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The Impact of the Entrepreneurial Education Ecosystem, Self-Efficacy, and Outcome Expectations on Entrepreneurial Career Interest Among Students

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Abstract

Entrepreneurial career intention among university students in developing economies remains relatively low, while prior research has predominantly emphasized individual determinants and insufficiently integrated the comprehensive role of the entrepreneurship education ecosystem. This study aims to examine the effect of the entrepreneurship education ecosystem on students' entrepreneurial career intention through the mediating roles of self-efficacy and outcome expectations. A quantitative survey design was employed involving 314 undergraduate students from the Faculty of Economics and Business, Universitas Negeri Semarang, selected using proportional random sampling. Data were analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings reveal that the entrepreneurship education ecosystem has a positive effect on both self-efficacy and outcome expectations. Furthermore, self-efficacy and outcome expectations significantly and positively influence entrepreneurial career intention. The entrepreneurship education ecosystem also demonstrates an indirect effect on entrepreneurial career intention through these two mediating variables. This study highlights the critical role of strengthening the entrepreneurship education ecosystem as a mechanism for shaping students' confidence and perceived benefits, thereby fostering stronger entrepreneurial career orientation.

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INTRODUCTION

Amid the accelerating dynamics of global economic transformation, technological disruption, and the growing complexity of labor markets, higher education institutions can no longer focus solely on the transmission of academic knowledge. Universities are increasingly expected to produce graduates who are adaptive, productive, and capable of contributing economically both as employees and as job creators. Within this broader transformation, economic education holds a strategic position because it not only equips students with conceptual understanding of economic mechanisms but also fosters economic literacy, workforce readiness, and rational economic decision-making. Nevertheless, empirical realities indicate persistent structural challenges in aligning educational outcomes with labor market demands, reinforcing the urgency of reorienting higher education toward competence-based and career-relevant learning outcomes (Liguori et al., 2020).

From the perspective of economic education, entrepreneurship should not be narrowly understood as a business activity but rather as an applied economic learning process that cultivates value creation, resource management, opportunity recognition, and risk-informed decision-making. Strengthening entrepreneurship education therefore represents an integral component of developing students' applied economic competencies. Through entrepreneurial learning, students gain not only practical skills for labor market entry but also contextualized economic literacy, including understanding of production, distribution, consumption, and market dynamics. Consequently, the development of a comprehensive entrepreneurship education ecosystem has become a strategic agenda for improving graduate employability and enhancing the contribution of economic education to broader economic development (Campos et al., 2021).

Despite the expansion of entrepreneurship-related policies and programs, students' entrepreneurial career intentions remain relatively limited. This phenomenon reveals a persistent gap between the substantial entrepreneurial potential among university students and their relatively low orientation toward entrepreneurial careers. In the context of economic education, such a condition suggests that learning processes have not fully transformed economic knowledge into productive economic behavior. Universities have attempted to establish entrepreneurship education ecosystems through curriculum integration, business training, incubation programs, and institutional support. However, empirical evidence indicates that the effectiveness of such ecosystems largely depends on students' perceptions of relevance, support, and learning value embedded within the educational environment (Wang et al., 2021).

Preliminary observations indicate that the effectiveness of the entrepreneurship education ecosystem remains suboptimal in fostering students' entrepreneurial career intentions. Only a minority of students perceive entrepreneurship as an attractive career pathway, while a considerable proportion believe that the educational ecosystem has not sufficiently supported the development of entrepreneurial competencies. This condition reflects a misalignment between program design and expected educational outcomes, particularly in shaping employability and productive career orientation. Within economic education, such findings suggest that learning processes may not yet fully cultivate applied economic competencies that encourage students to pursue entrepreneurship as a viable form of economic participation (Maheshwari & Kha, 2022).

Theoretically, entrepreneurial career intention is shaped not only by environmental factors but also by internal psychological mechanisms. Social Cognitive Career Theory (SCCT) posits that career interests emerge from the interaction between learning experiences, self-efficacy beliefs, and outcome expectations. In this framework, self-efficacy reflects individuals' confidence in their capacity to perform entrepreneurial tasks, while outcome expectations represent perceived benefits

associated with entrepreneurial engagement. Effective entrepreneurship education therefore involves not only knowledge transfer but also the formation of cognitive beliefs and career orientations (Lent & Brown, 2019).

However, much of the existing literature emphasizes direct relationships between entrepreneurship education and entrepreneurial intention without adequately examining the underlying psychological mechanisms. Such an approach provides limited explanation of how educational processes shape students' economic behavior. Recent studies highlight the need to investigate self-efficacy and outcome expectations as simultaneous mediators linking educational ecosystems to entrepreneurial career intentions. Integrating these psychological constructs offers a more comprehensive understanding of how entrepreneurship education translates into career-oriented behavioral outcomes (Adebusuyi et al., 2022).

In this study, the entrepreneurship education ecosystem is conceptualized as an integrated learning environment encompassing curriculum design, experiential learning, institutional support, and contextualized entrepreneurial exposure. This ecosystem functions as a platform for developing applied economic competencies and strengthening students' readiness for entrepreneurial careers. Prior research demonstrates that integrated entrepreneurship ecosystems enhance productive economic orientation among students; however, their effectiveness depends heavily on students' perceptions of support and relevance within the educational context (Liu et al., 2021).

Table 1. Student Participation in Entrepreneurship Student Activity Unit (2025)

No	Study Program	Number of Students
1	Management	27
2	Accounting	19
3	Development Economics	13
4	Office Administration Education	6
5	Accounting Education	1
Total Students		66

Source: Entrepreneurship Student Activity Unit (2025)

The data presented in Table 1 indicate that student participation in entrepreneurial activities remains concentrated in specific academic programs, while engagement from economic education students is relatively limited. From an economic education standpoint, this pattern suggests that learning processes may not yet effectively encourage the practical application of economic knowledge in productive activities. These findings underscore the importance of understanding how educational environments shape students' psychological readiness for entrepreneurship (Wu & Tian, 2022).

Self-efficacy plays a crucial role in shaping productive economic behavior. Individuals with strong self-efficacy are more confident in making economic decisions, managing risks, and initiating entrepreneurial activities. In economic education, self-efficacy reflects students' perceived ability to apply economic knowledge in real-world contexts. Empirical evidence consistently shows that self-efficacy significantly predicts entrepreneurial intention, particularly when reinforced through experiential learning, mentoring, and project-based education (Ferreira-Neto et al., 2023).

In addition to self-efficacy, outcome expectations constitute a key determinant of entrepreneurial career intention. Outcome expectations refer to individuals' perceptions regarding the economic, social, and psychological benefits of engaging in entrepreneurship. Students with positive expectations are more likely to consider entrepreneurship as a viable career choice. These expectations are shaped by learning experiences, exposure to market realities, and interaction with entrepreneurial role models, making them central to rational economic orientation within educational processes (Santos & Liguori, 2019).

Despite growing interest in entrepreneurship education, the simultaneous relationship among entrepreneurship education

ecosystems, self-efficacy, outcome expectations, and entrepreneurial career intention remains underexplored. Addressing this gap is essential for advancing the field of economic education, particularly in understanding how educational processes generate outcomes such as employability, economic literacy, and productive career orientation. This study therefore examines the influence of the entrepreneurship education ecosystem on students' entrepreneurial career intentions through the mediating roles of self-efficacy and outcome expectations within the framework of Social Cognitive Career Theory (Belchior & Lyons, 2021).

The findings of this research are expected to contribute theoretically by enriching the literature on economic education and entrepreneurial career development, and practically by informing the design of more effective entrepreneurship learning strategies that enhance students' employability and productive economic orientation. Ultimately, this study reinforces the strategic role of economic education in shaping adaptive, self-reliant graduates capable of actively contributing to economic development (Duong et al., 2024).

METHOD

This study employed a quantitative approach using an explanatory survey design aimed at examining causal relationships among variables within a theoretically grounded structural model. Such an approach enables empirical hypothesis testing, standardized measurement of latent constructs, and comprehensive examination of both direct and indirect relationships among the entrepreneurship education ecosystem, self-efficacy, outcome expectations, and students' entrepreneurial career intentions. Epistemologically, this design aligns with the objectives of economic education research, which emphasizes theory-driven behavioral modeling to explain learning outcomes and career-oriented behavioral development (Hair et al., 2019; Duong et al., 2024).

The research was conducted at the Faculty of Economics and Business, Universitas Negeri Semarang (FEB UNNES), which comprises five study programs: Management, Accounting, Economic Education, Accounting Education, and Office Administration Education. The target population included all active undergraduate students enrolled at FEB UNNES. A proportional random sampling technique was applied to ensure representation across study programs based on their respective student proportions. A total of 314 respondents participated in the study, which satisfies recommended sample size requirements for Structural Equation Modeling using Partial Least Squares (SEM-PLS), exceeding both the "10-times rule" and contemporary recommendations for models involving multiple latent constructs and mediation paths (Hair et al., 2021).

The conceptual framework positions the entrepreneurship education ecosystem as the exogenous variable, self-efficacy and outcome expectations as mediating variables, and entrepreneurial career intention as the endogenous variable. The hypothesized relationships were formulated systematically as follows: H1—Entrepreneurship education ecosystem positively influences self-efficacy; H2—Entrepreneurship education ecosystem positively influences outcome expectations; H3—Self-efficacy positively influences entrepreneurial career intention; H4—Outcome expectations positively influence entrepreneurial career intention; H5—Entrepreneurship education ecosystem indirectly influences entrepreneurial career intention through self-efficacy; H6—Entrepreneurship education ecosystem indirectly influences entrepreneurial career intention through outcome expectations. The consistent labeling of hypotheses was designed to prevent interpretive ambiguity in the results and discussion sections (Lent & Brown, 2019; Belchior & Lyons, 2021).

Variable operationalization was grounded in theoretical foundations and prior empirical research. The entrepreneurship education ecosystem was conceptualized as an institutional

environment that supports entrepreneurial learning and practice, measured across three core dimensions: (1) curriculum and learning processes, including entrepreneurship courses, project-based or simulation-based learning, and business incubation; (2) infrastructure and resources, including physical facilities, technology access, business laboratories, and financial support; and (3) participation level, referring to student engagement in entrepreneurial training, competitions, and student entrepreneurial organizations (Elnadi & Gheith, 2021; Liu et al., 2021).

Self-efficacy was measured using three primary indicators—magnitude, strength, and generality—reflecting perceived task capability, resilience in overcoming obstacles, and the breadth of confidence across contexts. Outcome expectations were measured across four dimensions: financial expectations, social relationship expectations, career development expectations, and personal success expectations. Entrepreneurial career intention was measured through indicators of interest, preference, and commitment toward entrepreneurship as a future career orientation. These constructs are widely recognized in Social Cognitive Career Theory as key predictors of career choice and behavioral intention (Abulela, 2024; Odacı et al., 2023).

The research instrument consisted of a structured questionnaire using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Prior to the main data collection, a pilot test involving 30 students was conducted to ensure clarity and psychometric adequacy. Initial validity was assessed using item-total correlation, while reliability was examined using Cronbach's alpha. In the main analysis stage, the measurement model was evaluated using SEM-PLS by testing convergent validity (outer loadings ≥ 0.70 and AVE ≥ 0.50), discriminant validity (Fornell-Larcker criterion and HTMT ratio), and construct reliability using composite reliability and Cronbach's alpha (≥ 0.70) (Hair et al., 2019).

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS software. The choice of SEM-PLS over covariance-based SEM (CB-SEM) was based on several methodological considerations. First, the study aimed to predict and explain simultaneous mediation relationships among latent constructs, making variance-based SEM more appropriate for predictive modeling and theory development. Second, SEM-PLS does not require strict multivariate normality, making it robust for survey data that may deviate from normal distribution. Third, the moderate sample size and mediation complexity render SEM-PLS more efficient in parameter estimation compared to CB-SEM, which is more sensitive to model specification and larger sample requirements (Hair et al., 2021; Ringle & Sarstedt, 2016).

The analysis proceeded in two main stages. The first stage involved evaluation of the outer model to ensure construct validity and reliability. The second stage involved evaluation of the inner model to test path coefficients, t-statistics using bootstrapping with 5,000 resamples, and p-values to determine statistical significance. Additionally, R^2 values were used to assess explanatory power, while effect size (f^2) and predictive relevance (Q^2) were examined to evaluate each variable's predictive contribution to the model (Hair et al., 2019).

Ethical considerations were rigorously observed throughout the research process. All respondents were provided with written information regarding the study's objectives, data confidentiality, and their right to withdraw at any time without academic consequences. Participation was voluntary and based on informed consent, and all collected data were anonymized to ensure respondent privacy. The study also obtained formal approval from the faculty prior to survey administration, ensuring compliance with ethical standards in higher education research (Tran et al., 2023).

Overall, the methodological design was structured to ensure internal validity, construct reliability, and analytical rigor in explaining the mechanisms underlying students' entrepreneurial career intentions. This approach is expected to provide strong empirical contributions to economic education research,

particularly in understanding how entrepreneurship learning environments shape psychological outcomes and career orientations among university students (Liguori et al., 2020; Hendriana et al., 2025).

RESULTS AND DISCUSSION

Descriptive Analysis

This study was conducted among undergraduate students of the Faculty of Economics and Business, Universitas Negeri Semarang, with the population comprising all students from the 2021 cohort. A total of 314 respondents were selected using proportional random sampling to ensure that the distribution of participants adequately represented the five academic programs within the faculty. Data analysis was performed in two stages, namely descriptive statistical analysis and structural model analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. This analytical approach is widely recommended for predictive and exploratory modeling involving latent constructs and mediation relationships, particularly when the objective is theory testing and variance explanation (Hair et al., 2021; Hair et al., 2019).

All variables were classified within the high category, indicating that students generally demonstrated positive perceptions of the entrepreneurship education ecosystem, strong confidence in their capabilities, and favorable expectations regarding the benefits of entrepreneurship. Outcome expectations obtained the highest mean score, suggesting that students tend to perceive entrepreneurship as a career path capable of providing financial, social, and personal development benefits. However, descriptive findings do not allow causal inference; therefore, structural model analysis is required to examine inter-variable relationships and explanatory mechanisms (Hair et al., 2019). Table 2 presents the summary of descriptive statistics for all research variables.

Table 2. Descriptive Statistics Summary

Variable	Total Score	Mean	Category
Entrepreneurial Career Intention	913.4	76.0	High
Entrepreneurship Education Ecosystem	735	81.6	High
Self-Efficacy	729.4	81.0	High
Outcome Expectations	251.6	83.8	High

Source: Processed research data (2025)

Measurement Model Evaluation

The measurement model was evaluated to assess construct validity and reliability prior to hypothesis testing. The research model positioned the entrepreneurship education ecosystem as the exogenous construct, self-efficacy and outcome expectations as mediators, and entrepreneurial career intention as the endogenous construct. All constructs demonstrated Average Variance Extracted (AVE) values above the recommended threshold of 0.50, indicating adequate convergent validity. Specifically, AVE values were 0.623 for the entrepreneurship education ecosystem, 0.636 for self-efficacy, 0.621 for outcome expectations, and 0.614 for entrepreneurial career intention. These results indicate that more than half of the variance in the indicators is explained by their respective latent constructs, confirming satisfactory construct representation and internal consistency (Hair et al., 2019).

Table 3. Convergent Validity Test Results

Variable	Average Variance Extracted (AVE)	Threshold	Result
Entrepreneurial Career Intention	913.4	76.0	High
Entrepreneurship Education Ecosystem	735	81.6	High
Self-Efficacy	729.4	81.0	High
Outcome Expectations	251.6	83.8	High

Source: Processed research data (2025)

Discriminant validity was assessed using cross-loading analysis. Each indicator loaded highest on its respective construct compared to other constructs, with most loadings exceeding 0.70. This finding confirms that the constructs

are empirically distinct and that no substantial conceptual overlap exists among variables. Establishing discriminant validity is essential to ensure that structural relationships reflect theoretical associations rather than measurement redundancy (Henseler et al., 2015; Hair et al., 2021).

Table 4. Discriminant Validity Test Results (Cross-Loadings)

Indicator	EEE (X1)	SE (X2)	OE (X3)	ECI (Y)	Result
EPK1	**0.777**	0.644	0.593	0.648	Valid
EPK2	**0.805**	0.686	0.625	0.678	Valid
EPK3	**0.768**	0.657	0.549	0.577	Valid
EPK4	**0.819**	0.732	0.629	0.695	Valid
EPK5	**0.822**	0.692	0.609	0.652	Valid
EPK6	**0.766**	0.673	0.555	0.603	Valid
EPK7	**0.824**	0.728	0.662	0.716	Valid
EPK8	**0.788**	0.695	0.606	0.651	Valid
EPK9	**0.731**	0.654	0.645	0.666	Valid
ED1	0.711	**0.808**	0.610	0.636	Valid
ED2	0.718	**0.808**	0.616	0.658	Valid
ED3	0.606	**0.743**	0.564	0.568	Valid
ED4	0.716	**0.792**	0.663	0.642	Valid
ED5	0.745	**0.840**	0.650	0.699	Valid
ED6	0.601	**0.738**	0.578	0.575	Valid
ED7	0.749	**0.854**	0.722	0.711	Valid
ED8	0.727	**0.808**	0.707	0.706	Valid
ED9	0.636	**0.779**	0.637	0.591	Valid
EH1	0.606	0.650	**0.742**	0.646	Valid
EH2	0.604	0.632	**0.806**	0.682	Valid
EH3	0.541	0.575	**0.726**	0.576	Valid
EH4	0.646	0.623	**0.788**	0.672	Valid
EH5	0.709	0.691	**0.807**	0.721	Valid
EH6	0.505	0.588	**0.722**	0.568	Valid
EH7	0.631	0.644	**0.823**	0.687	Valid
EH8	0.648	0.670	**0.829**	0.701	Valid
EH9	0.528	0.590	**0.754**	0.587	Valid
EH10	0.669	0.664	**0.835**	0.713	Valid
EH11	0.638	0.656	**0.846**	0.701	Valid
EH12	0.546	0.599	**0.766**	0.614	Valid
MKB1	0.658	0.658	0.704	**0.809**	Valid
MKB2	0.647	0.635	0.696	**0.796**	Valid
MKB3	0.619	0.597	0.625	**0.742**	Valid
MKB4	0.646	0.685	0.671	**0.796**	Valid
MKB5	0.647	0.689	0.697	**0.823**	Valid
MKB6	0.583	0.586	0.591	**0.708**	Valid
MKB7	0.639	0.659	0.693	**0.802**	Valid
MKB8	0.658	0.693	0.678	**0.833**	Valid
MKB9	0.638	0.629	0.582	**0.768**	Valid
MKB10	0.643	0.665	0.660	**0.802**	Valid
MKB11	0.645	0.657	0.645	**0.790**	Valid
MKB12	0.583	0.641	0.596	**0.722**	Valid

Source: Processed research data (2025)

Notes:
EEE = Entrepreneurship Education Ecosystem
SE = Self-Efficacy
OE = Outcome Expectations
ECI = Entrepreneurial Career Intention

Reliability Analysis

All constructs demonstrated strong internal reliability, with Cronbach's alpha values exceeding 0.60 and composite reliability values exceeding 0.70. These results indicate that the measurement instrument consistently captures the latent constructs and provides stable and reliable parameter estimation. High reliability strengthens confidence in subsequent structural model interpretation (Hair et al., 2019).

Table 5. Reliability Test Results (Cronbach's Alpha and Composite Reliability)

Variable	Cronbach's Alpha	Composite Reliability	Result
Entrepreneurial Career Intention	0.924	0.937	Reliable
Entrepreneurship Education Ecosystem	0.928	0.940	Reliable
Self-Efficacy	0.944	0.951	Reliable
Outcome Expectations	0.942	0.950	Reliable

Source: Processed research data (2025)

Structural Model Evaluation (Inner Model)

The structural model was evaluated to examine the explanatory power, predictive relevance, and significance of hypothesized relationships.

Table 6. Coefficient of Determination (R^2)

Variable	R-square	Interpretation
Entrepreneurial Career Intention	0.786	High

Source: Processed research data (2025)

The R^2 value for entrepreneurial career intention was 0.786, indicating that 78.6% of the variance in entrepreneurial career intention is explained by the entrepreneurship education ecosystem, self-efficacy, and outcome expectations. This value reflects substantial explanatory power according to SEM-PLS guidelines (Hair et al., 2021). The predictive relevance value (Q^2predict) for entrepreneurial career intention was 0.773, exceeding the recommended threshold of 0.50. This result indicates strong predictive capability and suggests that the model possesses high out-of-sample predictive accuracy.

Table 7. Predictive Relevance (Q^2)

Variable	R-square	Interpretation
Entrepreneurial Career Intention	0.773	High

Source: Processed research data (2025)

Effect size analysis revealed moderate influence of the entrepreneurship education ecosystem on entrepreneurial career intention (f^2 = 0.161) and outcome expectations on entrepreneurial career intention (f^2 = 0.300), while self-efficacy demonstrated a weak effect (f^2 = 0.014). These findings suggest that outcome expectations constitute the strongest predictor among the examined constructs, whereas self-efficacy plays a relatively limited direct role within this model (Hair et al., 2019).

Table 8. Effect Size (f^2)

Variable	R-square	Interpretation
Entrepreneurship Education Ecosystem → Entrepreneurial Career Intention	0.161	Moderate
Self-Efficacy → Entrepreneurial Career Intention	0.014	Weak
Outcome Expectations → Entrepreneurial Career Intention	0.300	Moderate
Average	0.275	Moderate

Source: Processed research data (2025)

Path Coefficients and Hypothesis Testing

Table 9. Hypothesis Testing Results

Relationship	(β)	T-statistic	P-value
Entrepreneurship Education Ecosystem → Entrepreneurial Career Intention	0.386	3.877	0.000
Self-Efficacy → Entrepreneurial Career Intention	0.121	1.471	0.142
Outcome Expectations → Entrepreneurial Career Intention	0.440	5.794	0.000

Source: Processed research data (2025)

The structural model revealed positive path coefficients for all hypothesized relationships. The entrepreneurship education ecosystem significantly influenced entrepreneurial career intention (β = 0.386, p < 0.001), indicating that a more supportive educational environment enhances students' entrepreneurial career orientation. This finding aligns with prior research emphasizing the importance of educational ecosystems in fostering entrepreneurial behavior (Elnadi & Gheith, 2021; Campos et al., 2021). Self-efficacy exhibited a positive but statistically insignificant relationship with entrepreneurial career intention (β = 0.121, p = 0.142), suggesting that confidence in personal capability alone may not be sufficient to directly stimulate entrepreneurial career interest within this context. Such results imply that psychological confidence may require reinforcement through contextual or motivational factors to influence career choice (Ferreira-Neto et al., 2023; Odacı et al., 2023). In contrast, outcome expectations demonstrated a strong and statistically significant effect on entrepreneurial career intention (β = 0.440, p < 0.001). This finding indicates that students who perceive greater financial, social, and developmental benefits from entrepreneurship are more likely to pursue

entrepreneurial careers. Outcome expectations therefore emerge as the most influential determinant within the proposed model (Santos & Liguori, 2019; Liguori et al., 2020).

Discussion

The findings indicate that the entrepreneurship education ecosystem exerts a positive and statistically significant effect on students' entrepreneurial career intentions. The magnitude of the path coefficient suggests that the quality of the university learning environment constitutes a critical contextual determinant in shaping students' productive career orientations. Within the framework of Social Cognitive Career Theory (SCCT), contextual affordances—such as institutional support, experiential learning opportunities, and access to entrepreneurial networks—function as environmental enablers that shape outcome expectations and career-related interests (Lent et al., 2019; Lent et al., 2017). Empirical studies have consistently shown that university ecosystems integrating curricular, extracurricular, and structural support mechanisms significantly strengthen entrepreneurial intentions (Campos et al., 2021; Moraes et al., 2020; Tran et al., 2023). Likewise, Liu et al. (2021) emphasize that entrepreneurship education ecosystems create synergistic interactions between institutional infrastructure and student agency, thereby reinforcing perceived feasibility and desirability of entrepreneurial careers. The present findings corroborate this line of research by demonstrating that a well-structured educational ecosystem—comprising applied curricula, incubation facilities, and real business exposure—enhances students' perception that entrepreneurship represents a viable and economically meaningful career trajectory.

In contrast, self-efficacy did not demonstrate a statistically significant direct effect on entrepreneurial career intention, despite its positive directionality. From an SCCT perspective, self-efficacy represents a central cognitive mechanism influencing career-related behavior through its interaction with outcome expectations and contextual supports (Lent & Brown, 2019). However, recent evidence suggests that self-efficacy does not always operate as an autonomous predictor; rather, its influence may be contingent upon environmental and motivational mediators (Belchior & Lyons, 2021; Pham et al., 2024a). Studies grounded in SCCT indicate that self-efficacy frequently exerts indirect effects via outcome expectations or perceived institutional support (Adebusuyi et al., 2022; Duong et al., 2024). This suggests that confidence in one's entrepreneurial capability may not automatically translate into career intention when students lack strong expectations regarding tangible economic or social returns. In developing economy contexts, structural uncertainty and perceived labor market risks may attenuate the direct conversion of self-belief into career commitment (Maheshwari, 2021; Liu et al., 2023). Thus, the present result reinforces the multidimensional character of entrepreneurial career formation: psychological resources alone are insufficient without complementary environmental reinforcement and credible benefit expectations.

Conversely, outcome expectations emerged as the strongest and most significant predictor of entrepreneurial career intention. In SCCT, outcome expectations refer to individuals' cognitive evaluations of anticipated consequences—financial rewards, autonomy, social recognition, and personal fulfillment—associated with a given career path (Lent et al., 2017; Lent & Brown, 2019). Empirical evidence consistently demonstrates that positive outcome expectations substantially increase entrepreneurial intention across educational contexts (Liguori et al., 2020; Luc, 2020b; Santos & Liguori, 2019). Moreover, Ip and Liang (2023) show that outcome expectations amplify the translation of entrepreneurial self-efficacy into intention, particularly when sustainability orientation and institutional support are present. The strong coefficient identified in this study indicates that students engage in a rational evaluative process before committing to entrepreneurial careers, prioritizing perceived economic and professional returns. When entrepreneurship is viewed as a pathway to

financial independence and self-determination, intention formation becomes substantially more robust. This aligns with findings from Pham et al. (2024b) and Liu et al. (2023), who report that career-related outcome expectations significantly mediate the relationship between self-efficacy and career choice.

Simultaneously, the structural model reveals that the entrepreneurship education ecosystem, self-efficacy, and outcome expectations collectively explain a substantial proportion of variance in entrepreneurial career intention. Nevertheless, the dominant contribution stems from contextual ecosystem support and cognitive evaluation of anticipated outcomes. This pattern strongly reflects SCCT's integrative logic, wherein environmental supports shape learning experiences that cultivate self-efficacy and outcome expectations, which in turn guide career interests and choices (Lent et al., 2019; Duong et al., 2024). Empirical confirmations of this triadic interaction have been documented in longitudinal and cross-sectional studies across higher education contexts (Belchior & Lyons, 2021; Ip et al., 2021; Tran et al., 2023). However, the relatively weak direct effect of self-efficacy in the present study suggests that contextual and economic signaling mechanisms may carry greater explanatory weight than purely intrapersonal confidence within this institutional setting.

From an economic education perspective, these findings carry important theoretical and policy implications. A robust educational ecosystem functions not merely as a knowledge transmission channel but as a strategic resource configuration system that enhances students' perceived feasibility and desirability of entrepreneurship. By providing structured experiential learning, mentorship, and access to networks, universities effectively shape students' economic cognition and future-oriented evaluations (Moraes et al., 2020; Campos et al., 2021; Liu et al., 2021). However, when experiential exposure fails to generate credible expectations of tangible economic return, even high self-efficacy may not culminate in entrepreneurial career commitment. Therefore, entrepreneurship education must move beyond competence-building toward designing institutional environments that visibly demonstrate market access, opportunity recognition, and sustainable value creation.

Overall, the study underscores that strengthening the entrepreneurship education ecosystem and cultivating positive, realistic outcome expectations constitute strategic levers for enhancing students' entrepreneurial career intentions. While self-efficacy remains theoretically indispensable within SCCT, its functional impact appears conditional upon environmental reinforcement and benefit perception. These findings extend contemporary entrepreneurship education literature by evidencing that, within higher education settings, contextual and cognitive-economic evaluations may exert more decisive influence than self-belief alone. Consequently, universities should adopt an ecosystem-oriented pedagogical architecture that integrates applied learning, institutional support, and outcome-oriented signaling mechanisms to foster adaptive, opportunity-driven, and economically resilient young entrepreneurs.

CONCLUSION

This study demonstrates that students' entrepreneurial career intentions are not formed incidentally but emerge from a dynamic interaction between the entrepreneurship education ecosystem and individual cognitive processes. The findings confirm that a supportive educational environment constitutes the primary structural foundation for fostering entrepreneurial career orientation. When students are exposed to applied curricula, experiential learning opportunities, mentorship, and institutional facilities that support venture development, entrepreneurship becomes cognitively framed as a feasible and economically meaningful career pathway. In this regard, the university ecosystem functions as a contextual catalyst that shapes students' perceptions of opportunity, feasibility, and desirability. Although self-efficacy displayed a positive directional relationship with entrepreneurial career intention, its direct effect

was not statistically significant. This suggests that confidence in one's entrepreneurial capabilities, while theoretically important, is insufficient on its own to stimulate strong career commitment. Self-belief requires reinforcement through credible learning experiences and tangible signals of economic viability. Without supportive environmental conditions and clear perceptions of potential benefits, self-efficacy may remain a latent psychological resource rather than a decisive behavioral driver.

In contrast, outcome expectations emerged as the most influential determinant of entrepreneurial career intention. Students who perceive entrepreneurship as offering financial returns, autonomy, and personal development demonstrate substantially stronger career interest. This finding highlights the central role of rational evaluation in career decision-making: students appear to weigh anticipated benefits before committing to entrepreneurial pathways. Thus, positive and realistic perceptions of entrepreneurial outcomes serve as a critical motivational mechanism that translates educational exposure into career orientation. Taken together, the results indicate that entrepreneurial career intention is shaped through the synergy between ecosystem quality and perceived entrepreneurial benefits, with self-efficacy functioning as a complementary rather than dominant factor. Strengthening entrepreneurship education therefore requires more than enhancing individual competencies; it necessitates designing institutional environments that provide authentic experiential learning, visible support structures, and credible economic prospects. Strategically, universities should adopt an ecosystem-oriented approach that integrates practice-based pedagogy, business incubation, industry collaboration, and structured mentorship. Such an approach can cultivate robust outcome expectations while simultaneously reinforcing students' entrepreneurial confidence. By aligning environmental support with cognitive evaluation processes, higher education institutions can more effectively stimulate entrepreneurial career orientation among students and contribute to the development of adaptive, opportunity-driven, and economically resilient future entrepreneurs.

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