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# Entrepreneurial Mindset for Sustainable Economic Growth: Gen Z Jabodetabek Case

**Pauline H. Pattyranie Tan[1]* | Nicholas Wilson[2] | Christian S. R. Novembri[3]**

[1]*Universitas Pelita Harapan, Faculty of Economics and Business, Tangerang, Indonesia*
[2]*Universitas Bunda Mulia, Faculty of Social Sciences and Humanities, Jakarta, Indonesia*
[3]*Universitas Pelita Harapan, Faculty of Economics and Business, Tangerang, Indonesia*

*Correspondence to: Pauline H. Pattyranie Tan, Universitas Pelita Harapan, Jl. M. H. Thamrin Boulevard 1100 Lippo Village Tangerang 15811, Indonesia
E-mail: pauline.henriette@uph.edu

**Abstract:** Entrepreneurship education is increasingly associated with inclusive and sustainable economic growth, especially if it is easily accessible, value-based, and tailored to Generation Z's learning preferences. Access to entrepreneurship education is considered essential in shaping an entrepreneurial mindset for innovation and sustainable economic development. This study aims to analyze the effect of Entrepreneurship Education on Self-Efficacy, the effect of Entrepreneurship Education on Entrepreneurial Attitudes, the effect of Self-Efficacy on entrepreneurial attitudes, the effect of Entrepreneurial attitudes on Entrepreneurial Mindset, the effect of Entrepreneurship Education on Entrepreneurial Mindset, and the effect of Self-Efficacy on Entrepreneurial Mindset of Gen Z. The novelty of this research is the integrative approach between theory and practice for Gen Z in Indonesia, by combining classical theories such as the Theory of Planned Behavior (TPB) with contemporary realities, especially entrepreneurial education and self-efficacy that are tailored to the values and learning preferences of Generation Z. For practical contribution, this research provide a basis for developing an entrepreneurship curriculum based on a mindset. The quantitative analysis was conducted on 160 respondents from Generation Z who have studied Entrepreneurship, as well as those who intend to and have acted as entrepreneurs, both in family businesses and non-family businesses. The findings of this study are that Entrepreneurship Education has a positive effect on Self-Efficacy, as accepted. Entrepreneurship Education has a positive effect on Entrepreneurial Attitudes, as accepted. Self-efficacy has a positive effect on Entrepreneurial Attitudes, rejected. Entrepreneurial Attitude has a positive effect on Entrepreneurial Mindset, as accepted. Entrepreneurship Education has a positive effect on Entrepreneurial Mindset, as accepted. Self-efficacy has a positive effect on Entrepreneurial Mindset, as rejected.

**Keywords:** entrepreneurial attitudes, entrepreneurial mindset, entrepreneurship education, Gen Z entrepreneurs, self-efficacy.

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## INTRODUCTION

Entrepreneurship education is increasingly associated with inclusive and sustainable economic growth, especially if it is accessible, values-based, and tailored to Generation Z's learning preferences. Access to entrepreneurship education is considered essential in shaping an entrepreneurial mindset for innovation and sustainable economic development. In an inclusive ecosystem, entrepreneurial skills are developed among all young people irrespective

of their background, and they are equipped to contribute to a resilient as well as and equitable economy (Ni & Wang, 2024). This purpose-driven entrepreneurship education enables Generation Z to engage in ventures that resonate with their dreams and society's demands, thus promoting economic development and social advancement. Embracing new pedagogical approaches and aligning the educational experience with the values and preferences of Generation Z will empower educators to encourage the next wave of entrepreneurs to confront worldwide challenges, develop sustainable solutions, and create a more just and prosperous future (Molina, 2025; Redford et al., 2023). Thus, attractive to study the entrepreneurial mindset of Gen Z and the factors that influence it, especially entrepreneurial education and self-efficacy, which are mediated by the entrepreneurial attitude of Gen Z in Indonesia as for or inclusive and sustainable economic growth will be there. Strategy could have been effective either for empirical evidence or for filling the research gap about the entrepreneurial mindset of Gen Z in Indonesia, with the case of Jabodetabek region.

Overall, despite the increased interest and international initiatives aimed at promoting entrepreneurship among Generation Z, there are still significant gaps in the conversion of entrepreneurship education, self-efficacy, and attitudes into a strong entrepreneurial mindset. In Entrepreneurship Education, most education systems across the globe still emphasize theoretical knowledge as opposed to practical, experiential learning that develops genuine entrepreneurial skills and mindsets. Consequently, Gen Z is denied the chance to acquire critical thinking, resilience, and opportunity recognition abilities necessary for entrepreneurship in an ever-evolving economy. Concerning Entrepreneurial Self-Efficacy, although Generation Z is typically characterized as confident and technologically knowledgeable, the reality is that its entrepreneurial self-efficacy is highly variable depending on region, culture, and resource availability. In most countries, young people do not gain sufficient mentorship, real-world exposure experience, and support systems to convert self-efficacy into entrepreneurial action. Concerning Entrepreneurial Attitudes, despite a strong emphasis on innovation and social impact by Generation Z,. Cultural and socioeconomic factors may shape their attitudes toward risk and failure. In some regions, fear of failure coupled with a lack of role models in entrepreneurship creates a vicious cycle of defeatism in attitudes that stunts true mindset development (Jeraj & Aydin, 2021).

A survey in Indonesia indicates that as much as 62% of its Generation Z population would rather establish their own businesses than work for another company. The TEA (Total Early-Stage Entrepreneurial Activity) rate stands at only 14.09%, meaning although there is high interest, actual entrepreneurial activities are much lower than it should be. This gap indicates that the Indonesian Gen Z have the desire to become entrepreneurs but faces obstacles in turning those intentions into real businesses. High interest but low realization. Most Gen Z do not possess the mindset and practical skills to convert intentions into actions (Asmoro et al., 2022). Another problem is that education concentrates on theory instead of a mindset. Most entrepreneurship education in Indonesia, including JABODETABEK, has been designed to teach business knowledge and technical skills rather than develop an entrepreneurial attitude and mindset toward doing business. The curriculum often undercuts experiential learning combined with creativity and resilience as essential elements of an entrepreneurial mindset (Erwananda et al., 2021; Purmono, 2023).

This study uses the Theory of Planned Behavior (TPB) as a theoretical basis developed by Ajzen (Sofiani & Subroto, 2024). TPB posits that individual behavior is driven by behavioral intentions, which are influenced by three key components: Attitude toward the behavior (how positively or negatively one feels about performing the behavior), Subjective norms (perceived social pressure to perform or not perform the behavior), and Perceived behavioral control (the perceived ease or difficulty of performing the behavior, closely related to self-efficacy). Thus, this research model aligns with TPB in the following ways: Entrepreneurial

Education and Entrepreneurial Self-Efficacy act as antecedents that shape Entrepreneurial Attitude (mirroring the attitude and perceived behavioral control constructs in TPB) (Jiatong et al., 2021; Wiyanto & Widayati, 2024; Molina, 2025). Entrepreneurial Attitude then mediates the effect of these antecedents on the Entrepreneurial Mindset (analogous to behavioral intention and subsequent behavior in TPB) (Wiyanto & Widayati, 2024. Entrepreneurial Mindset represents the readiness and cognitive orientation to act entrepreneurially, which is the ultimate outcome in your model (Sofiani & Subroto, 2024; Jiatong et al., 2021).

Entrepreneurship education improves students' knowledge, competencies, and, most importantly, self-efficacy (Yeh et al., 2021; Luo et al., 2022; Wang et al., 2023). Through exposure to positive role models, social persuasion, and repeated entrepreneurial tasks, students gain confidence in their ability to succeed as entrepreneurs. This is supported by the application of the Theory of Planned Behavior, where entrepreneurship education enhances students' perceived behavioral agency and self-efficacy beliefs (Raharjo et al., 2023; Purmono, 2023; Widati et al., 2024).

A study published in the Airlangga Journal of Innovation Management found that entrepreneurial self-efficacy has a significant and positive direct effect on entrepreneurial attitude. The research, conducted among students at Universitas Negeri Makassar, demonstrated that higher self-confidence in entrepreneurial abilities is associated with a more positive attitude toward entrepreneurship (Isma et al., 2020). Another empirical study published in Frontiers in Psychology concluded that entrepreneurial self-efficacy-defined as confidence in one's ability to perform entrepreneurial tasks-significantly enhances entrepreneurial attitude. The research explains that individuals who believe in their entrepreneurial capabilities are more likely to develop a positive attitude toward entrepreneurial activities (Liu et al., 2019). Additional research confirms this relationship: individuals with higher entrepreneurial self-efficacy are more likely to have positive beliefs about their abilities to recognize opportunities, take risks, and overcome challenges, which in turn fosters a positive entrepreneurial attitude (Sahid et al., 2024).

An entrepreneurial attitude has a positive and significant effect on the entrepreneurial mindset (Saadat et al., 2022; Yan et al., 2023; Wiyanto & Widayati, 2024). The study further explains that students with a more favorable attitude toward entrepreneurship are more likely to embrace an entrepreneurial mindset, reinforcing the interconnectedness of attitude and mindset (Tian et al., 2025).

Hypothesis testing found a significant positive effect of entrepreneurship education on entrepreneurial mindset, with an original sample value of 0.465, a t-statistic of 6.585 (>1.96), and a p-value of 0.000 (<0.05). This demonstrates that entrepreneurship education develops and influences students' entrepreneurial mindsets by equipping them with critical skills and attitudes such as creativity, resilience, and risk-taking. The study concludes that entrepreneurship education not only provides theoretical knowledge but also shapes the character and mindset of an entrepreneur, leading students to be more inclined to start their own businesses or continue family ventures after receiving such education (Pudjiastuti et al., 2024). A large-scale study of over 90,000 college students confirmed that entrepreneurship education, through curriculum and extracurricular activities, directly predicts and significantly enhances students' entrepreneurial mindset. The research further found that the entrepreneurial mindset mediates the relationship between entrepreneurship education and entrepreneurial intention, highlighting the central role of mindset in translating education into entrepreneurial action (Sun et al., 2023). Another study explicitly tested the hypothesis that entrepreneurship education has a significant positive impact on entrepreneurial mindset and found supporting evidence, emphasizing that educational experiences provide the knowledge, skills, and support systems necessary to develop the attitudes and thinking patterns essential for entrepreneurship (Li et al., 2023).

Research examining the impact of self-efficacy and sustainable entrepreneurship education found that self-efficacy continues to positively influence the entrepreneurial mindset, both directly and when mediated by entrepreneurial attitude. The study concludes that "with or without the entrepreneurial attitude variable, self efficacy can influence the entrepreneurial mindset in the same positive direction." This effect is further supported by findings that entrepreneurial attitude can partially mediate this relationship, but self-efficacy remains a critical factor in fostering an entrepreneurial mindset (Wiyanto & Widayati, 2024). Wiyanto & Widayati (2024) reinforce that self-efficacy is a key driver in shaping entrepreneurial attitudes and behaviors and that it directly enhances the entrepreneurial mindset. Li et al. (2023) demonstrated that entrepreneurial attitude enhances the effect of self-efficacy on entrepreneurial mindset, but the positive influence of self-efficacy remains significant even without this mediation. A study conducted by Wardana et al. (2020) found that entrepreneurship education successfully influences entrepreneurial self-efficacy, entrepreneurial attitude, and the entrepreneurial mindset. On the other hand, entrepreneurial self-efficacy promotes an entrepreneurial attitude instead of an entrepreneurial mindset. Furthermore, an entrepreneurial attitude plays an essential role in mediating both entrepreneurship education and self-efficacy toward students' entrepreneurial mindset.

## METHODS

This research is quantitative research with the dependent variable in the research model is Entrepreneurial Mindset, and the independent variables are Entrepreneurial Education and Entrepreneurial Self-Efficacy, and attitude toward entrepreneurship as a mediated variable. The research model uses a measuring instrument for abstract variables based on behavior and characteristics, using a Likert scale from 1–5, following the Sekaran and Bougie method (Sekaran & Bougie, 2019). The population of the study was Generation Z, as individuals who have an interest in being entrepreneurs, and some have done it, and who have studied Entrepreneurship in the Jabodetabek area, and a sample of 170 respondents was taken using non-probability sampling, or Purposive sampling (Kock & Hadaya, 2018).

The instrument or questionnaire used for the Entrepreneurial Education, Entrepreneurial Mindset, Attitude towards Entrepreneurship, and Entrepreneurial Mindset variables, following Wardana et al. (2020), Soomro & Shah (2022), Utami (2017), and Hasyim et al. (2023). The data was then run using PLS-SEM, and Reliability, Convergent Validity, and Discriminant Validity tests were carried out. Reliability Testing using Cronbach's Alpha and Composite Reliability to ensure that the indicators of a construct are consistent and stable. Convergent Validity is based on Outer loading and AVE values to ensure that the indicators of a construct measure the construct. Discriminant Validity using HTMT to ensure that different constructs are measuring different things.

Data analysis through Structural Equation Modeling (SEM), with a series of outer and inner model tests, and one-tailed hypothesis testing. Hypothesis testing was carried out one-tailed at a 95% level of confidence.

## RESULTS AND DISCUSSION

Respondent profile. As many as 57.5% of respondents are women, and the remaining 49.4% are men, most of whom are around 21-23 years old. 59% have incomes between Rp3 million and 5 million, and the rest are less than or more than that amount. Respondents are domiciled in the areas of Jakarta (17.5%), Bogor (10%), Bekasi (19%), Depok (22%), and Tangerang (42%) the most. This is because their campuses are located in these areas. The types of businesses owned by respondents can be seen in Table 1.

**Table 1 Respondent Business Type**

| | Number of Respondents | Percentage |
|---|---|---|
| Family Business | 143 | 89,4% |
| Not a Family Business | 17 | 10,6% |
| **Total** | 160 | 100% |

Source: Results of Jabodetabek Gen Z Entrepreneur Survey

The data shows that most respondents manage family businesses. The indicator value of Entrepreneurial Education variable based on the Likert scale is as follows. Most stated that their university had provided learning that helped them understand the role of entrepreneurship in society and develop business skills (Table 2).

**Table 2 Average Value of Entrepreneurial Education Indicator**

| No | Indicators | Min | Max | Standard Deviation | Mean |
|---|---|---|---|---|---|
| 1 | The university develops my entrepreneurial skills | 1 | 5 | 1.118 | 3.531 |
| 2 | The university provides complete knowledge about entrepreneurship | 1 | 5 | 1.091 | 3.769 |
| 3 | Learning makes me have creative ideas to become an entrepreneur | 1 | 5 | 1.157 | 3.750 |
| 4 | The learning that I have undergone has helped me understand the role of entrepreneurship in society. | 1 | 5 | 1.139 | 3.800 |
| 5 | The education that I have undergone has helped me become interested in becoming an entrepreneur. | 1 | 5 | 1.123 | 3.531 |
| 6 | The education I received helped me develop my business skills. | 1 | 5 | 1.070 | 3.781 |
| Total average value | | | 3.69 | | |

Source: Results of the 2024 Jabodetabek Gen Z Entrepreneur Survey.

From Table 3, the average respondent answered that they could think creatively, the average mean value was 3.794, which means that the average respondent answered agree, and was able to produce ideas with a mean value of the ESE2 indicator of 3.812, which means that the respondent answered agree.

The total average score for the Entrepreneurial Attitude indicator is 3.637, as seen in Table 4. This means that the average respondent agreed that they were interested in pursuing a career or job as an entrepreneur. They were satisfied with their career and made entrepreneurship their professional goal. The average score for the Entrepreneurial Mindset indicator was 3.810 (Table 5). This means that the average respondent agreed that they would seek information about starting a new business and becoming an entrepreneur. Table 6 shows that most of the loading factor values of each indicator are >0.70. This indicates that the indicator has a strong contribution to the construct or latent variable. This means that the indicator is valid in representing the construct being measured. Specifically, for ESE5 and EM6, the values < 0.70 can be maintained because the AVE (Average Variance Extracted) and construct reliability (Composite Reliability) still meet the criteria. All the AVE values are >0.5 thus all the variables are valid (Table 7).

**Table 3 Average Value of Entrepreneurial Self-Efficacy Indicators**

| No | Indicators | Min | Max | Standard Deviation | Mean |
|---|---|---|---|---|---|
| 1 | I can think creatively | 1 | 5 | 1.061 | 3.794 |
| 2 | I am able to generate ideas | 1 | 5 | 1.079 | 3.812 |
| 3 | I have the ability to identify business opportunities | 1 | 5 | 1.165 | 3.706 |
| 4 | I am ready to start a proper company | 1 | 5 | 1.069 | 3.788 |
| 5 | I can control the process in starting a new business | 1 | 5 | 1.047 | 3.875 |
| 6. | I know how to develop new business processes | 1 | 5 | 1.105 | 3.669 |
| Total average value | | | 3.774 | | |

Source: Smart-PLS 4 Processing Results

**Table 4 Average Value of Entrepreneurial Attitude Indicator**

| No | Indicators | Min | Max | Standard Deviation | Mean |
|---|---|---|---|---|---|
| 1 | A career as an entrepreneur appeals to me | 1 | 5 | 1.089 | 3.663 |
| 2 | From the many career options. I chose to become an entrepreneur | 1 | 5 | 1.058 | 3.638 |
| 3 | Becoming an entrepreneur makes me feel satisfied | 1 | 5 | 1.051 | 3.587 |
| 4 | If I have the resources. I would like to become an entrepreneur | 1 | 5 | 0.978 | 3.638 |
| 5 | I am interested in taking advantage of business opportunities | 1 | 5 | 0.982 | 3.650 |
| 6 | My professional goal is to become an entrepreneur | 1 | 5 | 0.995 | 3.650 |
| Total average value | | | 3.637 | | |

Source: Smart-PLS 4 Processing Results

**Table 5 Average Value of Entrepreneurial Mindset Indicators**

| No | Indicators | Min | Max | Standard Deviation | Mean |
|---|---|---|---|---|---|
| 1 | I will consider my time in entrepreneurship | 1 | 5 | 0.985 | 3.631 |
| 2 | I will look for information about the advantages of entrepreneurship | 1 | 5 | 1.024 | 3.531 |
| 3 | I will look for information about the disadvantages of entrepreneurship | 2 | 5 | 1.048 | 3.962 |
| 4 | I will consider what makes me interested in entrepreneurship | 1 | 5 | 1.052 | 3.862 |
| 5 | One day I am interested in starting a new business | 1 | 5 | 1.123 | 3.856 |
| 6 | I will look for information about how to start a new business strategy. | 1 | 5 | 1.069 | 4.019 |
| Total average value | | | 3.810 | | |

Source: Smart-PLS 4 Processing Results

Inferential Statistics used in this study is PLS-SEM, which evaluates inner, outer models, and hypothesis testing using the smart PLS application. The Outer Model Test can be seen below.

**Table 6 Convergent Validity Test – Outer Loadings**

| Variable | Indicator | Outer Loading |
|---|---|---|
| Entrepreneurial Education | EE1 | 0.871 |
| | EE2 | 0.924 |
| | EE3 | 0.894 |
| | EE4 | 0.883 |
| | EE5 | 0.804 |
| | EE6 | 0.746 |
| Entrepreneurial Self–Efficacy | ESE1 | 0.958 |
| | ESE2 | 0.947 |
| | ESE3 | 0.861 |
| | ESE4 | 0.956 |
| | ESE5 | 0.644 |
| | ESE6 | 0.958 |
| Entrepreneurial Attitude | EA1 | 0.751 |
| | EA2 | 0.747 |
| | EA3 | 0.712 |
| | EA4 | 0.837 |
| | EA5 | 0.807 |
| | EA6 | 0.865 |
| Entrepreneurial Mindset | EM1 | 0.827 |
| | EM2 | 0.723 |
| | EM3 | 0.835 |
| | EM4 | 0.725 |
| | EM5 | 0.774 |
| | EM6 | 0.658 |

Source: Smart-PLS 4 Processing Results

**Table 7 Average Variance Extracted (AVE) Value**

| Variable | AVE | Result |
|---|---|---|
| Entrepreneurial Education | 0.622 | Valid |
| Entrepreneurial Self–Efficacy | 0.732 | Valid |
| Entrepreneurial Attitude | 0.577 | Valid |
| Entrepreneurial Mindset | 0.777 | Valid |

Source: Smart-PLS 4 Processing Results

The loading factor value of each indicator > 0.70 is said to be reliable and has a strong and valid contribution in measuring the latent construct, and is worthy of being maintained in the model.

Based on the results of the SEM analysis, all indicators in the constructs in this research model have a loading factor > 0.70, which indicates that each indicator has a strong and valid contribution in measuring the latent construct. In addition, the Average Variance Extracted (AVE) value for each construct is also above the threshold of 0.50, which means that the construct can explain more than 50% of the variance of its indicators.

**Table 8 Reliability Test**

| Variable | Cronbach Alpha | Reliability | Rule Of Thumb | Result |
|---|---|---|---|---|
| Entrepreneurial Education | 0.878 | 0.907 | > 0.7 | Reliable |
| Entrepreneurial Self – Efficacy | 0.926 | 0.942 | | Reliable |
| Entrepreneurial Attitude | 0.871 | 0.890 | | Reliable |
| Entrepreneurial Mindset | 0.922 | 0.945 | | Reliable |
| | | | | Reliable |

Source: SmartPLS 4.0 Data Processing

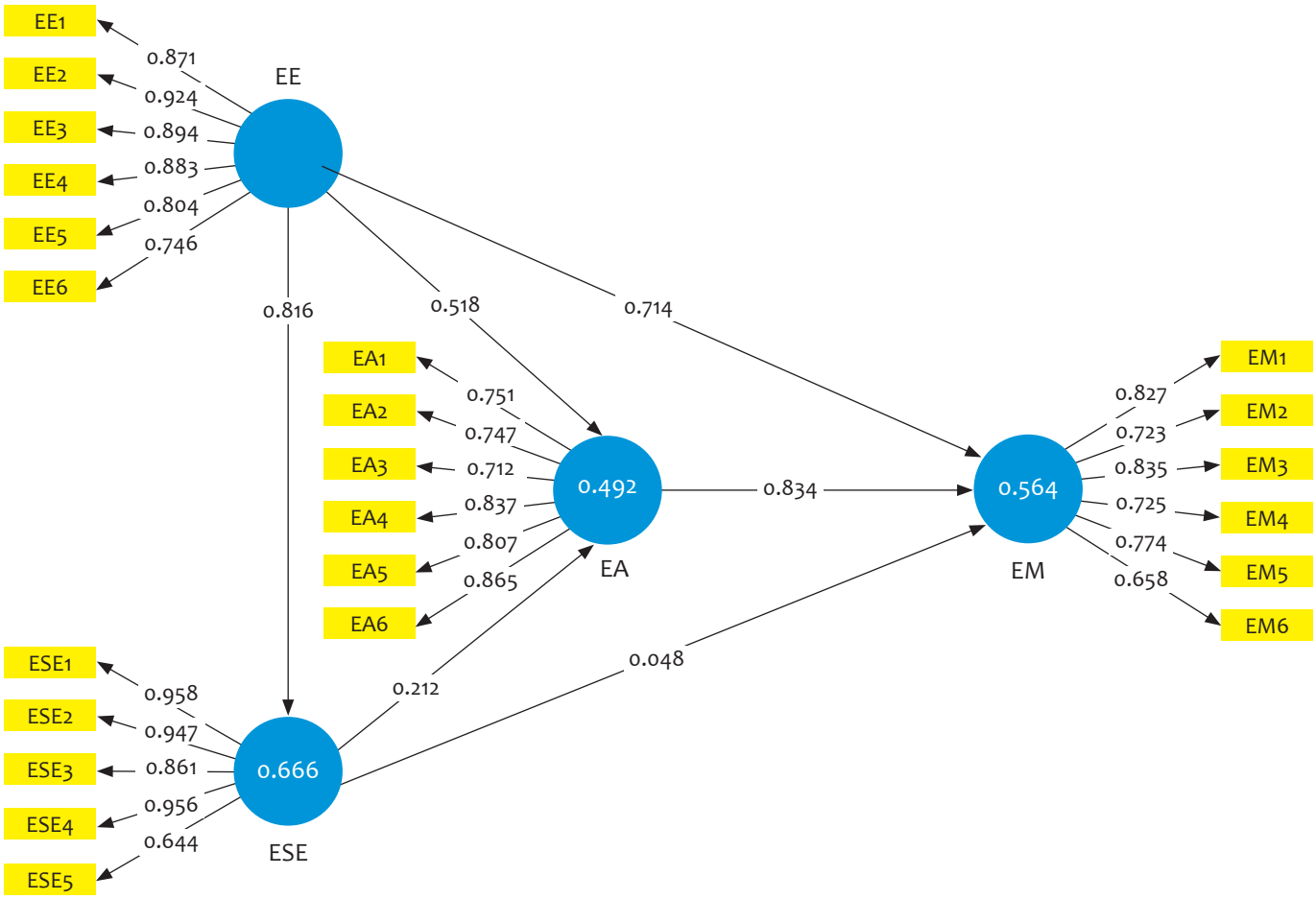
Based on the results of construct reliability testing, all variables in the model show Composite Reliability (CR) values above 0.70, and Cronbach's Alpha (CA) is also above the minimum threshold of 0.70. Table 8 shows that all constructs have good internal reliability, so the indicators used consistently measure each latent construct. To test discriminant validity, HTMT (Heterotrait-Monotrait Ratio) was used, as in Table 9. From Table 9 can be seen HTMT < 0.90, and this shows that there is discriminant, and all indicators meet the requirements. The calculation results for the Outer Model can be seen in Figure 1.

**Table 9 Discriminant Validity (HTMT) Test**

| Variable | Entrepreneurial Attitude | Entrepreneurial Education | Entrepreneurial Mindset | Entrepreneurial Self–Efficacy | Entrepreneurial Attitude |
|---|---|---|---|---|---|
| Entrepreneurial Attitude | | | | | |
| Entrepreneurial Education | 0.778 | | | | |
| Entrepreneurial Mindset | 0.700 | 0.434 | | | |
| Entrepreneurial Self–Efficacy | 0.714 | 0.868 | 0.543 | | |
| Entrepreneurial Attitude | 0.778 | 0.434 | 0.758 | 0.414 | |

Source: SmartPLS 4.0 Data Processing

The Inner Model Test can be seen as follows. In the research conducted using Evaluation of the Determination Coefficient (R2), Predictive Relevance (Q2), and the Multicorrelation test, which evaluates the structural model of the study. In the inner model there is an acceptable r2 which is 0.75 (significant), 0.50 (Moderate), 0.25 (less significant), for Q2 it is greater than 0 (minimum), 0.25 (Moderate), and 0.50 (high), the standard path coefficient value is approximately between -1 and +1 (can be greater or smaller). Values close to +1 usually have a strong and statistically significant influence on a positive relationship, and vice versa. The closer the coefficient estimate is to 0, the weaker the relationship will be.




Source: SmartPLS 4.0 Data Processing

**Figure 1 The Outer Model Test**

Determination Coefficient ($R^2$). R–squared is useful for measuring the number of endogenous variables that can affect each other. The result of R–R-squared is 0.67 and above from the endogenous latent variable in the structural model that can affect the exogenous variable to the endogenous variable in the good category. If the value has a result of 0.33 – 0.67, then the category is classified as moderate, and if the value reaches 0.19 – 0.33, then the category will be classified as a weak category.

Table 10 shows the Determination Coefficient (R2). The $R^2$ test results show that Entrepreneurial Attitude, Entrepreneurial Mindset, and Entrepreneurial Self-Efficacy each have $R^2$ values in the moderate category. Although their predictive power is not particularly strong, the constructs in this research model are able to explain the variation in these three variables with a sufficient level of clarity.

**Table 10 $R^2$ Test**

| | R Square | R Square Adjusted | Result |
|---|---|---|---|
| Entrepreneurial Attitude | 0.492 | 0.485 | Moderate |
| Entrepreneurial Mindset | 0.564 | 0.556 | Moderate |
| Entrepreneurial Self–Efficacy | 0.666 | 0.664 | Moderate |

Source: SmartPLS 4.0 Data Processing

**Table 11 Variance Inflation Factor (VIF)**

| | VIF |
|---|---|
| EA1 | 3.648 |
| EA2 | 3.116 |
| EA3 | 2.198 |
| EA4 | 4.529 |
| EA5 | 3.026 |
| EA6 | 4.560 |
| EE1 | 3.168 |
| EE2 | 3.143 |
| EE3 | 4.354 |
| EE4 | 3.497 |
| EE5 | 2.488 |
| EE6 | 1.637 |
| EM1 | 2.416 |
| EM1 | 2.416 |
| EM2 | 1.989 |
| EM3 | 4.433 |
| EM4 | 4.712 |
| EM5 | 4.299 |
| EM6 | 2.846 |
| ESE1 | 1.542 |
| ESE2 | 3.144 |
| ESE3 | 2.633 |
| ESE4 | 2.114 |
| ESE6 | 1.320 |

Source: SmartPLS 4.0 Data Processing

The $R^2$ test shows an $R^2$ value of 0.492 (adjusted 0.485) means that approximately 49.2% of the variance in Entrepreneurial Attitude can be explained by the predictors in the model. This is considered a moderate level of explanatory power. The $R^2$ value of 0.564 (adjusted 0.556) indicates that about 56.4% of the variance in Entrepreneurial Mindset is explained by the model, also classified as moderate. The $R^2$ value of 0.666 (adjusted 0.664) suggests that 66.6% of the variance in Entrepreneurial Self-Efficacy is explained by the predictors, which is at the higher end of the moderate range.

For the multicollinearity test (Table 11), the VIF value must be higher than 0.20 and lower than 5 to avoid multicollinearity. VIF results show no multicollinearity in this study. The Predictive Relevance ($Q^2$) shows that the model demonstrates moderate predictive relevance for Entrepreneurial Attitude and Entrepreneurial Education (Table 12). The model demonstrates high predictive relevance for Entrepreneurial Mindset and Entrepreneurial Self-Efficacy. All $Q^2$ values are well above zero, confirming that the model has good predictive capability for all constructs listed.

**Table 12 Predictive Relevance ($Q^2$)**

| Variable | Q2 | Result |
|---|---|---|
| Entrepreneurial Attitude | 0.299 | Moderate |
| Entrepreneurial Education | 0.288 | Moderate |
| Entrepreneurial Mindset | 0.250 | High |
| Entrepreneurial Self–Efficacy | 0.497 | High |

Source: SmartPLS 4.0 Data Processing

Hypothesis Testing. In hypothesis testing, the PLS analysis method can be used, which is the Bootstrapping method used to process structural models developed by Geisser & Stone. At that time, the Bootstrapping method could result in data that was distributed freely (Distribution Free) so that it was not necessary to distribute normally, and it was not necessary to draw a large sample (minimum sample of 30). In this test, non-probability and statistics were carried out. For statistical testing, the t-statistic method or t-test was used. for the probability value at the p-value with an alpha reaching 5% or less than 0.5, while the t-value with an alpha reaching 5% was 1.96. Thus, the criteria for accepting the hypothesis when the t-statistic > t-table can be done by testing the t-test, and if the p-value alpha obtained is 5%, the data is declared significant.

**Table 13 Hypothesis Testing**

| Hypothesis | Path coefficients | t-statistics | P-value | Conclusion |
|---|---|---|---|---|
| H1: Entrepreneurial Education has a positive effect on Self-Efficacy | 0.816 | 13.947 | 0.000 | Supported |
| H2: Entrepreneurial Education has a positive effect on Entrepreneurial Attitude | 0.518 | 5.255 | 0.000 | Supported |
| H3: Self-efficacy has a positive effect on Entrepreneurial Attitude | 0.212 | 1.401 | 0.081 | Not Supported |
| H4: Entrepreneurial Attitude has a positive effect on Entrepreneurial Mindset. | 0.834 | 21.667 | 0.000 | |
| H5: Entrepreneurial Education has a positive effect on Entrepreneurial Mindset | -0.174 | 2.342 | 0.010 | Supported |
| H6: Self-efficacy has a positive effect on Entrepreneurial Mindset | 0.048 | 0.410 | 0.341 | Not Supported |

Source: SmartPLS 4.0 Data Processing

From the results of the hypothesis test in Table 13, it can be interpreted as follows:
H1: Entrepreneurship Education has a positive effect on Self-Efficacy.

The results of the hypothesis test show that Entrepreneurship Education has a very significant positive effect on Self-Efficacy, with a path coefficient value of 0.816, a t-statistic of 13.947, and a p-value of 0.000. This indicates that the better the quality of entrepreneurship education received by Gen Z students, the higher their confidence in their ability to start and manage a business. Theoretically, these results are consistent with the Theory of Planned Behavior (TPB) framework, where Entrepreneurial Education acts as an external factor that strengthens perceived behavioral control, which in this context is reflected through Self-Efficacy. Education that provides an understanding of the role of entrepreneurs in society (EE4 indicator, mean = 3.800) and practical business skills (EE6, mean = 3.781) has been shown to encourage students' self-confidence to think creatively (ESE1, mean = 3.794), generate ideas (ESE2, mean = 3.812), and master and start a new business (ESE5, mean = 3.875).

This finding supports previous literature (Ndou et al., 2018; Wardana et al., 2020; Soomro & Shah (2022) which emphasizes that experience-based education and real practice are very important in building entrepreneurial self-efficacy. Therefore, an effective entrepreneurship education strategy is not only theoretical but also emphasizes business simulations, field practice, and real case studies, so that students' confidence in acting as entrepreneurs is stronger.

H2: Entrepreneurship Education has a positive effect on Entrepreneurial Attitude

The test results show that Entrepreneurship Education has a significant positive effect on Entrepreneurial Attitude (P-value = 0.000; t-statistic = 5.255; coefficient = 0.518). This shows that entrepreneurship learning not only provides technical knowledge but also forms a positive attitude towards the entrepreneurial profession. For example, indicator EE6 (mean = 3.781) shows that learning helps students develop business skills, while EA1 (mean = 3.663) states that "a career as an entrepreneur is interesting to me." Theoretically, this finding is consistent with TPB, where education acts as an antecedent that forms "attitude toward behavior." Relevant and applicable education encourages individuals to develop positive perceptions of the entrepreneurial profession, which ultimately strengthens entrepreneurial intentions. This is supported by research by Wardana et al. (2020), whose research results are that Entrepreneurial Education has a positive effect on Entrepreneurial Attitude.

H3: Self-efficacy has a positive effect on Entrepreneurial Attitude

This hypothesis is not statistically supported (P-value = 0.081; t-statistic = 1.401). Although the Self-Efficacy indicator (e.g., ESE2 = 3.812) shows that respondents feel capable of generating ideas, this does not automatically strengthen their attitudes towards entrepreneurship (EA1 = 3.663). This indicates a gap between self-confidence in ability and perceptions of the attractiveness or value of the entrepreneurial profession.

From a TPB perspective, self-efficacy (perceived behavioral control) should influence attitudes, but in this context, there may be external factors such as economic uncertainty or social norms that make self-efficacy not directly shape positive attitudes. This reflects the need for environmental support or role models to strengthen the influence of self-efficacy on attitudes. This study is in accordance with the research of Isma et al. (2020), Liu et al. ( 2019) and Sahid et al. ( 2024).

H4: Entrepreneurial Attitude has a positive effect on Entrepreneurial Mindset

Although statistical significance was achieved (indicating the relationship is unlikely due to chance), the direction of the effect was the opposite of what was hypothesized. In hypothesis testing, support for a

hypothesis requires both statistical significance and alignment with the hypothesized direction. Here, the data do not support the hypothesis because the observed effect is negative, not positive as expected. The hypothesis test result does not match the expected outcome. While the relationship is statistically significant, it is negative rather than positive, so the hypothesis is not supported.

Theoretically, these results show that in the TPB framework, "attitude" is not always consistent with "intention" or "behavior," especially when there are inhibiting factors such as a lack of a supportive ecosystem, fear of failure, or social pressure. This finding is an important signal that attitude alone is not enough to form an entrepreneurial mindset without contextual intervention.

H5: Entrepreneurial Education has a positive effect on Entrepreneurial Mindset

The results of the Hypothesis Test state that Entrepreneurial Education has a positive effect on Entrepreneurial Mindset. Hypothesis H5 is accepted with a P Value of 0.010 and a t-statistic value of 2.342, and a Path Coefficient of –0.174.mThis means that the EE6 indicator has a fairly high mean of 3.781

The education I have taken helps me develop my business skills" and the EM 6 indicator, namely I will look for information on how to start a new business strategy" has a mean of 4.019 which means that the average respondent answered agree and the EM3 indicator, namely I will look for information on the disadvantages of entrepreneurship" has a mean of 3.962 which means that the respondents are in the agree category, the EM4 indicator, namely I will consider what makes me interested in entrepreneurship" has a mean of 3.862 which means that the respondents are in the agree category, the EM5 indicator, namely One day I am interested in starting a new business" has a mean of 3.856 which means that the average respondent answered agree. This means that generation Z students admit that the education they take can help generation Z to develop their business skills to produce creative ideas and control the establishment of new businesses, become entrepreneurs find out about how to form a new business strategy, consider what makes generation Z interested in an entrepreneurial career, find out what are the disadvantages of entrepreneurship to form a better business and the results of research conducted by Wardana et al. (2020) explored Entrepreneurial Education and Self-Efficacy which have a positive impact on Entrepreneurial Mindset.

TPB interpretation shows that although education can strengthen the intention (mindset), the type and approach of education are very important. Entrepreneurship education that is too theoretical can hinder creativity and the courage to take risks, two important components of the entrepreneurial mindset. Therefore, an experiential learning approach and strengthening of soft skills are needed.

H6: Self-efficacy has a positive effect on Entrepreneurial Mindset

The results of the Hypothesis Test state that Self-Efficacy has a positive effect on Entrepreneurial Mindset; hypothesis H6 is not accepted with a P Value of 0.341 and a t-statistic value of 0.410, and a Path Coefficient of 0.048.

This means that it can be seen from the respondent profile where it can be seen from the ESE2 indicator, namely "I can generate ideas, the mean value of the ESE2 indicator is 3.812 and EM 6, namely I will look for information on how to start a new business strategy" has a mean of 4.019. In this case, it means that respondents who have confidence in being able to generate ideas in reality are not necessarily seen by EM 6, who have only just looked for information on how to start a new business strategy.

In the context of TPB, this shows that perceived behavioral control is not enough to influence behavior (mindset) without environmental support, real experiences, and learning systems that allow for real implementation of ideas. This underlines the need for synergy between self-efficacy and external factors such as mentoring and role models.

## CONCLUSION

The findings show that entrepreneurship education significantly enhances self-efficacy and entrepreneurial attitudes among Generation Z, and that practical, experience-based learning approaches are crucial for translating these gains into entrepreneurial mindsets. However, not all positive attitudes or self-efficacy automatically lead to a robust entrepreneurial mindset, highlighting the need for curriculum refinement and ecosystem support. The data suggest that these relationships are not always direct or significant in this demographic context. Academically, this study contributes to the growing body of literature integrating the TPB with entrepreneurship research, particularly by highlighting the nuanced mechanisms through which educational inputs influence entrepreneurial cognition. Furthermore, this study offers new empirical evidence from Indonesia, a rapidly growing economy with a young and entrepreneurial population that is underrepresented in global entrepreneurship research. From a policy perspective, these results underscore the need for reform in entrepreneurship education policies and curricula. Policymakers should prioritize experiential and practice-oriented entrepreneurship education models that do more than simply transfer knowledge—they must foster real entrepreneurial attitudes and self-efficacy.

## ORCID

Pauline H. Pattyranie Tan https://orcid.org/0000-0001-6718-2062
Nicholas Wilson https://orcid.org/0000-0002-6247-3829

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