of the long-term impacts of economic activities (Li et al., 2023; Shi et al., 2020). In the context of sustainable entrepreneurship, mindset functions as a bridge that connects sustainability values with the intention to engage in SDG-oriented entrepreneurial activities (Alwakid et al., 2021; Fanea-Ivanovici & Baber, 2022).

Moreover, the mediation analysis demonstrates that Entrepreneurial Mindset serves as a full mediator in the relationship between Informal Entrepreneurship Education and SDG-Oriented Entrepreneurial Intention. This indicates that the effect of informal entrepreneurship education on sustainability-oriented entrepreneurial intention occurs indirectly through the development of entrepreneurial mindset (Aboobaker & Renjini, 2020; Cai et al., 2021; Peng et al., 2021). In other words, learning experiences must be internalized into cognitive frameworks before they can be translated into behavioral intentions.

From a theoretical perspective, this study reinforces both Human Capital Theory and the Theory of Planned Behavior (TPB) by demonstrating that the accumulation of knowledge through informal

learning does not directly lead to entrepreneurial intention but requires cognitive transformation in the form of an entrepreneurial mindset (Jung & Lee, 2020; Li et al., 2023). In addition, this study contributes to the Sustainable Entrepreneurship literature by emphasizing that orientation toward the SDGs does not automatically emerge from learning exposure but requires the internalization of sustainability values within individuals (Rosário et al., 2022; Shabbir, 2023).

From a practical perspective, the findings suggest that fostering entrepreneurship among university students should not rely solely on providing informal experiences or exposure. Instead, it is essential to focus on developing a strong entrepreneurial mindset that integrates sustainability values. Educational institutions and policymakers are therefore encouraged to design programs that combine experiential learning with reflective and value-based approaches, enabling students to perceive entrepreneurship not only as an economic activity but also as a means to achieve sustainable development (Fanea-Ivanovici & Baber, 2022; Filho et al., 2021).

Overall, this study highlights that informal entrepreneurship education plays a crucial role as a foundational element in developing entrepreneurial capacity. However, its influence on sustainability-oriented entrepreneurial intention largely depends on the successful formation of an entrepreneurial mindset as the primary mediating mechanism. Therefore, the non-significant direct effect should not be viewed as a limitation, but rather as an important finding that underscores the indirect and complex nature of sustainable entrepreneurial intention formation.

#### 4. CONCLUSIONS AND SUGGESTION

This study examines the relationship between Informal Entrepreneurship Education, Entrepreneurial Mindset, and SDG-Oriented Entrepreneurial Intention. The findings reveal that Informal Entrepreneurship Education does not directly influence SDG-oriented entrepreneurial intention. However, it has a positive and significant effect on Entrepreneurial Mindset, which in turn significantly influences SDG-Oriented Entrepreneurial Intention. Furthermore, Entrepreneurial Mindset is found to fully mediate the relationship between Informal Entrepreneurship Education and SDG-Oriented Entrepreneurial Intention.

These results indicate that informal learning alone is insufficient to directly foster sustainability-oriented entrepreneurial intention. Instead, its impact operates through the development of entrepreneurial mindset as a key cognitive mechanism. Therefore, the formation of sustainability-oriented entrepreneurial intention is an indirect and complex process that requires not only experiential learning but also the internalization of entrepreneurial thinking aligned with sustainability values.

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