THE DISTORTED PATH TO HIGH-GROWTH ENTREPRENEURSHIP: THE COMPLEX ROLE OF HIGH-GROWTH ENTREPRENEURIAL SELF-EFFICACY IN GENERATION Z

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Abstract

This study investigates the relationship between growth opportunity recognition, ambitious proactivity, and high-growth entrepreneurial intention, with high-growth entrepreneurial self-efficacy as a mediating variable. A digital survey of 400 Generation Z individuals who have taken entrepreneurship courses in higher education was analyzed using structural equation modelling (SEM) with AMOS 26. The findings reveal that ambitious proactivity significantly enhances both high-growth entrepreneurial self-efficacy and high-growth entrepreneurial intention. In contrast, growth opportunity recognition exhibits a complex dynamic—while it positively influences high-growth entrepreneurial self-efficacy, its direct effect on high-growth entrepreneurial intention is negative, indicating that high-growth entrepreneurial self-efficacy functions as a distorter variable. This study highlights the complex interaction of psychological traits and opportunity

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recognition in shaping entrepreneurial ambition, offering new insights into high-growth entrepreneurship development.

Key Words

High-growth entrepreneurship; entrepreneurial intention; entrepreneurial self-efficacy; opportunity recognition; proactive personality.

INTRODUCTION

Previous studies have proven that entrepreneurship contributes to economic development in a country (Jian et al., 2021; Pradhan et al., 2020). Nonetheless, research has shown that growth-oriented entrepreneurship significantly boosts macroeconomic growth, particularly in the countries transitioning their status to high-income economies (Stam & Stel, 2011). Several countries have designed and implemented high-growth entrepreneurship policies such as the NIY and Tekes programs in Finland, Accelerace in Denmark, the High-Growth Programme and the International Growth Programme in Norway, among many others (Autio & Rannikko, 2016; Lilischkis, 2011). These initiatives stem from evidence showing how high-growth firms contribute more to economic growth by generating new jobs and increasing labor productivity (Stam, Suddle, et al., 2011). Therefore, encouraging people to pursue high-growth entrepreneurship is essential, requiring them to have the intention to launch a high-growth business. However, studies regarding the determinants of high-growth entrepreneurial intention remain insufficient.

In this broad landscape, Generation Z, born between 1997-2012, stands out as a critical demographic for the future of entrepreneurship who will drive Indonesia's economy forward as they already make up the majority (27.94%) of the population (Indonesia Central Bureau of Statistics, 2020). Generation Z exhibits various positive traits that could encourage entrepreneurship in the future, such as being visionary, modern, effective communicators through digital media, smart workers, and influential individuals with massive online followership (Dreyer & Stojanová, 2023). Despite being more individualistic (Pichler et al., 2021), this trait may actually drive them to have higher intention to become entrepreneurs, although they will only launch a business if they discover a highly potentially profitable opportunity (Liñán et al., 2016). Thus, Generation Z has an outstanding potential to create high-growth businesses in the future. By focusing on Generation Z, this study addresses a critical gap: understanding how psychological factors, such as ambitious proactivity and self-efficacy, interact with opportunity recognition to shape high-growth entrepreneurial intentions. This will not only enrich the general discussion on the importance of entrepreneurship, but also provide targeted insights that are essential for developing supportive policies and

educational programs aimed at nurturing the next generation of high-growth entrepreneurs. However, the factors that drive their high-growth entrepreneurial intentions, particularly in terms of psychological traits and self-efficacy, also remain underexplored.

Prior research has highlighted the importance of opportunity in fostering the intention to become entrepreneurs (Hassan et al., 2020; Lim et al., 2023; Ryu & Kim, 2020). For high-growth ventures, this capability is even more critical, as it involves identifying market gaps through observation and connecting shifting markets, demographics, technology, governmental regulations, and other elements (Baron, 2006). Entrepreneurs who can effectively identify growth opportunities are more likely to engage in ventures with scalable potential. However, recognizing an opportunity alone may not suffice. Individuals also need to be proactive in order to engage in entrepreneurial activity, as proactive personalities encourage creativity and inspire people to adopt new approaches to issues and challenges (Kumar & Shukla, 2022). In high-growth entrepreneurship, proactive personalities may translate into more ambitious growth objectives and a stronger drive to overcome obstacles.

The rest of the paper is structured as follows: The next section discusses the relationship between this study and earlier research. Section 3 explains the data and measurement strategy. Section 4 presents the results, including descriptive statistics and the measurement and structural models. Section 5 interprets the findings and discusses the significance of high-growth entrepreneurial self-efficacy as a distorter. The findings and implications are summarized in the concluding section.

LITERATURE REVIEW

High-Growth Entrepreneurial Intention

Previous research has identified three types of entrepreneurial intention: general entrepreneurial intention, lifestyle entrepreneurial intention, and high-growth entrepreneurial intention (Drost & Mcguire, 2011). High-growth entrepreneurial intention refers to the interest in building or creating a business and rapidly expanding that business, which could potentially become an international business, an industry leader, or a public company through an IPO (Prabhu et al., 2012). This type of entrepreneurial intention is crucial, as individuals with high-growth entrepreneurial intention will create rapidly growing businesses that are expected to contribute more to the economic development of a country by generating job opportunities, having a lower failure rate, yielding higher profits, paying higher wages, increasing opportunities for product exports, and investing more in research and development (Buss, 2002). High-growth businesses have been found to contribute more to job creation in OECD countries, thus playing a significant role in developing policies to reduce unemployment and encourage economic development (Audretsch, 2012).

According to Gundry & Welsch (2001), high-growth entrepreneurs share several traits, including strategic intentions that prioritize technological advancement and market expansion, a stronger commitment to business success, a greater willingness to make sacrifices for the company, early planning for business growth, the use of a team-based organizational structure, concern for reputation and quality, adequate capitalization, strong leadership, and the utilization of a wider range of financing sources for expansion. These characteristics suggest recognizing growth opportunities and being ambitiously proactive.

Growth opportunity recognition, high-growth entrepreneurial self-efficacy, and high-growth entrepreneurial intention

Opportunity recognition is defined as a cognitive process that involves identifying potential business venture ideas, involving the individual's ability to discover or construct patterns and concepts (Hassan et al., 2020). Therefore, it is accurate to state that growth opportunity recognition refers to the ability to recognize business ideas that have potential to expand, rather than merely being general business ideas. A study regarding new venture growth (X. Kang et al., 2023) stated that entrepreneurs often talked about their "eureka" moments, when they saw market gaps or creative solutions to existing problems. An entrepreneurial venture often grows as a result of taking advantage of and exploiting environmental opportunities (Petrović & Leković, 2019). These findings show the importance of growth opportunity recognition for building a high-growth business. Entrepreneurs who can effectively recognize promising business opportunities tend to pursue ventures with significant growth potential (Baron, 2006; Shane & Venkataraman, 2000). Prior studies emphasize that opportunity recognition is not just a passive observation but an active cognitive process that drives the entrepreneurial mindset (Ardichvili et al., 2003; Mitchell et al., 2002). Thus, when individuals clearly identify viable growth opportunities, they are more likely to develop a strong intention to launch and grow a business.

H1: Growth opportunity recognition has a significant influence on high-growth entrepreneurial intention.

The ability to recognize opportunities plays a pivotal role in building entrepreneurs' confidence in their capabilities (Mcgee et al., 2009). Dinh et al. (2021) found that opportunity recognition affects entrepreneurial self-efficacy. However, another study by J.-H. Kang & Yang (2016) found that recognition of entrepreneurial activities has a significant positive effect on entrepreneurial self-efficacy among college students, which indicates that the more they can identify entrepreneurial opportunities, the more confident they become in starting a business. These studies showed the possibility of a reciprocal relationship between opportunity recognition and entrepreneurial self-efficacy. Another study about women entrepreneurs in high-growth startups found that people with a strong discovery mindset act and think in ways that support opportunity perception, and when combined

with a belief in their abilities, they are more likely to move from opportunity perception to the creation of a new venture (Neill et al., 2015). This finding indicates that developing skills in opportunity recognition can enhance an individual's confidence in starting a high-growth business. Therefore, effective opportunity recognition enhances high-growth entrepreneurial self-efficacy, reinforcing the belief that one can successfully execute the venture.

H2: Growth opportunity recognition has a significant influence on high-growth entrepreneurial self-efficacy.

Ambitious proactivity, high-growth entrepreneurial self-efficacy, and high-growth entrepreneurial intention

Proactive people see possibilities and seize them; they take charge, act, and persist until they achieve significant change (Crant, 1996). This trait is crucial for aspiring entrepreneurs to identify market opportunities and act swiftly upon them (Bateman & Crant, 1993). Proactive personality has been discovered to be a significant predictor of entrepreneurial intention, since it encourages creativity and inspires people to alter how they handle difficulties and issues (Kumar & Shukla, 2022). Meanwhile, ambitious entrepreneurs are defined as those who engage in the entrepreneurial process with the intention of producing the greatest possible value (Stam et al., 2012). In startups and newly formed companies, ambitious entrepreneurship has a positive effect on economic growth (Stam, Hartog, et al., 2011). Ambitious proactivity involves taking the initiative, setting high goals, and actively seeking opportunities, which all are the fundamental traits of successful entrepreneurs (Baum & Locke, 2004; Crant, 1996; Shane & Venkataraman, 2000). Ambitious proactive individuals are more driven to pursue ventures that promise rapid expansion and substantial impact (Autio & Acs, 2010; Ucbasaran et al., 2010). Therefore, ambitious proactivity may directly drive the intention to start high-growth businesses by inspiring an opportunity-driven mindset.

H3: Ambitious proactivity has a significant influence on high-growth entrepreneurial intention.

Proactive personality has also been found to be a strong predictor of entrepreneurial self-efficacy (Nawaz et al., 2023; Yu, 2021). Proactive personality and entrepreneurial self-efficacy have been identified as the cognitive process foundations of entrepreneurial feasibility (Fuller et al., 2018). Proactive people are more aware of environmental opportunities, and their self-efficacy may have a greater influence on their plans to launch a business (Travis & Freeman, 2017). Some of the traits of high-growth entrepreneurs include a strong commitment to a company’s success and a willingness to make sacrifices (Gundry & Welsch, 2001), which shows the ambitious characteristics of entrepreneurs. Ambitious proactivity fosters greater entrepreneurial self-efficacy, forming a foundation for effective business execution (Drnovšek et al., 2010; Zhao et al., 2005). Therefore, we

can conclude that ambitious proactivity is crucial for increasing high-growth entrepreneurial self-efficacy, which in turn increases the intention to start a high-growth business.

H4: Ambitious proactivity has a significant influence on high-growth entrepreneurial self-efficacy.

High-growth entrepreneurial self-efficacy and high-growth entrepreneurial intention

Since starting a new firm is a difficult and risky endeavour that requires confidence and courage in one's talents, the idea of self-efficacy is highly relevant to entrepreneurial studies (Kumar & Shukla, 2022). Self-efficacy has long been identified as a critical determinant of entrepreneurial behaviour (Bandura et al., 1999; Chen et al., 1998). Entrepreneurial self-efficacy has also been identified as a mediating variable between proactive personality and high-growth entrepreneurial intention (Prabhu et al., 2012; Sidratulmunthah et al., 2018). Sweida & Reichard (2013) proposed that increasing high-growth entrepreneurial self-efficacy through proper education and training could boost the intention to create high-growth ventures.

H5: High-growth entrepreneurial self-efficacy has a significant influence on high-growth entrepreneurial intention.

While recognizing growth opportunities is essential, its effect on entrepreneurial intention may be indirect, operating through the enhancement of self-efficacy (Newman et al., 2019; Zhao et al., 2005). Studies indicate that when individuals perceive opportunities, this perception strengthens their confidence in handling entrepreneurial tasks, which in turn shapes their intent to pursue high-growth ventures (Krueger & Carsrud, 1993; Romero-Galisteo et al., 2022). Thus, self-efficacy may act as a mediating mechanism, showing the positive impact of opportunity recognition on entrepreneurial intention (Chen et al., 1998; Wardana et al., 2020).

H6: High-growth entrepreneurial self-efficacy mediates the relationship between growth opportunity recognition and high-growth entrepreneurial intention.

Similarly, ambitious proactivity is thought to influence entrepreneurial intention partly by bolstering self-efficacy (Newman et al., 2019; Zhao et al., 2005). Research has found that individuals with a proactive and ambitious nature tend to develop stronger confidence in their ability to navigate the uncertainties of entrepreneurship (Chen et al., 1998; Krueger & Carsrud, 1993). Hence, self-efficacy may also mediate the relationship between ambitious proactivity and high-growth entrepreneurial intention, meaning

that a proactive mindset enhances self-belief, which in turn drives the intention to engage in high-growth entrepreneurship.

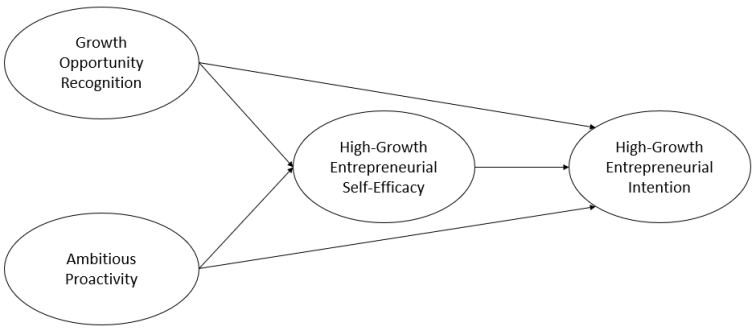
H7: High-growth entrepreneurial self-efficacy mediates the relationship between ambitious proactivity and high-growth entrepreneurial intention.

RESEARCH METHODS AND DESIGN

Research design

This study's quantitative and empirical nature was made possible by its adoption of a positivist paradigm. The purpose of this study was to investigate the relationship between growth opportunity recognition and ambitious proactivity towards high-growth entrepreneurial intention, mediated by high-growth entrepreneurial self-efficacy, as shown in Figure 1.

Figure 1: Research model



Sample and data collection

This study employed a purposive sampling technique with the respondents of Generation Z who had taken an entrepreneurship course at a university. Participants were chosen using clear criteria to ensure they were well-suited for the study. First, they had to belong to Generation Z (born between 1997 and 2012). Second, they needed to have taken an entrepreneurship course at a recognized higher education institution, ensuring that each participant had a basic understanding of entrepreneurship. Lastly, only those who agreed to complete the digital survey were included. This demographic was chosen due to its potential in shaping the future entrepreneurial landscape and its unique characteristics, such as digital savviness and an innovative communication style (Smith & Cawthon, 2017; Turner, 2015). However, it is important to note that most of the respondents were likely in the early stages of their careers, meaning that they had limited practical experience (Gielnik et al., 2018). Consequently, their responses regarding high-growth entrepreneurial intention may tend to show their theoretical knowledge rather than practical experience in the real world (Nabi et al., 2017). This selection

process helped us gather responses from individuals who were both knowledgeable about entrepreneurship and interested in sharing their insights on high-growth entrepreneurial intentions. The primary data were collected through digital questionnaires that were used to distribute the survey. In total, 400 qualified respondents participated, exceeding the minimum required number of respondents of 385 for an unknown population with a 95% confidence level, based on Lemeshow et al. (1988).

Measurement

A 5-point Likert scale ranging from strongly disagree to strongly agree was used. The research questionnaire included 24 items designed to assess five key variables. These variables included growth opportunity recognition and ambitious proactivity as the independent variables, high-growth entrepreneurial self-efficacy as the proposed mediating variable, and high-growth entrepreneurial intention as the dependent variable. There were 5 items adapted from Hassan et al. (2020) to measure growth opportunity recognition, 10 items adapted from SEIBERT et al. (2001) to measure ambitious proactivity, 4 items adapted from Zhao et al. (2005) to measure high-growth entrepreneurial self-efficacy, and 7 items adapted from Drost & Mcguire (2011) to measure high-growth entrepreneurial intention.

Data analysis tool

The study used structural equation modelling (SEM) using AMOS software version 26 to analyze the intricate interactions between these factors. While AMOS may provide a strong framework to analyze complex relationships, it may also come with several limitations, such as dependence on the normality and linearity of data (Kline, 2023). Moreover, its effectiveness may also be influenced by the size and variance of the sample (Wolf et al., 2013). Confirmatory factor analysis was then performed to ensure that all indicators were grouped into factors associated with the author's attempts to connect them with latent variables. The validity and reliability were then assessed using an AVE and construct reliability tests. In order to determine if the sample data originated from a population that was normally distributed, multiple tests were performed, including the normality test. Before determining the outcome using maximum likelihood estimation, the model fit was also assessed to ensure that the structural equation model (SEM) accurately represented the observed data.

RESULTS

Descriptive statistics

This study examined 400 people categorized as Generation Z (born 1997-2012) who have taken an entrepreneurship course at a university or similar higher education program. Age, gender, social economy status, and domicile

were some of the demographic data collected. Based on Table 1, the majority of the respondents were female (81.5%), within the age group 18-24 (70.5%), belonged to the middle social economy status (40.5%), and were located in Java (78%).

Table 1: Demographic characteristics

Profile	Classification	Frequency	%
Gender	Male	74	18.5%
	Female	326	81.5%
Age group	18-24	282	70.5%
	25-28	118	29.5%
Social economy status	Lower	125	31.25%
	Middle	162	40.5%
	Higher	111	27.75%
Domicile	Sumatra	45	11.25%
	Java	312	78%
	Bali & Nusa Tenggara	9	2.25%
	Kalimantan	14	3.5%
	Sulawesi	17	4.25%
	Maluku & Papua	3	0.75%

Validity and reliability test

By examining the loading factor values for each item and the average variance extracted (AVE), with a threshold value of 0.50, tests for convergent validity and construct reliability were conducted to verify the quality of the data (Hair et al., 2021). The construct reliability value was above 0.7 and the AVE > 0.5, demonstrating the validity and reliability of the data. Table 2 shows the loading factor values and AVE for each item.

Table 2: Convergent validity and construct reliability

Variable & Indicator	Std. Loading	Convergent Validity (AVE) ≥ 0.50	Construct Reliability ≥ 0.70
Growth Opportunity Recognition		0.580	0.872
GOR1	0.612		
GOR2	0.761		
GOR3	0.729		
GOR4	0.845		
GOR5	0.836		
Ambitious Proactivity		0.583	0.933
AP1	0.717		
AP2	0.796		
AP3	0.628		
AP4	0.763		
AP5	0.722		
AP6	0.834		
AP7	0.791		
AP8	0.804		
AP9	0.744		
AP10	0.813		
High-Growth Entrepreneurial Self-Efficacy		0.748	0.922
HGSE1	0.888		
HGSE2	0.885		
HGSE3	0.859		

HGSE4		0.827		
High-Growth Intention	Entrepreneurial		0.668	0.961
HGEI1		0.788		
HGEI2		0.825		
HGEI3		0.802		
HGEI4		0.853		
HGEI5		0.831		
HGEI6		0.803		
HGEI7		0.791		

Normality analysis

To determine whether the data had a normal distribution, a normality test was performed. A number of indicators, as shown in Table 3, had critical ratios higher than 2.5, indicating that certain data were not provided frequently. Consequently, the data was standardized using bootstrap. The Bollen-Stine bootstrap showed that the model fit 3000 bootstrap samples more closely. Table 4 shows the distributions with a bell-shaped distribution after a bootstrap.

Table 3: Assessment of normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
GOR5	2.000	7.000	-.664	-5.424	-.285	-1.164
HGEI7	1.000	7.000	-1.291	-10.544	1.392	5.683
HGEI6	1.000	7.000	-.933	-7.621	.209	.855
HGEI5	2.000	7.000	-1.019	-8.322	.425	1.735
HGEI4	2.000	7.000	-.870	-7.107	.031	.126
HGEI3	2.000	7.000	-.898	-7.336	.117	.478
HGEI2	1.000	7.000	-.834	-6.813	.189	.773
HGEI1	3.000	7.000	-.854	-6.973	.049	.199
HGSE4	1.000	7.000	-.714	-5.833	-.053	-.217
HGSE3	2.000	7.000	-.565	-4.613	-.387	-1.581
HGSE2	2.000	7.000	-.548	-4.477	-.400	-1.634
HGSE1	2.000	7.000	-.476	-3.884	-.398	-1.625
AP10	2.000	7.000	-.562	-4.585	-.499	-2.036
AP9	1.000	7.000	-.745	-6.087	.430	1.757
AP8	1.000	7.000	-.656	-5.360	-.071	-.289
AP7	1.000	7.000	-.523	-4.270	-.275	-1.121
AP6	2.000	7.000	-.630	-5.143	-.396	-1.617
AP5	2.000	7.000	-.844	-6.894	-.130	-.532
AP1	1.000	7.000	-.660	-5.387	.227	.925
AP2	1.000	7.000	-.435	-3.552	-.360	-1.471
AP3	3.000	7.000	-.919	-7.501	-.042	-.172
AP4	1.000	7.000	-.947	-7.729	.775	3.162
GOR1	1.000	7.000	-1.158	-9.454	1.168	4.766
GOR2	1.000	7.000	-.120	-.977	-.540	-2.204
GOR3	1.000	7.000	-.745	-6.080	.610	2.490
GOR4	1.000	7.000	-.314	-2.560	-.642	-2.622
Multivariate					330.376	86.582

Table 4: Bootstrap distribution

243.189	|*

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                    275.060  |*
                    306.930  |**
                    338.800  |******
                    370.671  |**********
                    402.541  |********************
                    434.412  |*********************
N = 3000            466.282  |****************
Mean = 440.755      498.152  |***********
S. e. = 1.128       530.023  |******
                    561.893  |***
                    593.764  |*
                    625.634  |*
                    657.504  |*
                    689.375  |*
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Goodness of fit

Table 5 shows the results of goodness of fit test. The NFI and RFI values of 0.899 and 0.887, respectively, suggest that the model is a moderately good fit. However, the IFI, TLI, and CFI values all exceeded the cut-off of 0.90, and the RMSEA was less than 0.8, suggesting a good model fit and confirming the appropriateness of the collected data for analysis.

Table 5: Goodness of fit

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI	RMSEA
Default model	.899	.887	.929	.921	.929	.072
Saturated model	1.000		1.000		1.000	
Independence model	.000	.000	.000	.000	.000	.257

Structural equation modelling analysis

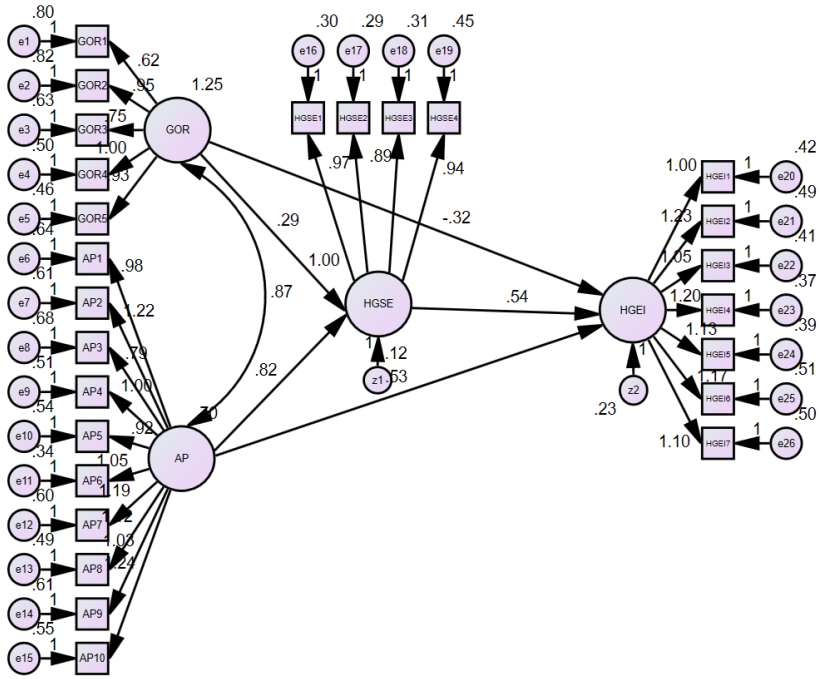
By integrating the measurement model (confirmatory factor analysis) with the structural model through structural equation modelling, we might simultaneously develop a statistical test. Growth opportunity recognition was found to negatively affect high-growth entrepreneurial intention but positively affect high-growth entrepreneurial self-efficacy, rejecting H1 and supporting H2. Ambitious proactivity was found to positively affect both high-growth entrepreneurial self-efficacy and high-growth entrepreneurial intention, supporting H3 and H4. High-growth entrepreneurial self-efficacy was found to positively affect high-growth entrepreneurial intention, supporting H5. This result also means that high-growth entrepreneurial self-efficacy partially mediated the relationship between ambitious proactivity and high-growth entrepreneurial intention, supporting H7. Table 6 summarizes the statistical test, and the structural equation model can be seen in Figure 2.

Table 6: Regression weights

	Estimate	S.E.	C.R.	P	Conclusion
GOR → HGSE	.291	.090	3.249	.001	Accepted

	Estimate	S.E.	C.R.	P	Conclusion
AP → HGSE	.818	.123	6.633	***	Accepted
HGSE → HGEI	.536	.129	4.160	***	Accepted
GOR → HGEI	-.323	.113	-2.862	.004	Rejected
AP → HGEI	.533	.174	3.057	.002	Accepted

Figure 2: Structural equation model



Although growth opportunity recognition positively affected high-growth entrepreneurial self-efficacy, and high-growth entrepreneurial self-efficacy positively affected high-growth entrepreneurial intention, it cannot be concluded that high-growth entrepreneurial self-efficacy mediates the relationship between those variables, because growth opportunity recognition had a negative relationship with high-growth entrepreneurial intention. This result also indicates that high-growth entrepreneurial self-efficacy may act as a distorter variable. To prove this, the analysis was conducted once more, considering only growth opportunity recognition and high-growth entrepreneurial intention. Based on the analysis shown in Table 7, the analysis revealed that in a simple model, growth opportunity recognition positively affected high-growth entrepreneurial intention. This result indicates that the original relationship between opportunity recognition and high-growth entrepreneurial intention was positive but turned negative with the existence of high-growth entrepreneurial self-efficacy.

Table 7: Regression weight for growth opportunity recognition and high-growth entrepreneurial intention

	Estimate	S.E.	C.R.	P
Growth Opportunity Recognition → High-Growth Entrepreneurial Intention	.511	.041	12.330	***

Mediating effect

Table 8 shows that ambitious proactivity and high-growth entrepreneurial intention through high-growth entrepreneurial self-efficacy were significantly correlated (Sobel z = 3.524, p<0.05), proving that H7 is indeed accepted. There is no need to test the mediating effect of high-growth entrepreneurial self-efficacy of growth opportunity recognition and high-growth entrepreneurial intention, since the direct relationship between these variables was negative, despite the positive relationship between growth opportunity recognition, high-growth entrepreneurial self-efficacy, and high-growth entrepreneurial intention. For mediation to be categorized as positive, the signs of both the direct and indirect pathways should be consistent. This means that if the pathway between the independent variable and the dependent variable is positive, then the pathways from independent variable to mediating variable and from the mediating variable to the dependent variable should also be positive. If these signs are inconsistent, the mediation effect can become ambiguous or even lead to a distortion effect (MacKinnon et al., 2012).

Table 8: Sobel test for the mediating effect

	Hypotheses	Z	p	Result
H7	HGSE mediated AP and HGEI	3.524	0.000	Accepted

DISCUSSION

Interpretation of key findings

The results of this study revealed a complex relationship between growth opportunity recognition, ambitious proactivity, and high-growth entrepreneurial intention, especially when high-growth entrepreneurial self-efficacy is included as a mediating variable. Ambitious proactivity consistently demonstrated a positive effect on high-growth entrepreneurial self-efficacy. This aligns with previous studies emphasizing the important role of a proactive individual in identifying opportunity, determining ambitious goals, and encouraging entrepreneurial success (Biswas, 2024; Hirschi & Spurk, 2021; Neneh, 2019). This finding affirmed that a proactive and aspirational approach tends to increase one's belief in their capabilities and determination to pursue high-growth entrepreneurship.

However, the relationship between growth opportunity recognition and high-growth entrepreneurial intention showed an unexpected dynamic. Although growth opportunity recognition positively affected high-growth entrepreneurial self-efficacy, its direct effect on high-growth entrepreneurial

intention was negative. This result challenged the conventional assumption that opportunity recognition is always beneficial (Baron, 2006; Patzelt & Shepherd, 2011). On the contrary, this result also showed that psychological factors like high-growth entrepreneurial self-efficacy may intervene in an unexpected way to shape the final outcomes.

The role of high-growth entrepreneurial self efficacy as a distorter variable

Our findings confirm previous research highlighting the role of self-efficacy in driving entrepreneurial intention (Prabhu et al., 2012; Zhao et al., 2005). However, most of the studies examined the role of general entrepreneurial self-efficacy rather than its specific role in high-growth entrepreneurship. This study found that high-growth entrepreneurial self-efficacy did not function as a mediating variable but as distorter variable in the relationship between growth opportunity recognition and high-growth entrepreneurial intention. When high-growth entrepreneurial self-efficacy was included in the analysis, the direct relationship between growth opportunity recognition and high-growth entrepreneurial intention changed from positive to negative. This showed that high-growth entrepreneurial self-efficacy not only changed the strength of the relationship, but also its direction.

One possible explanation for this distortion is the overemphasize on the self-efficacy, which may lead individuals to overestimate their capabilities and focus too much on the internal factors while overlooking the external market factors (Camerer & Lovallo, 1999; Moore et al., 2007). This overconfidence can hinder their decision-making and decrease the possibility of pursuing opportunity in high-growth entrepreneurship (Farsi et al., 2014; Taktak & Triki, 2015). Conversely, individuals with high self-efficacy might be too cautious and perceive opportunity as risky and complex. This finding highlighted the importance of maintaining balance between confidence and decision-making, while providing a new perspective on how self-efficacy interacts with opportunity recognition.

Theoretical contributions

This study made a significant contribution to the theoretical understanding of high-growth entrepreneurship by showing that growth opportunity recognition does not always have a direct positive relationship with entrepreneurial intention. The finding that high-growth entrepreneurial self-efficacy acts as a distorter variable broadens the theoretical perspective on mediators in entrepreneurship, challenging the traditional assumption of a linear relationship between variables. Moreover, this study integrates the theory of proactive personality and social cognitive theory, highlighting the importance of the interaction between personal characteristics, such as ambitious proactivity and self-efficacy, in influencing entrepreneurial intention. Thus, this study offers a new foundation for further study that may explore the role of psychological variables in high-growth entrepreneurship.

Practical implications

This study has crucial implications for education and entrepreneurship policy. Educational institutions may develop programs that not only teach technical skills like opportunity recognition but also train students to balance their self-efficacy with critical analysis regarding market risk and opportunity. Educational intervention should aim to balance the self-confidence building and critical market analysis, given that high-growth entrepreneurial self-efficacy appears to distort rather than mediate the relationship between growth opportunity recognition and high-growth entrepreneurial intention. For instance, entrepreneurship curricula could integrate case studies and simulation practices that highlight the pitfalls of overconfidence, allowing students to experience firsthand how overconfidence may hinder growth opportunity recognition. Additionally, policy makers could design programs that provide access to training, mentoring, and real-world simulations to encourage young entrepreneurs, especially Generation Z, in developing their capabilities and realistic confidence in starting a high-growth business. For example, entrepreneurship programs could include mentorship initiatives and peer review sessions to provide constructive feedback on the business ideas and strategic planning. These steps would help to ensure that future entrepreneurs are psychologically prepared and equipped with the practical skills to succeed in high-growth businesses.

Limitations

One of the notable limitations of this study is the dependence on the self-assessment of a relatively inexperienced group. Generation Z, who are in their late teens to mid-twenties, may not have faced the full spectrum of challenges associated with managing a high-growth business, such as operational complexity, failure, and limited resources (Goh & Lee, 2018). As entrepreneurial self-efficacy is generally built through experiential learning, the speculative nature of self-efficacy may affect the reliability of these insights (Bandura et al., 1999; Nabi et al., 2017). This limitation shows that it is necessary to interpret the findings with caution, as they may not fully reflect the realities experienced by more experienced entrepreneurs.

Another limitation lies in the regional context of this study. This study was conducted in Indonesia, which is still a developing country (Tambunan, 2011). This means that the respondents may face unique socio-economic challenges such as limited access to capital, limited entrepreneurial networks, and underdeveloped infrastructure in less developed areas (Sandee & Rietveld, 2001; Suryahadi et al., 2009). These limitations may influence respondents' perceptions of entrepreneurial opportunity and self-efficacy, reflecting the wider constraint of their environment. In less developed areas, the absence of a supportive ecosystem, such as strong financial institutions, skilled labor markets, and innovative networks, may restrict high-growth entrepreneurial intention (Ács et al., 2014; Bruton et al., 2013). Consequently, the findings of this study may be less applicable in a

more developed economy, where entrepreneurs usually benefit from a more comprehensive support system (Stenholm et al., 2013).

Another critical limitation of this study is the low number of male respondents that could affect the overall findings. The survey sample was highly imbalanced, with 81.5% of the respondents being female and only 18.5% being male. This gender imbalance is significant because entrepreneurial intention and self-efficacy may vary by gender due to variations in social norms, risk perception, and access to resources (Gupta et al., 2009; Wilson et al., 2007). This composition may reflect the cultural factors from the surveyed area, where women tend to operate smaller-scale or home-based businesses, potentially affecting their perception of high-growth entrepreneurial intention (Brush et al., 2009; Jennings & Brush, 2013).

Future research

Future research could address one of the limitations by including a more diverse sample across various age groups or adopting a longitudinal design to track the evolution of entrepreneurial self-efficacy over time. Including respondents with various levels of entrepreneurial experience may enable a deeper investigation on how practical experience would affect high-growth entrepreneurial intention. Such studies could provide a more comprehensive understanding of the dynamic interaction between theoretical knowledge and practical experience in shaping entrepreneurial self-efficacy.

Future studies could also consider including samples from more economically developed countries to explore how contextual support might affect high-growth entrepreneurial intention. A comparative study in various socio-economy settings might help clarify the extent to which regional factors shape entrepreneurial self-efficacy and entrepreneurial intention, compared to individual capacities, thereby increasing the generalizability of the findings.

Achieving a more balanced gender distribution in future research would also be beneficial in understanding the nuances of entrepreneurial self-efficacy and high-growth entrepreneurial intention. Including a more proportional representation of male respondents could facilitate a deeper investigation into gender-related socio-cultural factors. A comparative study could determine whether the observed patterns hold universally or are context-specific, shaped by differing gender norms.

CONCLUSION

This study provided notable insights into the complex dynamics between growth opportunity recognition, ambitious proactivity, and high-growth entrepreneurial self-efficacy in shaping high-growth entrepreneurial intention. While ambitious proactivity emerged as an absolute driver for high-growth entrepreneurial intention, the role of growth opportunity recognition was proven to be more complex. The results showed that high-growth

entrepreneurial self-efficacy acted as a distorter variable, changing the relationship between growth opportunity recognition and high-growth entrepreneurial intention. This finding highlighted the need for a deeper understanding of psychological dynamics in entrepreneurship.

Future studies should investigate contextual factors such as cultural influences or socio-economic status that may influence how high-growth entrepreneurial self-efficacy functions as a distorter variable. Moreover, a longitudinal study could also reveal how these relationships develop over time. By exploring these aspects, scholars can continuously refine theoretical frameworks and provide practical insights to encourage high-growth entrepreneurship.

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