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The mediating role of attitude and knowledge in the relationship between export/import support and global entrepreneurial mindset: Evidence from young Muslims in Yogyakarta

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ABSTRACT

Globalization and digital technology create opportunities for Muslim Generation Z in cross-border entrepreneurship, yet their understanding of export-import procedures remains limited. This study examines the mediating role of attitude, perception, and knowledge in developing a Global Entrepreneurial Mindset (GEM) among Muslim Gen Z in Yogyakarta. Using a quantitative approach with 220 respondents and PLS-SEM analysis, the results show that attitude, digital support, knowledge, policy support, and perception significantly influence GEM. Digital support positively affects attitude, opportunity awareness influences perception, and policy support affects knowledge. Attitude mediates the effect of digital support on GEM, while knowledge mediates the effect of policy support. However, perception does not mediate the relationship between opportunity awareness and GEM. These findings emphasize the strategic role of digital infrastructure, education, and supportive government policies in enhancing global entrepreneurial capacity. This study also contributes to the development of the SOR framework in global entrepreneurship.

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1. Introduciton

Young entrepreneurs are young people who are currently experiencing an increase in entrepreneurial activity in various countries. Data from the Global Entrepreneurship Monitor (GEM) 2023/2024 notes an upward trend in entrepreneurial activity among young people, and the data shows that the intention to become an entrepreneur is relatively high among those aged 18–24. The most recent period shows the dynamic nature of Indonesia's international trade. According to statistical data, Indonesia's export value in 2024 has increased compared to 2023. Generation Z is a generation that shows a strong tendency to enter the business world at an early age, not limited to local businesses but also digital businesses oriented towards the international market (cross-border e-commerce, cross-border wholesale/retail trade). A national youth population survey indicates that a considerable percentage of Gen Z is interested in boosting their income through side jobs or launching their own businesses. This trend highlights Gen Z's significant potential as emerging entrepreneurs.

Combining external market conditions (export/import trends and CBEC opportunities) with the potential and behavior of Gen Z entrepreneurs opens up opportunities for the formation of a Global Entrepreneurial Mindset among the younger generation. However, the reality on the ground in areas such as Yogyakarta shows a gap between Gen Z's interest and their access/practical ability to engage in export-import activities (e.g., knowledge of customs regulations; market networks; capital; digital capabilities for cross-border selling). A study of entrepreneurship programs in Yogyakarta shows that there are many training courses and programs, but challenges in implementation and international market connectivity are still felt (Khairisna et al., 2020). Globally, the growth of the digital economy and cross-border e-commerce (CBEC) opens up opportunities, especially for young entrepreneurs to engage in export-import.

The digital cross-border market is expected to grow rapidly (global cross-border e-commerce market estimates show a market value of hundreds of billions to over USD 1 trillion in the early 2020s). This signals a real opportunity for Gen Z to monetize their products/services in the international market. According to the ILO report (Global Employment Trends for Youth 2024), many developing countries face challenges in formal employment for young people, making entrepreneurship an important avenue for young people to obtain quality jobs or create their own job. Given this data phenomenon, it is important to analyze how the Global Entrepreneurial Mindset (GEM) of Generation Z can be influenced by Attitude, Policy Support, and Digital Support. Perception is a mindset variable for Gen Z that can be directed toward the role of micro-exporter/importer and globally-oriented MSMEs (Bae et al., 2014).

Despite the growing interest of Generation Z in entrepreneurial activities and the rapid expansion of cross-border e-commerce markets, existing scholarship has largely concentrated on entrepreneurial intention in general or domestic contexts, with limited attention given to the development of a Global Entrepreneurial Mindset (GEM) among young entrepreneurs. Prior studies have consistently highlighted the importance of entrepreneurial education, digital literacy, and self-efficacy as key determinants of entrepreneurial intention (Bae et al., 2014; Duong et al., 2025). However, comparatively little research has examined how these factors translate into entrepreneurial orientations that extend beyond national markets, particularly in relation to participation in export–import activities and other forms of cross-border business engagement.

In addition, the literature on digital entrepreneurship has predominantly emphasized the role of technology adoption and digital capability in enabling entrepreneurial entry. While these technological dimensions are undeniably important, relatively few studies incorporate policy support and the broader institutional environment as integral components of the entrepreneurial ecosystem that shapes globally oriented entrepreneurial behavior among youth. As a result, current research lacks a comprehensive analytical framework that simultaneously considers individual-level factors (such as attitudes and perceptions), institutional support mechanisms, and digital infrastructure in explaining the emergence of a global entrepreneurial orientation.

A further limitation concerns the mechanisms through which external stimuli are translated into entrepreneurial cognition and behavior. Although the Stimulus–Organism–Response (S–O–R) framework has been widely employed in behavioral and entrepreneurship research, empirical investigations that explicitly examine the mediating roles of perception, knowledge, and attitudes toward export–import activities in shaping a global entrepreneurial mindset remain relatively limited. This gap is particularly evident in studies focusing on Generation Z, whose entrepreneurial engagement is increasingly shaped by digital platforms and global market opportunities.

Moreover, empirical evidence addressing these issues within developing country contexts remains scarce. In Indonesia, and particularly within regional entrepreneurial ecosystems such as Yogyakarta, various entrepreneurship training initiatives have been introduced to support youth entrepreneurship. Nevertheless, existing observations suggest a persistent disconnect between high entrepreneurial aspirations among young people and their practical readiness to engage in international trade. Challenges such as limited familiarity with export–import regulations, insufficient access to global market networks, and a lack of operational knowledge related to cross-border digital commerce continue to constrain the ability of young entrepreneurs to capitalize on emerging global opportunities.

Against this backdrop, the present study seeks to address these gaps by examining how Attitude, Policy Support, and Digital Support shape the Global Entrepreneurial Mindset of Generation Z. In doing so, it further investigates the mediating roles of perception, knowledge, and export–import awareness in translating external opportunities and institutional support into globally oriented entrepreneurial readiness. It is important to conduct a study on the mediating role of Generation Z's perceptions, attitudes, and knowledge toward the import/export business to encourage a global entrepreneurial mindset. The results of this study are expected to provide strategic recommendations for entrepreneurship education and for the government through its policies in fostering young entrepreneurs who are oriented toward the global market.

2. Literature Review (optional)

Theoretical Integration: S-O-R, TAM, TPB, and KBV

This study adopts an integrated theoretical framework combining the Stimulus–Organism–Response (S-O-R) paradigm, the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Knowledge-Based View (KBV) to explain how external environmental conditions shape the development of a Global Entrepreneurial Mindset (GEM) among Generation Z. Integrating these theoretical perspectives provides a more comprehensive understanding of how

environmental stimuli are translated into entrepreneurial cognition and ultimately into globally oriented entrepreneurial behavior.

The Stimulus–Organism–Response (S-O-R) framework, originally proposed by Mehrabian and Russell (1974), explains how environmental stimuli influence individuals' internal cognitive and affective states, which subsequently determine behavioral responses. Within this perspective, external conditions such as market opportunities, policy support, and digital technological infrastructure function as stimuli that trigger internal psychological processes within individuals. These internal processe (referred to as organismic state) include perceptions, knowledge, and attitudes that shape individuals' behavioral responses. In the context of this study, the response is reflected in the formation of a Global Entrepreneurial Mindset, characterized by innovation orientation, proactiveness, risk-taking, and openness to international market opportunities.

To further explain the role of digital technology within this process, the Technology Acceptance Model (TAM) (Davis, 1989) provides an important theoretical foundation. TAM posits that individuals' perceptions of the usefulness and ease of use of technology significantly influence technology adoption. In entrepreneurial contexts, digital technologies such as e-commerce platforms, digital payment systems, and online logistics services significantly reduce barriers to entry into global markets. As a result, technology adoption can shape entrepreneurial attitudes and enable individuals to participate in international business activities more effectively.

Meanwhile, the Theory of Planned Behavior (TPB) explains how attitudes and cognitive evaluations influence behavioral intentions. TPB emphasizes that individuals are more likely to engage in entrepreneurial activities when they possess favorable attitudes, strong perceived capabilities, and supportive environmental conditions. This perspective suggests that positive attitudes and perceptions toward entrepreneurship are important psychological drivers that translate external opportunities into entrepreneurial actions.

In addition, the Knowledge-Based View (KBV) highlights knowledge as a strategic resource that enhances the ability of individuals and organizations to identify and exploit business opportunities. In the context of global entrepreneurship, knowledge of export-import procedures, international market dynamics, and cross-border logistics plays a crucial role in enabling entrepreneurs to operate in international markets. Therefore, export-import literacy represents an important cognitive capability that facilitates the development of a global entrepreneurial orientation.

By synthesizing these four theoretical perspectives, this study conceptualizes entrepreneurship development among Generation Z as a process in which external stimuli (opportunity awareness, policy support, and digital support) influence internal organismic mechanisms (perception, export-import literacy, and entrepreneurial attitude), which subsequently shape the response in the form of a Global Entrepreneurial Mindset.

Although several theoretical perspectives have been used to explain entrepreneurial behavior, this study positions the Stimulus–Organism–Response (S-O-R) framework as the central theoretical lens because it provides a more comprehensive explanation of how environmental conditions translate into entrepreneurial cognition and behavior. Unlike the Technology Acceptance Model (TAM), which primarily focuses on technology adoption, or the Theory of Planned Behavior (TPB), which explains behavioral intention through attitudes and perceived control, the S-O-R paradigm explicitly captures the dynamic process linking external stimuli,

internal psychological mechanisms, and behavioral outcomes. This integrative structure is particularly relevant in the context of Generation Z entrepreneurship, where global market opportunities, institutional policies, and digital technologies simultaneously shape individuals' cognitive and affective states. In this framework, external factors such as opportunity awareness, policy support, and digital infrastructure function as stimuli, which activate internal organismic processes including perception, knowledge acquisition, and entrepreneurial attitudes, ultimately leading to behavioral responses reflected in the development of a Global Entrepreneurial Mindset. Therefore, the S-O-R paradigm offers a more holistic and process-oriented explanation of how Generation Z interprets and responds to the evolving global entrepreneurial ecosystem, while TAM, TPB, and the Knowledge-Based View (KBV) serve as complementary perspectives that enrich the understanding of specific mechanisms within the organismic stage, particularly technology acceptance, attitude formation, and knowledge development.

External Stimuli and Organism Formation

a. Opportunity Awareness and Entrepreneurial Perception

Entrepreneurial opportunity recognition is widely recognized as a critical factor influencing entrepreneurial behavior. According to perception theory, individuals interpret environmental signals through cognitive processes shaped by prior experiences, information exposure, and contextual conditions (Robbins, 2017). In the context of global entrepreneurship, exposure to international market opportunities can shape individuals' perceptions regarding the feasibility and attractiveness of cross-border business activities. Prior research suggests that awareness of global opportunities significantly enhances individuals' confidence in engaging in international entrepreneurship (Cavusgil et al., 2022). Generation Z, who are highly exposed to digital information and global networks, may develop more positive perceptions of entrepreneurship when they become aware of the potential opportunities in international markets.

H1a: Opportunity awareness positively influences Generation Z's entrepreneurial perception.

b. Policy Support and Export/Import Literacy

Institutional support represents an important enabling factor for entrepreneurial development, particularly in international trade contexts where regulatory complexity often creates barriers for new entrepreneurs. Government policies, export promotion programs, and entrepreneurship support initiatives provide valuable knowledge resources that enhance individuals' understanding of export-import processes. Empirical evidence suggests that supportive policies and institutional initiatives strengthen entrepreneurial capabilities by improving knowledge related to international trade regulations, export procedures, and global market access (Hussain et al., 2023). From the perspective of the Knowledge-Based View, such knowledge represents a critical resource that enables entrepreneurs to develop strategies for competing in international markets.

H1b: Policy Support positively influences Generation Z's export/import literacy.

c. Digital Support and Entrepreneurial Attitude

Digital technologies have significantly transformed the entrepreneurial ecosystem by lowering barriers to entry into global markets. Digital platforms enable entrepreneurs to access international customers, marketing channels, and logistics services with relatively limited resources.

According to the Technology Acceptance Model (TAM), individuals are more likely to adopt technological innovations when they perceive them as useful and easy to use (Davis, 1989). Empirical studies also confirm that digital entrepreneurship education and digital technology exposure significantly enhance entrepreneurial attitudes and motivation among young individuals (Duong et al., 2024; Duong et al., 2025).

For Generation Z, who are considered digital natives, exposure to digital technology may foster more positive attitudes toward entrepreneurship by enabling experimentation, creativity, and innovation in business activities.

H1c: Digital support positively influences Generation Z's entrepreneurial attitude.

Organism Factors and Global Entrepreneurial Mindset

Within the S-O-R framework, organismic states represent internal psychological processes that mediate the relationship between environmental stimuli and behavioral outcomes. In entrepreneurship contexts, perception, knowledge, and attitude represent key cognitive and affective mechanisms influencing entrepreneurial orientation.

Perception plays an important role in shaping individuals' interpretation of market opportunities. Individuals who perceive global markets as accessible and attractive are more likely to develop internationally oriented entrepreneurial mindsets (Baron & Ensley, 2006).

H2a: Entrepreneurial perception positively influences the Global Entrepreneurial Mindset.

Knowledge also represents an important capability for entrepreneurs seeking to engage in international markets. According to the Knowledge-Based View, knowledge resources enable entrepreneurs to develop competitive advantages through better decision-making and opportunity recognition.

H2b: Export-import literacy positively influences the Global Entrepreneurial Mindset.

Attitude represents an individual's evaluative orientation toward entrepreneurial activities. According to TPB, positive attitudes toward entrepreneurship significantly increase the likelihood of entrepreneurial engagement. Entrepreneurial attitudes are also closely associated with innovation orientation, proactiveness, and risk-taking behavior.

H2c: Entrepreneurial attitude positively influences the Global Entrepreneurial Mindset.

Mediating Role of Organism Variables

The S-O-R framework suggests that internal psychological states mediate the relationship between environmental stimuli and behavioral responses. In entrepreneurship research, this

mediating mechanism is essential for explaining how individuals transform environmental opportunities into entrepreneurial actions.

Perception may mediate the relationship between opportunity awareness and entrepreneurial mindset because individuals must first cognitively interpret opportunities before responding to them behaviorally.

H3a: Perception mediates the relationship between opportunity awareness and the Global Entrepreneurial Mindset.

Export/import literacy may mediate the influence of policy support on global entrepreneurial orientation because institutional support often enhances knowledge and capability related to international business.

H3b: Export-import literacy mediates the relationship between policy support and the Global Entrepreneurial Mindset.

Entrepreneurial attitude may mediate the relationship between digital support and global entrepreneurial mindset because technological exposure often shapes individuals' psychological readiness for entrepreneurial activities.

H3c: Entrepreneurial attitude mediates the relationship between digital support and the Global Entrepreneurial Mindset.

Although several theoretical perspectives have been used to explain entrepreneurial behavior, this study positions the Stimulus–Organism–Response (S-O-R) framework as the central theoretical lens because it provides a more comprehensive explanation of how environmental conditions translate into entrepreneurial cognition and behavior. Unlike the Technology Acceptance Model (TAM), which primarily focuses on technology adoption, or the Theory of Planned Behavior (TPB), which explains behavioral intention through attitudes and perceived control, the S-O-R paradigm explicitly captures the dynamic process linking external stimuli, internal psychological mechanisms, and behavioral outcomes. This integrative structure is particularly relevant in the context of Generation Z entrepreneurship, where global market opportunities, institutional policies, and digital technologies simultaneously shape individuals' cognitive and affective states. In this framework, external factors such as opportunity awareness, policy support, and digital infrastructure function as stimuli, which activate internal organismic processes including perception, knowledge acquisition, and entrepreneurial attitudes, ultimately leading to behavioral responses reflected in the development of a Global Entrepreneurial Mindset. Therefore, the S-O-R paradigm offers a more holistic and process-oriented explanation of how Generation Z interprets and responds to the evolving global entrepreneurial ecosystem, while TAM, TPB, and the Knowledge-Based View (KBV) serve as complementary perspectives that enrich the understanding of specific mechanisms within the organismic stage, particularly technology acceptance, attitude formation, and knowledge development.

Based on the SOR concept, stimulus **variables** will affect the organism within a person, which will then impact their response. In this study, stimuli are external factors (export-import market opportunities; government policies and support; and digital technology) that are driving factors that will positively influence organism variables (Gen Z perceptions; export-import

literacy; entrepreneurial attitudes), thereby generating a response in Generation Z in the form of entrepreneurial attitudes with indicators of innovation orientation, proactivity, risk-taking, and a global mindset. The following is the development of the SOR model in this study:

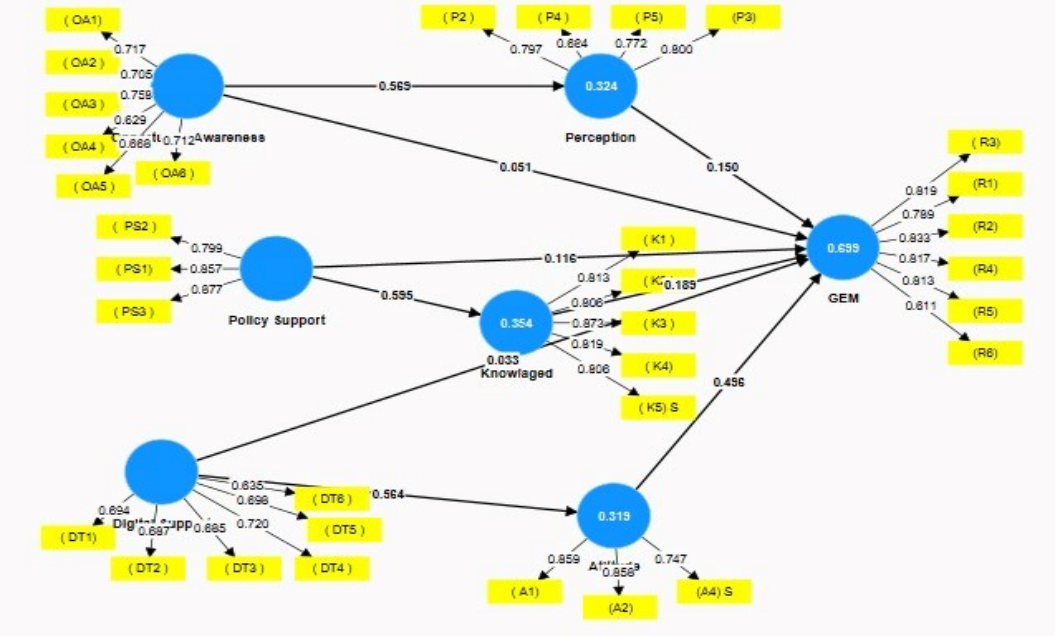

Figure 1. Test results framework

Source: Generated using Smart-PLS software, data, and design by the author

That stimulus (S) is external stimulation in the form of information, policies, global market opportunities, the use of digital technology, MSME experiences, or export-import education received by Gen Z. Where the stimulus variable will influence the Organism (O) variable within Gen Z, which is an internal psychological process (cognitive & affective) in the form of perceptions, knowledge, and entrepreneurial attitudes, which will then influence the Response (R) variable, namely reactions or behaviors in this study, which are reflected in entrepreneurial spirit, as seen in innovation orientation, risk-taking courage, and the intention to engage in export-import business.

3. Research Method

This study adopts a quantitative explanatory research design using a cross-sectional survey approach, with a population of Generation Z (aged 18-27 years) residing in Yogyakarta, which is one the major cities and a cener of higher education in Indonesia and Asia. The research sample consisted of 220 respondents, using purposive sampling with the criteria of students who are members of young business communities and digital MSME actors. The research instrument was a Likert scale (1-5) quetionnarie developed based on previuos research. The analysis technique used SEM PLS

4. Result and Discussion

Reliability and Validity

The measurement model in this study consists of a reflective measurement model in which the variables of green practice, green trust, green perceived values, green satisfaction, and green loyalty are measured reflectively. In Hair et al., (2019), the evaluation of the reflective measurement model consists of a minimum factor loading value of 0.70 and a minimum composite reliability (CR) value of 0.70. The factor loading values for all constructs are above 0.7, as shown in Table 3. Construct reliability is measured using composite reliability (CR) with a minimum value of 0.7. As shown in Table 3, all five variables meet this criterion. Convergent validity is measured using the average extracted variance (AVE). An acceptable AVE value is 0.5 or higher. All five variables in this study are above 0.5, as shown in Table 3.

Table 1. Summary of Outer Loading, Composite Reliability, and Average Variance Extracted

Variables	Item measurement	Indicator	Outer Loading	Cronbach Alfa	Composite Reliability	AVE
Atittude	(A1)	Innovation orientation	0,859	0,760	0,863	0,767
	(A2)	Courage to take risks	0,858			
		Global orientation (global mindset)				
	(A4)		0,747			
Digital Support	(DT1)	The use of international ecommerce	0,694	0,777	0,843	0,777
	(DT2)	Use of digital platforms (marketplace, payment system)	0,687			
	(DT3)	Use of digital platforms (marketplace, payment system)	0,685			
	(DT4)	Understanding global digital marketing	0,720			
	(DT5)	Understanding global digital marketing	0,698			
	(DT6)	Understanding global digital marketing	0,635			
Opportunity Awareness	(OA1)	Knowing the demand for products overseas	0,717	0,793	0,851	0,804
	(OA2)	Knowing the demand for products overseas	0,705			
	(OA3)	Knowing the demand for products overseas	0,758			
	(OA4)	Understanding international export/import product trends	0,629			
	(OA5)	Understanding international export/import product trends	0,668			
	(OA6)	Understanding international export/import product trends	0,712			
Perception	(P2)	Knowledge of exports and imports (positive/negative, simple/complex)	0,797	0,763	0,849	0,770

	(P4)	Attitude toward opportunities and challenges	0,684			
	(P5)	Understanding regulations and procedures	0,772			
Policy Support	(PS2)	Government Policy	0,799	0,800	0,882	0,714
	(PS1)	Export-import policy	0,857			
	(PS3)	Incubation facilities	0,877			
Knowlaged	(K1)	Knowledge of international trade regulations	0,813	0,881	0,913	0,884
	(K2)	Knowledge of international trade regulations	0,806			
	(K3)	Understanding export-import documents	0,873			
	(K4)	Awareness of global market opportunities	0,819			
	(K5)	Awareness of global market opportunities	0,806			
GEM	(R3)	Intention to start an exportimport business	0,819	0,873	0,905	0,885
	(R1)	Proactive in seeking overseas market opportunities	0,789			
	(R2)	Global risk-taking	0,833			
	(R4)	Innovation orientation and global mindset	0,817			
	(R5)	Innovation orientation and global mindset	0,813			
	(R6)	Proactive in seeking overseas market opportunities	0,611			

Source's: Author's own work

The Attitude variable was measured by three valid measurement items with outer loadings of 0.747– 0.859, which means that the four measurement items were valid in reflecting the measurement of Attitude. The reliability level of the variable is acceptable, as indicated by Cronbach's alpha and composite reliability values of above 0.7 (reliable). Meanwhile, the convergent validity level is indicated by the AVE value (0.767 > 0.5), which shows that it has met the requirements for good convergent validity. Overall, the variation in measurement items contained by the variable was 0.767. Among the three attitude measurement items, the innovation orientation item (A1) had the highest outer loading (0.859), indicating that Gen Z's attitude is greatly influenced by innovation orientation, which is a fundamental factor in the formation of a global entrepreneur's mindset (Tan et al., 2025 ; Paudel, 2025).

The Digital Support variable is assessed using six valid measurement items, which have outer loadings ranging from 0.635 to 0.720, indicating that these items effectively reflect the Digital Support measurement and demonstrate an acceptable level of reliability, as shown by Cronbach's alpha and composite reliability values exceeding 0.7.

The level of convergent validity is indicated by the AVE value (0.777> 0.5), which shows that it has met the requirements for good convergent validity. The six Digital Support measurement items (DT1; DT2; DT3; DT4; DT5; DT6) show high outer loading values, which means that Digital Support is reflected by measurement items on the use of international e-commerce; use of

digital platforms; and understanding of global digital marketing. The Opportunity Awareness variable is measured by six valid measurement items with outer loadings of 0.629–0.758, indicating that the six measurement items are valid in reflecting Opportunity Awareness. The reliability level of the variable is acceptable, as indicated by Cronbach's alpha and composite reliability values above 0.7 (reliable). Meanwhile, the convergent validity level is indicated by the AVE value (0.804 > 0.5), which shows that it meets the requirements for good convergent validity. The six Opportunity Awareness measurement items (OA1; OA2; OA3; OA4; OA5; OA6) show high outer loading values, which means that Opportunity Awareness is strongly measured through knowledge of overseas product demand and familiarity with international export/import product trends. The Perception variable is measured by three valid measurement items with outer loadings of 0.684–0.797. These three measurement items are valid and reflect the measurement of Perception. The reliability level of the variable is acceptable, as indicated by the Cronbach's alpha and composite reliability values, each of which is above 0.7 (reliable). Meanwhile, the convergent validity level is indicated by the AVE value (0.770 > 0.5), which shows that it meets the requirements for good convergent validity. Overall, the variation in measurement items contained by the variable is 0.770. Among the three Perception measurement items, the item Knowledge about export-import (positive/negative, simple/complex) (P2) has the highest outer loading (0.797), indicating that the dominant level of Gen Z Perception is reflected by Gen Z's knowledge about export-import. The Policy Support variable is measured by three valid measurement items with outer loadings of 0.799–0.877. These three measurement items are valid and reflect the measurement of Policy Support. The reliability level of the variable is acceptable, as indicated by Cronbach's alpha and composite reliability values, each above 0.7 (reliable). Meanwhile, the convergent validity level is indicated by the AVE value (0.714 > 0.5), showing that it meets the requirements for good convergent validity. Among the three Policy Support measurement items, the Incubation Facilities (PS3) measurement item has the highest outer loading (0.877), indicating that the level of Gen Z Policy Support is predominantly reflected in Gen Z's knowledge of exports and imports. In addition, to assess discriminant validity, heterotrait-monotrait (HTMT) analysis was used. The HTMT ratio value should not exceed 0.9 (Hair et al., 2019). The test results show that the HTMT value is below 0.9 for all variable pairs, thus achieving discriminant validity. This means that the variables divide the variation of measurement items against the items that measure them more strongly than dividing the variance in other variable items, as shown in Table 3.

Table 2 Heterotrait-monotrait ratio (HTMT)

	Atittude	Digital Support	GEM	Knowlaged	Opportunity Awareness	Perception	Policy Support
Atittude							
Digital Support	0,728						
GEM	0,807	0,749					
Knowlaged	0,653	0,602	0,688				
Opportunity Awareness	0,563	0,809	0,597	0,468			
Perception	0,749	0,873	0,749	0,446	0,696		
Policy Support	0,486	0,657	0,625	0,699	0,594	0,559	

Source's: Author's own work

Discriminant evaluation also needs to be viewed from the criteria of Fornell and Lacker, where discriminant validity is a form of evaluation to ensure that variables are theoretically different and empirically proven. The criteria of Fornell and Lacker are that the AVE root of the variable is greater than the correlation between variables. The Attitude variable has an AVE root (0.823) that is greater than the correlations for Digital Support (0.564), GEM (0.771), Knowledge (0.534), and Opportunity Awareness (0.453); Perception (0.579); and Policy Support (0.388). These results indicate that the discriminant validity of the Attitude variable is fulfilled. Similarly, the discriminant validity of the Digital Support, GEM, Knowledge, Opportunity Awareness, Perception, and Policy Support variables is fulfilled, as shown in Table 4.

Table 3. Fornell-Larcker criterion

	Atittude	Digital Support	GEM	Knowlaged	Opportunity Awareness	Perception	Policy Support
Atittude	0,823						
Digital Support	0,564	0,687					
GEM	0,771	0,617	0,784				
Knowlaged	0,534	0,516	0,616	0,824			
Opportunity Awareness	0,453	0,658	0,515	0,400	0,699		
Perception	0,579	0,746	0,612	0,369	0,569	0,765	
Policy Support	0,388	0,521	0,529	0,595	0,483	0,440	0,845

Source's: Author's own work

Structural Model Evaluation

Structural model evaluation involves testing hypotheses regarding the influence between research variables. The evaluation is conducted in three stages. First, the absence of multicollinearity between variables is examined using the Inner VIF (Variance Inflated Factor) measure. A VIF value below 5 indicates no multicollinearity between variables (Hair et al., 2019). Table 5 shows that all constructs have variance inflation factors below 3, indicating no collinearity issues between independent variables in the hypothesis model.

Table 4. Variance Inflation Factors

	Atittude	Digital Support	GEM	Knowlaged	Opportunity Awareness	Perception	Policy Support
Atittude			1,864				
Digital Support	1,000		2,114				
GEM							
Knowlaged			1,962				
Opportunity Awareness			1,901			1,000	
Perception			2,579				

Policy Support	1,808	1,000

Source's: Author's own work

Second is testing hypotheses between variables by looking at t-statistics or p-values. If the calculated t-statistic is greater than 1.96 (t-table) or the p-values from the test are greater than 0.05, then there is no significant effect between the variables. The results of bootstrapping analysis with 5,000 resampling show that Attitude has a positive and significant effect on GEM (β = 0.496 and p < 0.001). The Digital Support variable has a significant positive effect on Attitude (β = 0.564 and p < 0.001). At a 95% confidence interval, the magnitude of the effect of Attitude in increasing GEM lies between 0.325 and 0.647. The Digital Support variable has a positive and significant effect on GEM (β = 0.313 and p < 0.005). Then, the effect of the Knowledge variable on GEM (β = 0.189 and p < 0.005). Meanwhile, the effect of the Opportunity Awareness variable on Perception is positive and significant (β = 0.569 and p < 0.001). However, the effect of Opportunity Awareness on GEM (β = 0.137 and p > 0.005) is proven to be insignificant. Furthermore, the effect of the Perception variable on GEM (β = 0.150 and p > 0.005) is also insignificant. The effect of the Policy Support variable on the GEM variable (β = 0.229 and p < 0.005) is positively significant. Furthermore, the effect of the Policy Support variable on Knowledge (β = 0.595 and p < 0.001) was positively significant. Looking at the indirect relationship, it was found that Attitude acted significantly as a mediator between Digital Support and GEM (β = 0.280 and p < 0.001), then the Knowledge variable acts significantly as a mediator between the Policy Support variable and GEM (β = 0.113 and p < 0.005), and Perception does not significantly act as a mediator between Opportunity Awareness and GEM (β = 0.086 and p > 0.005) as shown in Table 6.

Third, testing the Effect Size f Square value, namely the direct effect of variables at the structural level with criteria (f square 0.02 = low; f square 0.15 = moderate; f square = 0.35 = high) (Hair et al., 2019). The test results show that the influence of independent variables on dependent variables is high, except for the influence of Digital Support on GEM, which is low (f square 0.001); Opportunity Awareness on GEM (0.005).

Table 5. Results of structural equation modeling -partial least squares analysis

Variable	β value	tstatistics	p-values	RMR = 0,08697 f2	*R2*	Results
Atittude -> GEM	0,496	5,995	0,000	0,438	0,683	Supported
Digital Support -> Atittude	0,564	7,740	0,000	0,467	0,313	Supported
Digital Support -> GEM	0,313	2,305	0,021	0,001	0,683	Supported
Knowlaged -> GEM	0,189	2,879	0,004	0,061	0,683	Supported
Opportunity Awareness -> GEM	0,137	1,393	0,164	0,005	0,683	Not Supported
Opportunity Awareness -> Perception	0,569	6,540	0,000	0,479	0,318	Supported
Perception -> GEM	0,150	1,759	0,079	0,029	0,683	Not Supported
Policy Support -> GEM	0,229	2,883	0,004	0,025	0,683	Supported
Policy Support -> Knowlaged	0,595	8,202	0,000	0,549	0,349	Supported

Source's: Author's own work

Table 6. Confidence intervals

	Original sample (O)	Sample mean (M)	2.5%	97.5%
Atittude -> GEM	0,496	0,495	0,325	0,647
Digital Support -> Atittude	0,564	0,573	0,420	0,708
Digital Support -> GEM	0,313	0,328	0,069	0,605
Knowlaged -> GEM	0,189	0,187	0,061	0,317
Opportunity Awareness -> GEM	0,137	0,136	-0,050	0,332
Opportunity Awareness -> Perception	0,569	0,592	0,423	0,752
Perception -> GEM	0,150	0,146	-0,028	0,310
Policy Support -> GEM	0,229	0,222	0,071	0,376
Policy Support -> Knowlaged	0,595	0,600	0,443	0,725

Source's: Author's own work

The F-square mediation effect is called the upsilon v statistic, which is obtained by squaring the mediation coefficient. (Lachowicz et al., 2018), as interpreted in (Ogbeibu et al., 2022), are low mediation effect (0.02), moderate mediation effect (0.075), and high mediation effect (0.175).

Tabel 8 Hasil Structural equation modelling-partial least square analysis

Variable	β value	t-statistics	p-values	Results
Digital Support -> Atittude -> GEM	0,280	5,436	0,000	Supported
Opportunity Awareness -> Perception -> GEM	0,086	1,665	0,096	Not Supported
Policy Support -> Knowlaged -> GEM	0,113	2,643	0,008	Supported

Source's: Author's own work

Table 8. Confidence intervals

	Original sample (O)	Sample mean (M)	2.5%	97.5%
Digital Support -> Atittude -> GEM	0,280	0,282	0,188	0,388
Opportunity Awareness -> Perception -> GEM	0,086	0,085	-0,016	0,189
Policy Support -> Knowlaged -> GEM	0,113	0,112	0,035	0,201

Source's: Author's own work

5. Discussion

The results show that the model built is able to explain 68.3% of the variance in Global Entrepreneurial Mindset (GEM), which means that the constructs in the model have substantial relevance in explaining GEM among Gen Z export-import practitioners or prospective practitioners in Yogyakarta. However, the fit indices (SRMR = 0.087; NFI = 0.697) indicate the need for refinement of the model structure and measurement.

The results of this study show interesting findings regarding the role of multiple mediating variables of perception, knowledge, and attitude in the relationship between Opportunity Awareness, Policy Support, and Digital Support on the Global Entrepreneurial Mindset (GEM) of Gen Z in Yogyakarta. Statistical test results show that most of the hypotheses are supported by research data. The variables of Attitude, Digital Support, Knowledge, and Political Support have a significant positive effect on GEM in this study, in line with Paudel (2025); Amrouni & Azouaou (2024); and Tan et al. (2025). The Digital Support variable has a significant positive effect on Attitude; Opportunity Awareness has a significant positive effect on Perception. Opportunity Awareness does not have a significant effect on GEM ($\beta = 0.137$; $p = 0.164$). The practical effect is also very small ($f^2 = 0.005$). This finding indicates that simply knowing that global opportunities exist does not necessarily increase a global entrepreneurial mindset. Interestingly, however, Opportunity Awareness has a very strong effect on Perception ($\beta = 0.569$; $p < 0.001$), so it is likely that the effect of Opportunity Awareness on GEM is indirect or requires other variables such as self-efficacy, intention, or experience. The conclusion of this study is reinforced by research (Baron & Ensley, 2006). Policy Support has a significant positive effect on Knowledge, as stated by (Amrouni & Azouaou, 2024) that the main factor determining Generation Z's interest in entrepreneurship is entrepreneurial attitude (Purmono, 2023). The findings show that Attitude has a significant and strong effect on GEM ($\beta = 0.496$; $p < 0.001$). These findings are in line with various studies that emphasize that a positive attitude towards entrepreneurship is an important predictor of global entrepreneurial orientation and mindset. Attitude functions as cognitive openness to cross-border opportunities, courage to take risks, and readiness to face global market dynamics (Ajzen, 1991). Thus, the findings of this study reinforce the evidence that attitude is the main driver of GEM. The Knowledge variable has a significant effect on GEM among Generation Z. This data is supported by a meta-analysis showing the role of knowledge or entrepreneurship education in entrepreneurial intention/mindset (Bae et al., 2014).

The results of this study prove that although Generation Z's perception of export and import businesses or international trade is strongly influenced by Opportunity Awareness, Perception does not have a significant effect on GEM ($\beta = 0.150$; $p = 0.079$). This finding shows that perception alone is not enough to build a global mindset without self-confidence, positive attitudes, and other external support (Purmono, 2023).

Mediation Role

In testing the mediation role, the results of statistical testing of the research data show that Attitude can significantly mediate the influence of the Digital Support variable on GEM. The results of this study support the findings in the study conducted by (Purmono, 2023); Digital Support has been proven to have two important roles:

1. A strong influence on Attitude ($\beta = 0.564$; $p < 0.001$ with a large f^2).
2. A direct influence on GEM ($\beta = 0.313$; $p = 0.021$ but very small f^2).

These results indicate that the most significant role of Digital Support is in shaping attitudes, not directly on GEM. Digital Support enhances Gen Z's comfort, efficiency, and confidence in utilizing technology for global business, so it is reasonable that its greatest impact is on attitude. Other studies proving how digital technology changes the entrepreneurial process

support the findings on Digital Support → Attitude / GEM in the research (Bae et al., 2014); (Nambisan, 2017).

Entrepreneurial attitude plays a significant role in mediating the influence of entrepreneurial selfefficacy on entrepreneurial intention. Technological advances will play a role in shaping positive attitudes, thereby encouraging Generation Z to develop a global mindset.

Similarly, the Knowledge variable can mediate the influence of the Policy Support variable on the GEM variable. The growth of the Global Entrepreneur Mindset is also influenced by Generation Z's high level of knowledge and literacy regarding global trade (Tan et al., 2025). The Perception variable cannot mediate the influence of the Opportunity Awareness variable on GEM. Entrepreneurial awareness among the generation Z.

6. Conlusions

The findings of this study provide empirical evidence on the key determinants shaping the Global Entrepreneurial Mindset (GEM) among Gen Z students. The structural model demonstrates that Attitude is the strongest predictor of GEM ($\beta = 0.496$, $p < 0.001$), confirming that positive entrepreneurial attitudes significantly enhance the global orientation, opportunity recognition, and readiness of young entrepreneurs. This highlights the central psychological role of attitudes in transforming external support into entrepreneurial mindset outcomes.

Furthermore, Digital Support shows both direct ($\beta = 0.313$, $p = 0.021$) and indirect effects on GEM through Attitude (Digital Support → Attitude: $\beta = 0.564$, $p < 0.001$). This indicates that digital-based learning platforms, online resources, and technology-enabled entrepreneurial ecosystems contribute substantially to the development of Gen Z's entrepreneurial mindset—either by shaping their positive attitudes or by directly stimulating global opportunity recognition.

Knowledge also significantly predicts GEM ($\beta = 0.189$, $p = 0.004$), suggesting that higher levels of entrepreneurial knowledge increase students' capability to think globally, evaluate risks, and identify international opportunities. In addition, Policy Support positively influences both Knowledge ($\beta = 0.595$, $p < 0.001$) and GEM ($\beta = 0.229$, $p = 0.004$), underscoring the role of government, campus regulations, and institutional support in fostering entrepreneurship education that strengthens global readiness.

On the other hand, Opportunity Awareness does not significantly influence GEM ($\beta = 0.137$, $p = 0.164$), indicating that merely being aware of opportunities is not sufficient to build a global entrepreneurial mindset without adequate psychological readiness, knowledge, and structural support. Similarly, Perception fails to show a significant direct impact on GEM ($\beta = 0.150$, $p = 0.079$), suggesting that perception alone may require more intensive experiential learning or digital exposure to translate into global-level entrepreneurial cognition.

The model fit indicators (SRMR = 0.087, NFI = 0.697) fall within acceptable thresholds, demonstrating that the structural model is robust and theoretically supported. Collectively, the study confirms that GEM is a multi-dimensional construct influenced most strongly by psychological (Attitude), cognitive (Knowledge), technological (Digital Support), and policy drivers (Policy Support).

Theoretical Implications

The significant role of Attitude as the strongest predictor validates the SOR (Stimulus–Organism– Response) framework, where Digital Support (stimulus) shapes Attitude (organism), which then determines GEM (response). This study extends entrepreneurial mindset literature by demonstrating that digital ecosystems are now essential antecedents of global entrepreneurial readiness. The nonsignificant effects of Opportunity Awareness and Perception indicate that entrepreneurial cognition models must integrate more complex pathways, possibly mediated by motivation or self-efficacy. The results reinforce the argument that knowledge-based and policy-based mechanisms are still critical even in digital entrepreneurship contexts. Future studies may explore moderating effects such as digital literacy, self-efficacy, or entrepreneurial passion. A longitudinal approach is recommended to capture how digital support and policy interventions shape GEM over time. Replication in other cultural or regional contexts will help validate the generalizability of the model.

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