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Empowering Future Entrepreneurs: Exploring Educational Determinants with the Moderating Effect of Governmental Support in Fostering Entrepreneurial Intention

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Abstract

In today's rapidly evolving world, entrepreneurship is crucial in driving economic development, necessitating a deeper understanding of the factors influencing students' entrepreneurial intention. Yet, cultivating entrepreneurial intention remains a formidable challenge among university students in Pakistan. This study examines the dynamic interplay between entrepreneurial education, awareness, orientation, and inspiration in shaping entrepreneurial intention, particularly emphasizing the pivotal moderating role of government support. The data from 825 undergraduate final-year business students at ten universities in Pakistan were collected through structured questionnaires. SmartPLS 4 was used for data analysis, testing eight hypotheses based on social cognitive theory. The findings reveal that entrepreneurial education, awareness, orientation and inspiration significantly enhance students' confidence in establishing their potential entrepreneurial intention. Additionally, the influence of these factors is more pronounced, with the moderating effect of government support positively amplifying entrepreneurial intention. Further, the study delivers actionable insights for policymakers, academicians and industrial patrons to design operational strategies, educational programs, skills-building initiatives, and supportive policies that collectively nurture entrepreneurial intention, paving the way for sustainable socio-economic development.

Keywords: Entrepreneurial education, entrepreneurial intention, entrepreneurial awareness, entrepreneurial inspiration, government support, entrepreneurial orientation

Introduction

Entrepreneurship is widely recognized as a principal engine of innovation, job creation, and sustainable economic growth (Hassan et al., 2020). As global economies confront automation, market disruption, and persistent youth unemployment, nurturing entrepreneurial capacities has become a strategic priority of universities, policymakers, and industrial leaders (Munawar et al., 2023). The center of this agenda is the notion that entrepreneurship is not merely a set of skills but a socially embedded process in which education, exposure, experience, and institutions jointly support and shape an individual's decision to start a venture (Kumar et al., 2020).

Within entrepreneurship research, entrepreneurial intention is a proximate predictor of new ventures' behavior, which indicates cognitive commitment to pursuing entrepreneurship (Munawar et al., 2023). Modern economics, particularly in emerging economies like Pakistan, entrepreneurship as a vehicle not only for business growth but also for enhancing competitiveness, addressing social challenges, and generating inclusive development (Adomako & Nguyen, 2024). Within this discourse, entrepreneurship is understood as more than a technical or managerial

competence; it is a socially embedded process where education, experience, exposure, and institutional support jointly shape individual decisions to start and sustain a venture (Munawar et al., 2023; Shahzad et al., 2021).

Social cognitive theory (SCT) offers a powerful lens to explain how entrepreneurial intention is cultivated from intention to action (Nurhusna et al., 2024). According to Bundura (1986), human agency is guided by the interplay of personal cognition (self-efficacy), observational learning from role models, and enabling environmental support. Applied to entrepreneurship, SCT highlights that students' intention is shaped by curricular exposure and inspiration from teachers and peers, entrepreneurial orientation development, and supportive institutional and policy frameworks (Biraglia et al., 2017). Thus, entrepreneurial education, awareness, inspiration (including role models and exposure), and orientation (attitudes and predispositions) interact with environmental support to foster entrepreneurial willingness, which ultimately enhances entrepreneurial intention. Within this perspective, entrepreneurial education has been widely identified as a primary driver of students' entrepreneurial intention (Munawar et al., 2023; Shahzad et al., 2021). Further, Safdar et al. (2022) assert that entrepreneurial education equips students with the knowledge, tools, and strategies to manage businesses effectively and to transform challenges into opportunities (Anwar et al., 2022; Khan et al., 2022). More than technical knowledge, entrepreneurial education cultivates an entrepreneurial mindset, enabling students to think proactively and creatively, identify opportunities, and act resourcefully (Ahmed et al., 2020; Shah et al., 2020; Shahzad et al., 2021). As such, education serves not only as an academic intervention but also as a transformative experience that nurtures self-efficacy and strengthens entrepreneurial intention (Shah et al., 2020; Shahzad et al., 2021).

Closely linked to education, awareness, and inspiration, operates as a psychological catalyst that sparks motivation and drives students toward entrepreneurial pursuits (Khawar et al., 2022). The awareness extends beyond knowledge of venture creation to include exposure to governmental policies, role models, and business networks that inspire entrepreneurial activity (Kishore, 2021). In addition, entrepreneurial orientation provides the behavioural foundation through which knowledge, awareness, and inspiration are translated into entrepreneurial intention (Adomako & Nguyen, 2024). Indeed, Adeniyi et al. (2024) also indicated that orientation reflects an individual's propensity to be innovative, proactive, and willing to take calculated risks. Thus, orientation shapes the readiness to act upon entrepreneurial opportunities, reinforcing the pathway from cognitive intention to behavioral engagement. While these individuals' antecedents are crucial, governmental initiatives serve as contextual moderators determining whether students' education, awareness, inspiration, and orientation translate into action. In Pakistan, programs such as the Higher Education Commission's (HEC) offices of research, innovation & commercialization (ORIC) and business incubation centers (BIC), along with the Kamyab Jawan Youth Entrepreneurship Scheme (YES), reflect a subsequent investment in fostering entrepreneurship at higher education institutions in Pakistan. These interventions aim to provide students with incubation platforms, mentorship, and concessional finance, thereby reducing barriers for young entrepreneurs (Ahmed et al., 2020; Shahzad et al., 2021). Yet, research suggests that such initiatives' effectiveness depends on how well-structured education integrates with students' entrepreneurial learning journey (Ferreira et al., 2018). Without alignment between the education effort and governmental support, awareness risk remains symbolic rather than actionable, leaving students' entrepreneurial potential underutilized (Ferreira et al., 2018; Oyelakin et al., 2016).

Despite expanded access, Pakistan's higher education system faces well-documented problems. Students' surveys and studies indicated multiple barriers: outdated curricula, traditional lecture methods, insufficient faculty development, and limited research infrastructure. The poverty remains a pressing issue, with the Pakistan Institute of Development Economics (PIDE) reporting a significant poverty rate increase from 20.7% to 37.5% from 2019 to 2022, positioning Pakistan

at 92nd out of 110th countries of the international poverty index. A key factor contributing to these challenges is the lack of educational opportunities, which perpetuates cycles of poverty and limits upward mobility. Additionally, many Pakistani students prioritize stable desk jobs over self-employment, reflecting limited awareness of the value and potential of entrepreneurship. Furthermore, higher education in Pakistan remains underdeveloped and misaligned with current market demands, hindering the effectiveness of entrepreneurship on university students' entrepreneurial intention. In particular, it remains unclear how current polices and university environments together influence Pakistani students' self-efficacy, motivation and learning behavior, which leads to hindrance for university students.

So, the current study fills the critical gap by applying social cognitive theory to investigate the Pakistani higher education landscape from a human-centric, learning-focused perspective. Doing so aims to provide actionable insights for policymakers and educators seeking to improve quality, equity, and graduate success in Pakistani universities. The framework positions entrepreneurial education, awareness, inspiration and orientation as primary antecedents of entrepreneurial intention and conceptualizes governmental imitative as a moderating force that can strengthen or weaken these relationships. By integrating cognitive, behavior and environmental perspectives, the study aims to move beyond descriptive critiques and toward actionable insights that inform curricular design, institutional strategy and policy coordination. Specifically, the study examines the direct influence of entrepreneurial education, awareness, inspiration and orientation on students' entrepreneurial intention. Second, evaluate how governmental initiatives moderate these relationships, facilitating the translation from awareness and education into intention. Ultimately, the study aspires to help Pakistani universities and policymakers transform initiatives into an integrated pathway from learning to venture creation.

Literature Review and Hypotheses Development

Social Cognitive Theory

Social Cognitive Theory, as conceptualized by Bandura et al. (1999), offers a robust framework for understanding the dynamic interplay of personal, behavioural, and environmental factors that influence an individual's perception of entrepreneurship. Indeed, SCT posits that personal intelligence, innate talents, and self-assurance are crucial drivers of entrepreneurial intention that closely align with SCT's ideologies (Nurhusna et al., 2024). Building on this foundation, Kayani et al. (2022) and AbdelAziz et al. (2023) further elaborate that human actions are shaped by the interaction of three key elements: (1) personal inputs, which include attitude, self-efficacy, and beliefs. (2) environmental input encompassing social effects, educational practices, and relative factors, and (3) behavioural outcomes which refer to actions and decisions (Biraglia et al., 2017). Bandura (2015) also emphasized that SCT not only enhances individuals' entrepreneurial intention but also fosters resilience, creative thinking, and adaptability, which are crucial for navigating the challenges of entrepreneurship (Shahzad et al., 2021; Handayati et al., 2020). Consequently, SCT serves as an ideal theoretical foundation for exploring the multifaceted factors that contribute to shaping entrepreneurial intention, particularly in the context of the educational and social environment. This framework not only underscores the importance of personal and environmental factors but also highlights the role of behavioural outcomes in driving entrepreneurial intention. Therefore, SCT is suitable for this study, making it a valuable tool for both academic research and practical application in the field of entrepreneurship.

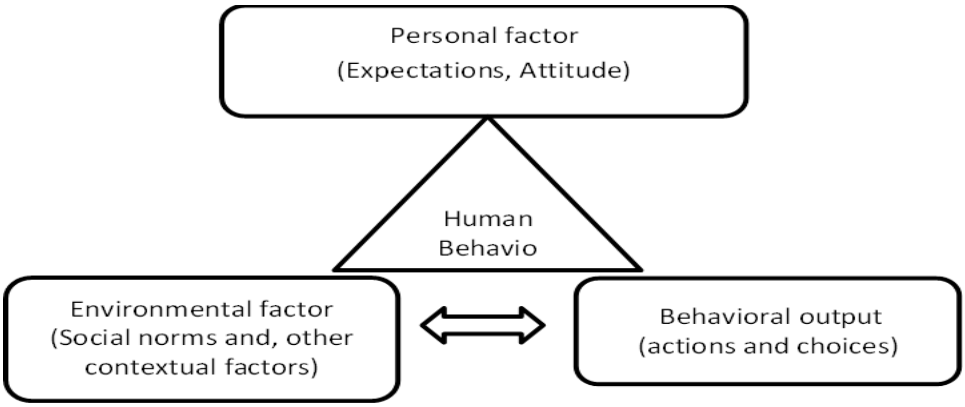

Figure 1: Igwesi-Chidobe et al., (2020)

Entrepreneurial Intention

Entrepreneurial intention has long been regarded as a psychological state reflecting an individual's readiness and determination to embark on an entrepreneurial journey (Safdar et al., 2022; Soomro et al., 2021). It embodies not only the deliberate decision to pursue entrepreneurship but also a commitment to contributing to the growth and success of potential ventures (Safdar et al., 2022). Traditionally, entrepreneurial intention has been conceptualized as a function of individuals' traits such as risk-taking propensity, passion and self-confidence, combined with an internal locus of control, shaping a focused mindset oriented toward entrepreneurial objectives and business success (Shahzad et al., 2021; Soomro et al., 2021). With the appropriate support from educational frameworks and a conducive learning environment, students can develop an entrepreneurial mindset that aligns with the demands of business creation and innovation (Safdar et al., 2022). Research by Safdar et al. (2022); Shahzad et al. (2021) and Soomro et al. (2021) consistently emphasized that a supportive academic atmosphere, along with a well-structured curriculum, has been shown to significantly enhance students' motivation and inspiration, thereby reinforcing their entrepreneurial intention (Shahzad et al., 2021). In the context of Pakistan, the concept of entrepreneurial intention has been extensively examined by various scholars, such as Khuram et al. (2022); Shahzad et al. (2021); and Tanveer et al. (2021), who have highlighted the diverse factors that influence an individual's mindset, attitude, and willingness to pursue entrepreneurship as opposed to conventional employment opportunities. Additionally, Shahzad et al. (2021) and Soomro et al. (2021) have demonstrated that entrepreneurial education, combining an effective educational environment and supportive governmental policies, can significantly promote entrepreneurial activities at the national level that ultimately raise students' entrepreneurial intention (Tahir, 2022).

Entrepreneurial Education

As a cornerstone, entrepreneurial education plays a pivotal role in shaping students' future aspirations and serves as a dynamic business education (Hassan et al., 2021). It is widely recognized as a crucial instrument for fostering wealth creation, alleviating poverty and driving economic growth, particularly in developing nations like Pakistan (Munawar et al., 2023). Furthermore, Liu et al. (2020) emphasize that entrepreneurial education not only cultivates students' interest in business ventures but also equips them with the skills to identify new opportunities by faster their problem-solving abilities, motivation and a proactive mindset (Shahzad et al., 2021). Entrepreneurial education is firmly a foundational pillar of economic development, offering a robust mechanism for poverty alleviation and promoting sustainable

growth (Liu et al., 2020). As Safdar et al. (2022) and Soomro et al. (2021) pointed out, cultivating students' awareness and fostering their entrepreneurial intention, the entrepreneurial education paradigm significantly shapes their career trajectories in a complex and dynamic global economy. Hassan et al. (2021) assert that higher-quality entrepreneurial education positively affects students' perception of entrepreneurship, strengthening their entrepreneurial intention. Additionally, Hassan et al. (2021) emphasize the crucial role of entrepreneurial education in developing an entrepreneurial mindset, nurturing creativity and driving innovation, which are indispensable for addressing modern economic challenges (Liu et al., 2020).

Entrepreneurial Inspiration

Entrepreneurial inspiration is defined as a strong drive to achieve business goals, supported by essential traits like risk-taking and confidence (Januardi et al., 2023). It reflects an individual's need and desire to attain entrepreneurial objectives, influencing their actions and decisions (Estay et al., 2013; Cui et al., 2021). Ajiwibawani et al. (2017) and Cui et al. (2021) highlighted that such inspiration fuels students' aspiration to achieve goals, perform entrepreneurial activities effectively and strive for success. Munawar et al. 2023 and Supriatna (2018) further emphasize that their motivation, inspiration and desire shape student entrepreneurial intention. Hassan et al. (2020) extend the context by indicating that entrepreneurial education plays a pivotal role in shaping students' future career choices by fostering an entrepreneurial mindset and providing insights into launching a successful venture. Rifkhan (2017) and Yu and Lu (2023) assert that entrepreneurial inspiration positively influences students' intention to pursue entrepreneurship by developing self-confidence and a strong mindset. According to Januardi et al. (2023) and Li et al. (2023) noted that training programs can significantly enhance students' entrepreneurial motivation, attitude and positive behavior. Additionally, Aini et al. (2020) suggest that such motivation empowers students to solve problems, adopt a business-oriented mindset, and leverage their unique skills to start venture. Furthermore, Yu and Lu (2023) indicated that the critical role of entrepreneurial education and governmental initiatives in fostering inspiration among university students, encouraging them to consider entrepreneurship as a viable and rewarding career path.

Entrepreneurial Orientation

Entrepreneurial orientation is widely regarded as a pivotal strategic posture that channels individual cognitive and behavioral focus toward entrepreneurial pursuits, thereby shaping entrepreneurial intention (Bae et al., 2014; Stock, 2023). The entrepreneurial orientation is characterized by dimensions such as innovativeness, risk-taking, and pro-activeness, which have been repeatedly found to enhance entrepreneurial intention (Stock & Erpf, 2023). In higher education, entrepreneurial orientation is particularly salient, as it equips university students with the mindset and competencies necessary to navigate complex markets and identify opportunities for new venture creation (Srivastava, 2025). A growing body of evidence consistently demonstrates the positive influence of entrepreneurial orientation on entrepreneurial intention (Stock 2023). Further, Srivastava (2025) reported that innovativeness, risk-taking, and pro-activeness significantly predicted students' entrepreneurial intention, affirming that these traits are crucial for enabling entrepreneurial reediness. The parallel findings of Naseer (2024) reveal that entrepreneurial orientation not only strengthens students' willingness to engage in venture creation but also interacts with contextual variables to strengthen the impact of entrepreneurial education on students' entrepreneurial intention. These insights suggest that the entrepreneurial orientation is not simply an internal disposition but a construct deeply intertwined with environmental and institutional factors.

Entrepreneurial Awareness

Entrepreneurial awareness has emerged as a crucial antecedent of entrepreneurial intention, particularly in contexts where limited exposure to entrepreneurship restricts students' willingness to consider self-employment as a viable career option (Hassan et al., 2020; Shahzad et al., 2021). The awareness encompasses understanding entrepreneurial opportunities, recognizing risk and rewards, and perceiving entrepreneurship as a socially and economically valuable activity (Shahzad et al., 2021). It reflects not only knowledge but also perception, which is how individuals interpret the feasibility and desirability of entrepreneurship in their socio-economic environment (Raza et al.. 2020). Scholars such as Hassan et al. (2020); Shahzad et al. 2021 and Mei et al. (2020) have increasingly emphasized that entrepreneurial awareness plays a vital role in wealth generation, poverty reduction, and overall economic development, particularly in emerging economies like Pakistan (Khawar et al., 2022; Shahzad et al., 2021). When students are more aware of entrepreneurial pathways, they are more likely to identify opportunities, evaluate them critically, and translate the intention to action (Khawar et al., 2022). This is particularly salient in Pakistan as many students are aware of entrepreneurship but remain hesitant to pursue it due to inadequate knowledge of financial channels, weak institutional support, and cultural inclination toward salaried employment (Khawar et al., 2022; Hassan et al., 2020).

Government initiatives as a Moderator

Governmental initiatives have increasingly been recognized as a decisive environmental factor that moderates the relationship between entrepreneurial antecedents such as education, awareness, inspiration, and entrepreneurial intention (Anwar et al., 2022). Government initiatives play a pivotal role in shaping entrepreneurial activities, particularly among university students, by creating a supportive environment through targeted policies, funding opportunities, and institutional infrastructures (Ali et al., 2019; Ferreira et al., 2017). Meanwhile, earlier research by Anjum et al. (2018) often highlighted the mere presence of financial incentives and training schemes. The study of Shahzad et al. (2021) and Syed et al. (2023) argues that the effectiveness of such initiatives depends on their integration with educational institutions and the extent to which they reduce the barriers to entrepreneurial entry. The study of Anjum et al. (2018) and Shahzad et al. (2021) emphasizes that to strengthen entrepreneurial intention, governments must go beyond policy rhetoric by embedding entrepreneurial education into university curricula and providing practical exposure through workshops, mentorship, and incubation centers.

In Pakistan, government-led initiatives such as interest-free loans (IFLs), the Prime Minister Youth Business Loan (PMYBL), and the Kamyab Jawan program have demonstrated potential in motivating tough individuals towards self-employment, particularly when coupled with entrepreneurial training and awareness programs (Ali et al., 2019). Similarly, the youth entrepreneurship scheme (YES), aligned with higher education institutions, provides students with education loans, infrastructure, and access to incubation facilities. Recent evidence claims that funding is sufficient, showing instead that governmental support acts as a moderator, strengthening entrepreneurial antecedents such as education, awareness, inspiration, and entrepreneurial intention by reducing perceived risks, legalizing entrepreneurship, and enhancing students' confidence to launch a venture (Li et al., 2019). Collectively, these initiatives underscore the Pakistani government's commitment to fostering a resilient entrepreneurial ecosystem. Yet, they also reveal that support must be dynamic, accessible and integrated within universities to produce a sustained impact on students' entrepreneurial intention.

Table 1: Governmental initiatives

Government Initiatives	Purpose

Interest-free loan	To motivate the students to startup at the micro-level and become self-independent.
Prime Minister Youth Business Loan	To support new and young entrepreneurs at the macro level, such as wholesalers, retailers, and manufacturers.
Kamyab Jawan	A loan for startups and the expansion of business operations for students.
YES	Provide an educational loan for university students for higher education.
Incubation Center	Facilitation at the university level for developing university students' competencies, such as office space, lab facilities, workshops, and mentorship that promotes entrepreneurial awareness.

List of developed hypotheses of the study

Hypothesis 1: Entrepreneurial education enhances Pakistani university students' attitude toward entrepreneurship and strengthens their entrepreneurial intention.

Hypothesis 2: Entrepreneurial awareness enhances Pakistani university students' attitude toward entrepreneurship and strengthens their entrepreneurial intention.

Hypothesis 3: Entrepreneurial inspiration enhances Pakistani university students' attitude toward entrepreneurship and strengthens their entrepreneurial intention.

Hypothesis 4: Entrepreneurial orientation enhances Pakistani university students' attitude toward entrepreneurship and strengthens their entrepreneurial intention.

Hypothesis 5: Government support significantly moderates how entrepreneurial awareness affects entrepreneurial intention of Pakistani university students.

Hypothesis 6: Government support significantly moderates how entrepreneurial education affects entrepreneurial intention of Pakistani university students.

Hypothesis 7: Government support significantly moderates how entrepreneurial inspiration affects entrepreneurial intention of Pakistani university students.

Hypothesis 8: Government support significantly moderates how entrepreneurial orientation affects entrepreneurial intention of Pakistani university students.

Proposed Theoretical Framework of the Study

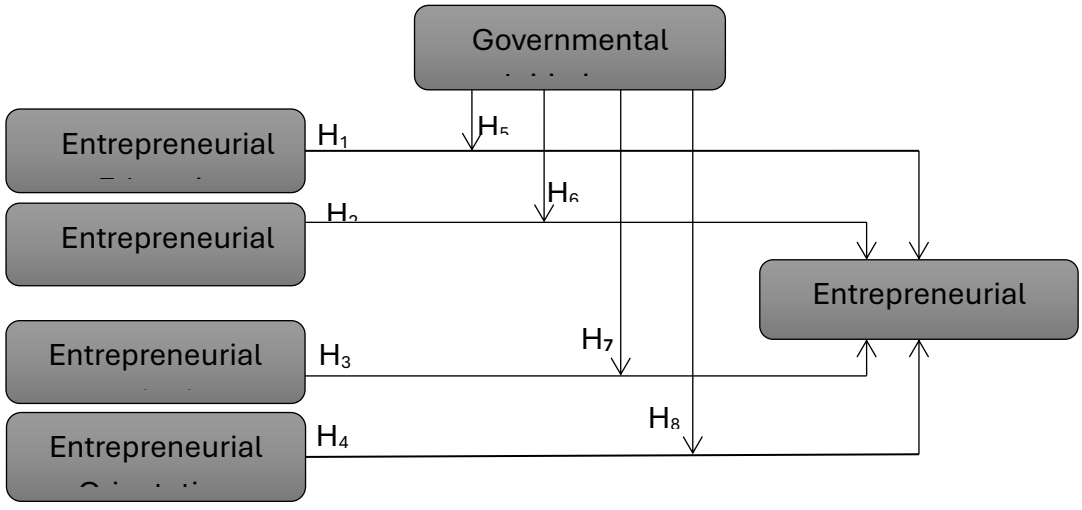

Figure 2: A Proposed Moderating Mediating Framework

Data and Methodology

As per the previous literature, this study rigorously investigated those factors igniting the entrepreneurial spark in Pakistan's next generation of business leaders, including entrepreneurial education, entrepreneurial awareness, entrepreneurial inspiration, entrepreneurial orientation and governmental initiatives towards entrepreneurial intention. For testing the proposed model, final-year business students at Pakistani universities were selected from the 2020-2021 batches, specifically those students who already attend entrepreneurial education as a subject. Data was collected via structured questionnaires using a five-point Likert scale. To ensure construct validity, robust multi-item measure were adopted, with four items selected for each construct of the model, for entrepreneurial education items selected from Shahzad et al. (2021) and Soomro et al. (2021); for entrepreneurial awareness items selected from Cui et al. (2021) and Soomro et al. (2021), for entrepreneurial inspiration items selected from Khan et al. (2022) and Syed et al. (2023), entrepreneurial orientation items selected from Ho & Lu, (2024) and San-Martín et al. (2021), governmental initiatives items selected from Ali et al. (2019) and Li et al. (2019) and for entrepreneurial intention items selected from Shahzad et al. (2021) and Soomro et al. (2021). Items were selected from various resources to evaluate the model's constructs, and these studies were examined across different contexts and parameters. Therefore, the multiple items were selected from other resources and rephrased as per the study's objective.

The data was collected using a stratified sample approach, as the study's population consisted of Pakistani universities in Punjab, Pakistan. Indeed, final-year business universities were selected as the targeted population of the study, as these students are ready to enter into practical life and willing to face the market challenges, and the data were analyzed using PLS-SEM 4, as suggested by Hair et al. (2021).

The structural equation model has emerged as a powerful analytical tool for unravelling complex relationships, as SEM allows researchers to rigorously test hypotheses and evaluate intricate models (Hair et al., 2021). SEM also offers a powerful lens for examining data across various disciplines, including marketing, business and operations management, education, healthcare (Chengoden et al., 2023), and social science (Tan et al., 2023). Particularly suited for exploratory investigation, SEM is a robust framework for understanding complex phenomena, minimizing error, and maximizing the predictive power of the theoretical model (Hair et al., 2021). SmartPLS has been evaluated in two phases: testing hypotheses and testing the validity and reliability of the data (Yuan et al., 2020).

The total population of the study consisted of 828 final-year business students from ten Pakistani business universities in the Punjab, Pakistan, specifically those students who had already studied entrepreneurial education as a subject. A total of 850 questionnaires were distributed among the targeted universities, and only 832 responses were received from the respondents. After clearing the data, only 825 responses were valid for further analysis, and only four responses were excluded from the data under the straight-line and blank responses.

Data Analysis

This study explored the entrepreneurial intention of 825 final-year business undergraduate students at ten Pakistani universities in the Punjab region, Pakistan. Drawn from ten prominent universities in the field of entrepreneurial education, these students represented the next generation of potential entrepreneurs in Pakistan. The sample comprised a near-even split in gender (55% male and 45%

female) and diverse academic backgrounds. Specifically, the study body included 10% from the University of Lahore, 9% from Gift University, 11% from the University of Management Technology, 11% University of Central Punjab, 16% from Commission on Science and Technology for Sustainable Development in the South, 9% from Superior University, 9% from Foundation for Advancement of Science and Technology, 11% from Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, 10% from National College of Business Administration & Economics, 11% from Lahore university of management sciences. A striking 80% of respondents expressed a strong desire to pursue entrepreneurial ventures after graduation, which makes students represent the majority of this group. A comprehensive overview of the respondents' demographic profile is presented in Table 2.

Table 2: Respondents' Demographic Profile

Characteristics	Number of students	Percentage
Gender	N 825	
Females	368	45%
Male	457	55%
Universities		
University of Lahore	79	10%
Gift University	77	9%
University management technology	93	11%
University of Central Punjab	94	11%
Commission on Science and Technology for Sustainable Development in the South	72	16%
Superior University	67	9%
Foundation for Advancement of Science and Technology	77	9%
Shaheed Zulfikar Ali Bhutto Institute of Science and Technology	95	11%
National College of Business Administration & Economics	84	10%
Lahore university of management sciences	90	11%
Specialization		
Accounting	176	23%
Business studies	230	28%
Administration	209	26%
Finance	213	23%
Willing to participate in entrepreneurial activities after graduation		
Yes	657	80%
No	171	20%

After developing descriptive statistics for the study respondents, the analysis proceeds to evaluating the model measurements. At this stage, it is often referred to as the outer model. This stage is crucial as it involves assessing the reliability and validity of the constructs used in the study. A subsequent section offers a comprehensive and detailed exploration of the essential phase, highlighting the methodological steps and statistical techniques employed to ensure the robustness of the measurement model, which is as follows:

Model Measurement

This study employed a Partial Least Squares Equation Model (PLS-SEM 4), a robust technique recommended for predictive modeling and complex causal analysis (Hair et al., 2021). The study was conducted in two distinct phases: assessment of the measurement model and structural model. The measurement model was rigorously examined for content validity and reliability to ensure the accuracy of the constructs. Following the established guideline by Hair et al. (2021), construct reliability was deemed satisfactory when the factor loading exceeded 0.708, composite reliability reached 0.700, and average variance extraction (AVE) must be greater than 0.500. The proposed moderating model was analyzed using PLS-SEM 4, and the measurement model evaluation, as presented in Table 3, yielded results that exceeded the established criteria. At the same time, Hair et al. (2021) suggest that factor loadings above 0.400 are acceptable with strong AVE, as the analysis demonstrated even stronger performance, with factor loadings ranging from 0.619 to 0.898 and composite reliability between 0.770 and 0.865. AVE value is consistently above the 0.500 threshold (0.518 – 0.642). These results indicate a robust result that confirms the reliability and validity of the measurement model, supporting further analysis.

Table 3. Model Measurement

Variable	Indicators	Loading	AVE	CR
Entrepreneurial Education	Entrepreneurial education nurtured my confidence to pursue my entrepreneurial aspirations	0.711	0.617	0.799
	Entrepreneurial education reshaped and ignited my entrepreneurial aspiration.	0.743		
	I believe entrepreneurship will prepare me to handle unpredictable business challenges.	0.856		
	I believe entrepreneurial education empowers me to be an innovative future entrepreneur.	0.822		
Entrepreneurial Awareness	I believe that the educational environment supports me in developing my entrepreneurial skills and mindset.	0.759	0.642	0.823
	I believe the educational environment fosters my innovation, creativity and ability to take calculated risks.	0.795		
	I believe the environment emphasizes developing practical entrepreneurial skills, such as business planning and financial management.	0.862		
	I believe that mentorship and guidance from university faculty significantly influence my entrepreneurial aspirations.	0.786		
Entrepreneurial Inspiration	I believe that my institution's dedicated entrepreneurship centers inspire me to pursue an accelerated entrepreneurial venture.	0.670		
	My institution also provides a designated fund and venture capital to foster students' entrepreneurial desirability.	0.890		

	I believe that institution-based workshops, training sessions, and seminars positively shape my entrepreneurial perspective.	0.816	0.610	0.789
	I believe that institutional appreciation programs promote my interest and desirability toward entrepreneurship	0.730		
Entrepreneurial Orientation	I believe that teachers enhance my self-efficacy, which supports my entrepreneurial success.	0.774	0.617	0.801
	I believe entrepreneurial teachers embody resilience, creativity, and a proactive mindset that inspires my entrepreneurial orientation.	0.796		
	I believe university support is more influential in shaping my entrepreneurial mindset than educational material.	0.787		
	I believe that the university-based section and learning environment motivate me to explore new ideas and take calculated risks.	0.784		
Governmental Initiatives	I believe that government initiatives inspire me to pursue entrepreneurship and build my own business.	0.876	0.606	0.865
	I believe that government support programs strengthen my desire to establish my own business.	0.898		
	I believe that government-based polices and training initiatives enhance my commitment to gaining the knowledge and expertise needed for entrepreneurial success.	0.683		
	I believe that government-led entrepreneurial courses and schemes significantly increase my desire to become a future entrepreneur.	0.619		
Entrepreneurial Intention	I am passionate about building my own business and becoming an entrepreneur.	0.713	0.518	0.770
	I have a strong and deep desire to build my own business.	0.708		
	I am committed to gaining the experience and knowledge to succeed in entrepreneurship.	0.739		
	The entrepreneurial course ignited a significant increase in my desire to pursue entrepreneurship.	0.702		

Discriminant Validity (HTMT)

The table 4 presents the results of the Fornell-Lacker criterion to assess discriminant validity among the study constructs. To ensure the distinctiveness of the constructs, the discriminant validity was assessed using the heterotrait-monotrait (HTMT) ratio, a robust method proposed by Henseler et al. (2015). The stringent test required HTMT values to be less than 0.850 to establish discriminant validity, as established by Hair et al. (2021). The primary purpose of discriminant validity is to ensure that the model's constructs are genuinely distinct (Hair et al., 2021). The results presented in Table 3 demonstrated that all HTMT values comfortably met this criterion, confirming strong discriminant validity and validating the measurement for subsequent analysis.

Table 4. The Heterotrait-monotraint ratio (HTMT)

		1	2	3	4	5	6	7	8	9	10
1	Entrepreneurial Inspiration	1									
2	Entrepreneurial Intention	0.798	1								
3	Entrepreneurial Orientation	0.764	0.689	1							
4	Entrepreneurial Awareness	0.790	0.761	0.797	1						
5	Entrepreneurial Education	0.820	0.490	0.809	0.848	1					
6	Governmental Initiatives	0.542	0.675	0.394	0.347	0.255	1				
7	Governmental Initiatives x Entrepreneurial Education	0.042	0.278	0.172	0.268	0.188	0.117	1			
8	Governmental Initiatives x Entrepreneurial Awareness	0.171	0.382	0.403	0.479	0.339	0.078	0.667	1		
9	Governmental Initiatives x Entrepreneurial Inspiration	0.121	0.138	0.175	0.158	0.105	0.252	0.836	0.640	1	
10	Governmental Initiatives x Entrepreneurial Orientation	0.075	0.156	0.222	0.350	0.157	0.101	0.638	0.638	0.733	1

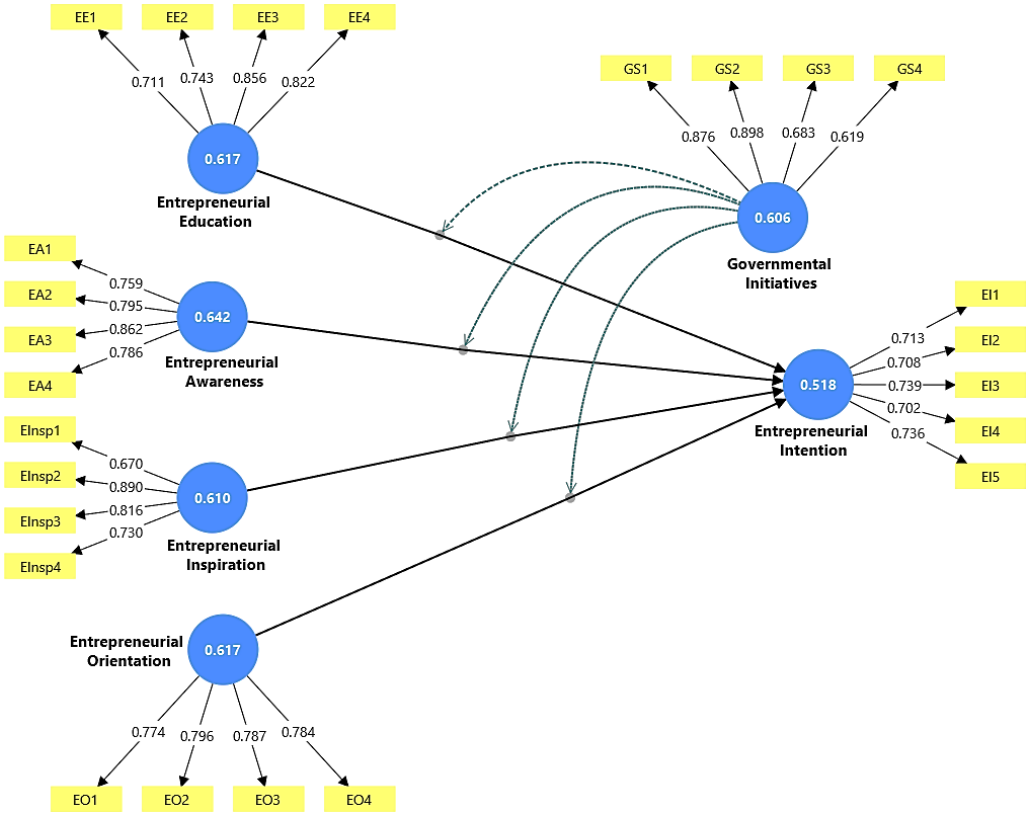

Figure 3: Model Measurement

The figure illustrates the measurement model of this study, highlighting the relationship between entrepreneurial education, awareness, inspiration and orientation as predictors of entrepreneurial intention, with governmental initiatives serving as a moderating factor. Each construct is measured through multiple indicators, all demonstrating acceptable factor loading. The AVE values for the construct range from 0.518 to 0.642, confirming the convergent validity. The model emphasizes

how individual-level factors and contextual support jointly influence students' entrepreneurial intention, aligning with the theoretical foundation of social cognitive theory.

Structural Model

The analysis progressed to the second phase with the validated measurement model, testing the hypothesized relationship among the constructs using structural equation modeling at a 5% significance level. Evaluation of the structural model requires a comprehensive diagnostic process, encompassing the assessment of inner collinearity, the coefficient of determination, and the path coefficient. A structural model is considered sound and well-established if it meets the established benchmarks stipulated by Hair et al. (2021). In particular, inner collinearity, as measured by the variance inflation factor (VIF), must not exceed the threshold of 5 to confirm the absence of problematic multicollinearity. The coefficient of determination should fall within 0 and 1, with a higher value indicating greater explanatory power. Finally, for the path coefficient to be deemed statistically significant, the corresponding p-value must be less than 0.05, and the t-statistic (one-tailed test) must surpass the critical value of 1.645. A crucial preliminary step in this phase was to assess for collinearity among the model constructs. This ensured that the relationships observed were not confounded by multicollinearity. To determine the collinearity testing, an established threshold value by Hair et al. (2021), and variance inflation factor (VIF) values below five were considered acceptable. The results are shown in Table 5; all VIF values comfortably met this criterion, confirming the absence of collinearity issues and allowing us to proceed confidently.

Table 5: Assessment of the Collinearity

Relationship	VIF
Entrepreneurial Inspiration -> Entrepreneurial Intention	2.980
Entrepreneurial orientation -> Entrepreneurial Intention	2.971
Entrepreneurial awareness -> Entrepreneurial Intention	2.958
Entrepreneurial Education -> Entrepreneurial Intention	2.356
Governmental Initiatives -> Entrepreneurial Intention	1.500
Governmental Initiatives x Entrepreneurial Inspiration → Entrepreneurial Intention	2.900
Governmental Initiatives x Entrepreneurial Orientation → Entrepreneurial Intention	2.857
Governmental Initiatives x Entrepreneurial Awareness → Entrepreneurial Intention	2.640
Governmental Initiatives x Entrepreneurial Education → Entrepreneurial Intention	3.962

Following the collinearity assessment, the next step is evaluating the structural model to determine the predictive power using the coefficient of determination known as R^2. This metric ranges from 0 to 1, as established by the threshold value by Hair et al. (2021), indicating the proportion of variance in the dependent variable explained by the other construct of the model. Using the PLS-SEM, the value of R^2 was obtained, and the value of R^2 for the entrepreneurial intention was 0.818, which explains that 82% variance in entrepreneurial intention is due to other model constructs. Further, it also explained that 18% of the variance in entrepreneurial intention is not included in the current study. The result of R^2 is presented in Table 6.

Table 6: Coefficient of Determination (R^2)

Items	R2
Entrepreneurial Intention	0.818

The culmination of the structural model analysis involved rigorously testing the hypotheses of the study and assessing the relationships between the constructs. This phase aimed to determine whether the exogenous variables significantly influenced the endogenous variables. The testing of hypotheses was evaluated by using a one-tailed bootstrapping procedure within PLS-SEM 4; under the domain hypotheses, the established significance level by Hair et al. (2021), has been followed, and a p-value below the 5% threshold was considered indicative of a significant effect. To ensure robust path coefficient estimates, 1000 resamples were generated (alpha at 5%, one-tailed), as suggested by Chin et al. (2010). Furthermore, a value exceeding 1.645, as per the guidelines of Hair et al. (2021), was required for significance. The results of these hypothesis testing are presented in Table 7.

Table 7: Hypotheses of the Study

Hypotheses	Relationship	T value	Path-value	P-value	Decision
Direct Effects					
H1	Entrepreneurial Education → Entrepreneurial Intention	2.344	0.304	0.001	Accepted
H2	Entrepreneurial awareness → Entrepreneurial Intention	3.157	0.127	0.038	Accepted
H3	Entrepreneurial Inspiration → Entrepreneurial Intention	2.027	0.293	0.021	Accepted
H4	Entrepreneurial orientation → Entrepreneurial Intention	2.638	0.251	0.011	Accepted
Moderating path					
H5	Governmental Initiatives x Entrepreneurial Education → Entrepreneurial Intention	2.875	0.161	0.011	Accepted
H6	Governmental Initiatives x Entrepreneurial Awareness → Entrepreneurial _Intention	3.341	0.178	0.016	Accepted
H7	Governmental Initiatives x Entrepreneurial Inspiration → Entrepreneurial Intention	2.131	0.228	0.029	Accepted
H8	Governmental Initiatives x Entrepreneurial Orientation → Entrepreneurial Intention	3.789	0.330	0.037	Accepted
Interaction path					
	Governmental Initiatives → Entrepreneurial Intention		0.210		

Result of the Direct Path

H1: Entrepreneurial education has a significant influence on entrepreneurial intention (β = 0.304, t = 2.344, p = 0.001), indicating that a well-structured curriculum, mentorship, and practical experiential learning provide students with the confidence, practical skills, and readiness to pursue entrepreneurship as a future career. The findings confirm the study's objective that education plays a central role in shaping entrepreneurial ambitions and reducing reliance on traditional employment. **H2:** entrepreneurial awareness positively predicts entrepreneurial intention (β = 0.127, t = 3.157, p = 0.038), indicating that awareness of business opportunities, market dynamics and institutional resources motivates students to consider entrepreneurship a viable career choice. Thus, the findings have confirmed the importance of universities in integrating awareness-building initiatives to cultivate opportunity recognition among students, which ultimately fosters entrepreneurial intention among university students.

H3: entrepreneurial inspiration has a significant effect on the choice of entrepreneurship (β = 0.293, t = 2.027, p = 0.021), confirming that exposure to role models, institutional workshops and short success stories can inspire students to translate aspiration into action, ultimately fostering students' entrepreneurial intention. This, the inspiration through the role models, serves as a motivational driver that enhances the desirability among university students to pursue entrepreneurship. **H4:** The finding of entrepreneurial orientation exerts a strong impact on students' entrepreneurial intention (β = 0.251, t = 2.638, p = 0.011), the innovativeness, pro-activeness and risk-taking enhance students' willingness to initiate a venture. Thus, the findings underscore the significance of fostering entrepreneurial traits in higher education to build a resilient, opportunity-driven mindset among aspiring future entrepreneurs.

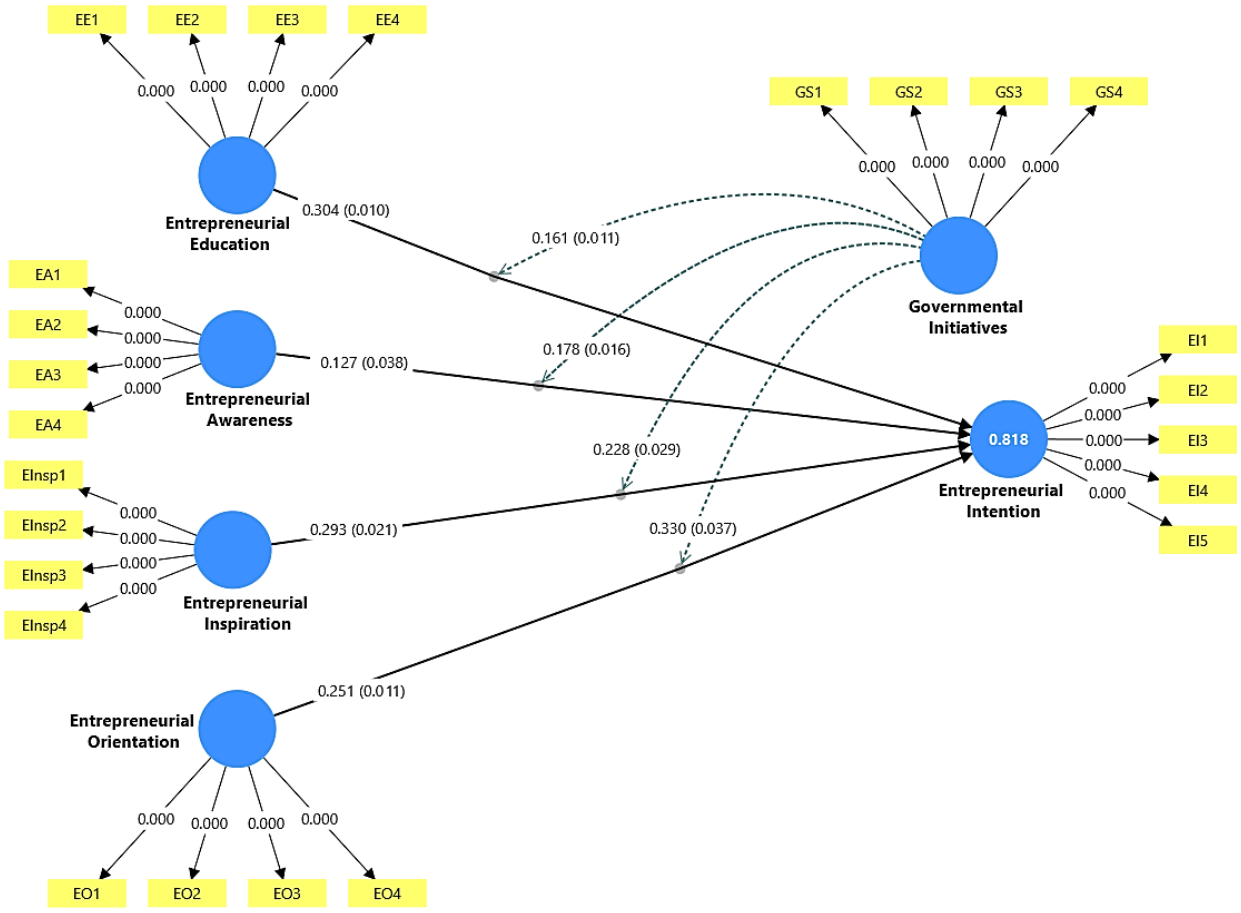

Figure 4: Structural Measurement

Moderating Analysis

H5: The findings regarding the moderating effect of governmental initiatives positively strengthen the relationship between entrepreneurial education and entrepreneurial intention ($\beta = 0.161$, $t = 2.875$, $p = 0.011$). The analysis has proven that government-led training, funding, and policy support amplify the effectiveness of education, ensuring the learned competencies are applied in practice. This collaboration transforms theoretical knowledge into actionable entrepreneurial outcomes.

The second assumption, this figure illustrates the moderating role of governmental initiatives in the relationship between entrepreneurial education and entrepreneurial intention. The graph shows that when governmental initiatives are high, the positive effect of entrepreneurial education on entrepreneurial intention becomes stronger, as reflected in the steeper slope of the dashed line. Students with high governmental support and strong entrepreneurial education displayed significantly higher entrepreneurial intention than those with low government support. Conversely, when governmental initiatives are low, the increase in entrepreneurial intention with higher entrepreneurial education is weaker, as shown by the solid line.

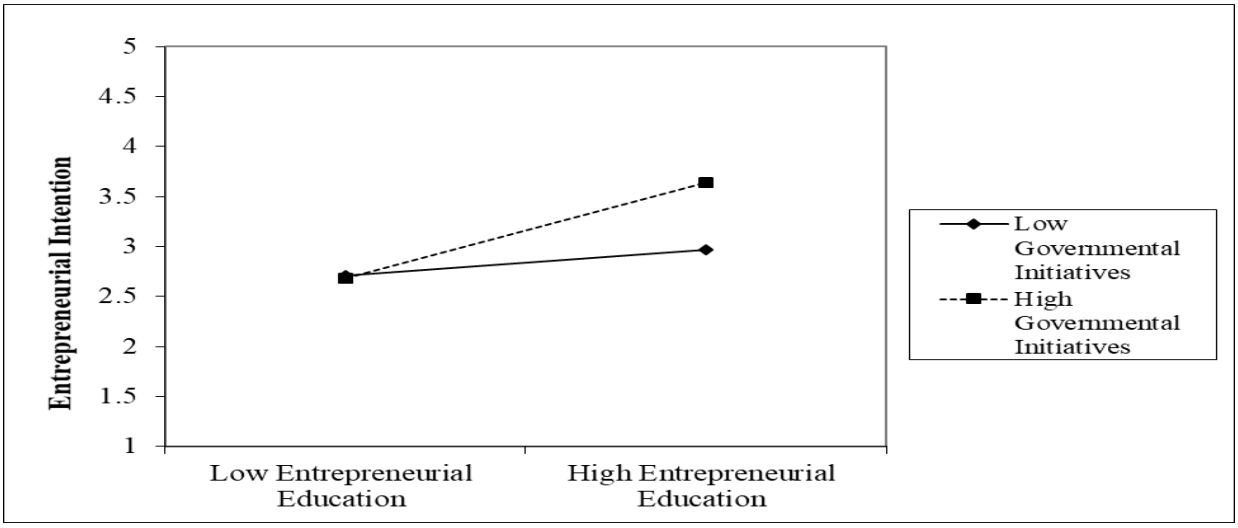

Figure 5: Moderating Effect of Governmental Initiatives

H6: The moderating effect of governmental initiatives enhances and strengthens the relationship between entrepreneurial awareness and entrepreneurial intention ($\beta = 0.178$, $t = 3.341$, $p = 0.016$). The findings support positively and indicate that the awareness supported by government schemes increases students' confidence to act on identified new business opportunities. The findings also emphasize the importance of aligning awareness-building with institutional and policy-level backing.

The second assumption is that the figure illustrates the moderating effect of governmental initiatives on the relationship between entrepreneurial awareness and entrepreneurial intention. The graph has shown that students with greater entrepreneurial awareness are more likely to develop strong entrepreneurial intention when they perceive robust government initiatives such as funding, policies and incubation programs. Conversely, under weak governmental support, awareness alone does not translate strongly into intention. These findings suggest that

governmental initiatives act as a catalyst, making entrepreneurial awareness more effective in driving entrepreneurial intention.

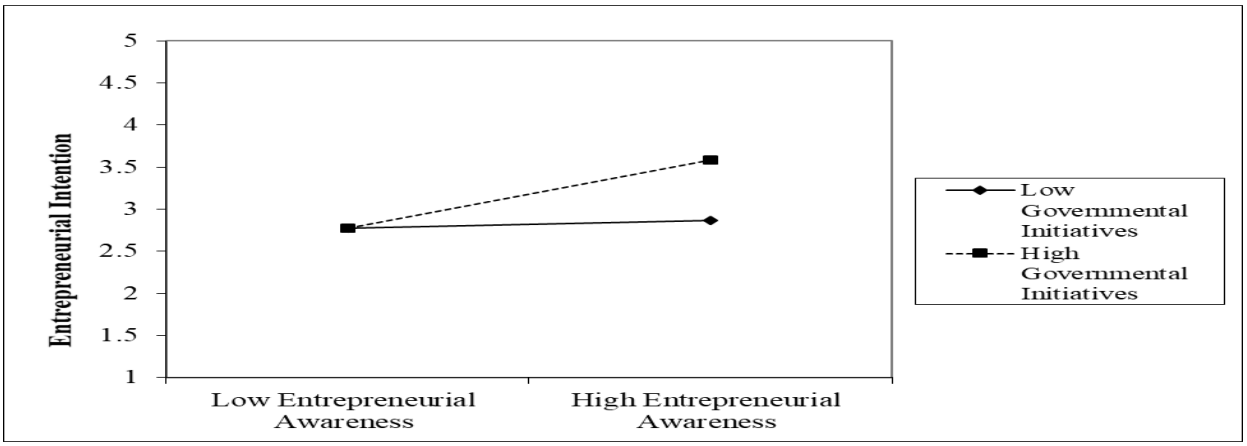

Figure 6: Moderating Effect of Governmental Initiatives

H7: governmental initiatives enhance and positively strengthen the relationship of entrepreneurial inspiration and intention ($\beta = 0.228$, $t = 2.131$, $p = 0.029$), indicating that inspiration stimuli, when reinforced with supportive policies and funding, can significantly increase the likelihood of entrepreneurial action. The presence of external backing, such as governmental support, can ensure inspirational behavior that improves students' entrepreneurial intention.

The second assumption is that the figure illustrates the moderating effect of governmental initiatives on the relationship between entrepreneurial inspiration and entrepreneurial intention. The graph has shown that students with greater entrepreneurial inspiration are more likely to develop strong entrepreneurial intention when they perceive robust government initiatives such as funding, policies and incubation programs. Conversely, inspiration alone does not translate strongly into intention under weak governmental support. These findings suggest that governmental initiatives act as a catalyst, making entrepreneurial inspiration more effective in driving entrepreneurial intention.

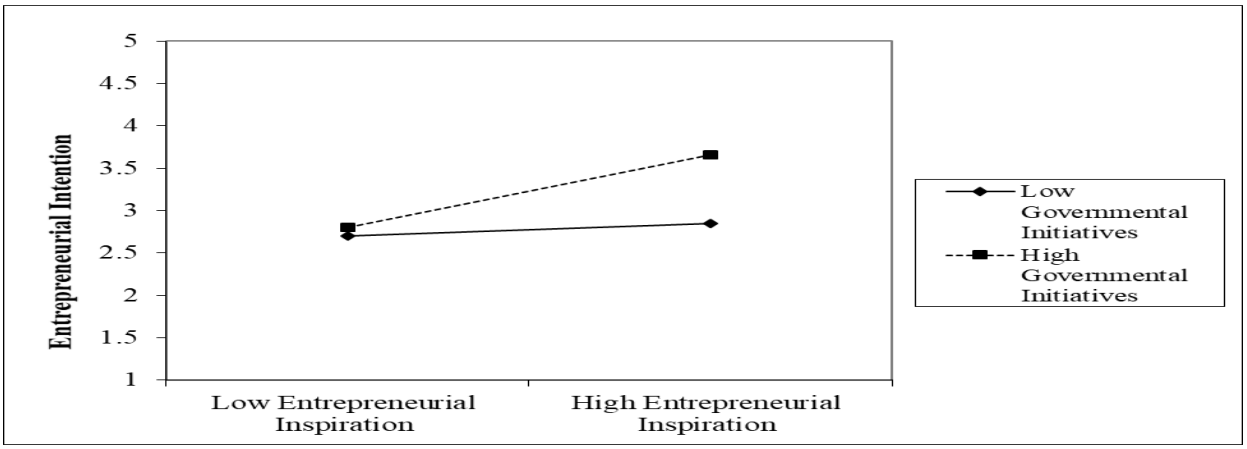

Figure 7: Moderating Effect of Governmental Initiatives

H8: the governmental initiatives also strengthen the link between entrepreneurial orientation and intention ($\beta = 0.330$, $t = 3.789$, $p = 0.037$), indicating that students with risk-taking and innovative tendencies benefit from institutional support, which provides financial stability and reduces uncertainty, thereby encouraging entrepreneurial engagement.

The second assumption is that the figure illustrates the moderating effect of governmental initiatives on the relationship between entrepreneurial orientation and entrepreneurial intention. The graph has shown that students with greater entrepreneurial orientation are more likely to develop strong entrepreneurial intention when they perceive robust government initiatives such as funding, policies and incubation programs. Conversely, orientation alone does not translate strongly into intention under weak governmental support. These findings suggest that governmental initiatives act as a catalyst, making entrepreneurial orientation more effective in driving entrepreneurial intention.

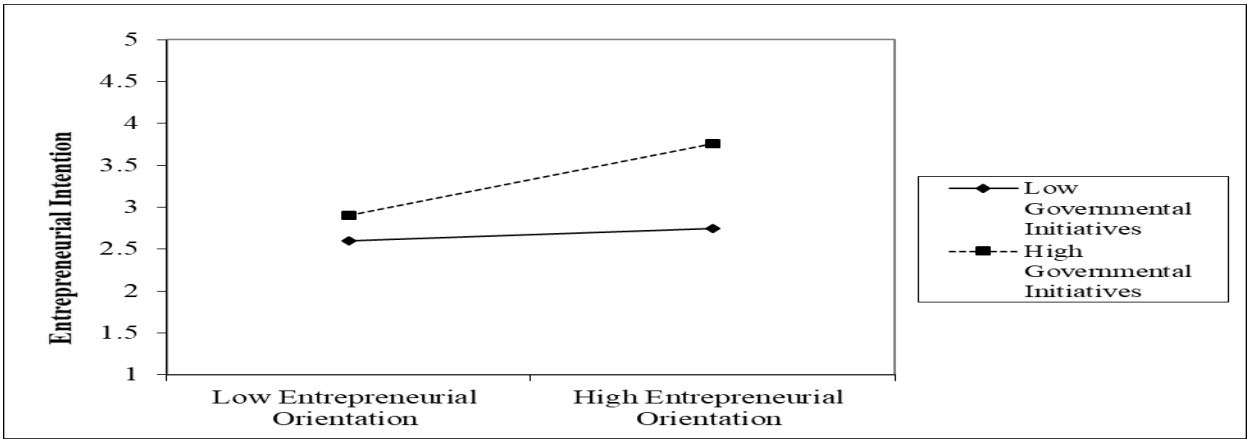

Figure 8: Moderating Effect of Governmental Initiatives

Discussion of the Results

The purpose of the study was to examine the influence of entrepreneur education awareness inspiration and orientation on students underpin tension while also analyzing the moderating role of government initiatives in higher education sectors of Pakistan the finding strongly confirmed that the objective of the studies have been met providing both practical and practical insights into how entrepreneurial intentions can be fostered within the developing economies such as Pakistan. The results confirmed that entrepreneurial education significantly predicts entrepreneurial intention ($\beta = 0.304$, $p = 0.037$). This supports the objective of establishing education as the foundation for entrepreneurship by moderating that a structured curriculum mentorship and experimental learning confidence and practical skills necessary for the venture creation price studies of Shahzad et al. (2021) and Munawar et al. (2023) have similarly argued that entrepreneurial education equips students to handle uncertainty and innovation however this study extend the finding of stimulating them in the Pakistani higher education context, where traditional employment is often prioritized. The evidence here highlights that education provides knowledge and ignites entrepreneurial ambition, reducing dependence on public and salaried jobs.

The findings also demonstrate that entrepreneurial awareness significantly influences entrepreneurial intention ($\beta = 0.304$, $p = 0.037$). These results address the study's second objective, showing that awareness of opportunities, market dynamics, and institutional resources encourages students to view entrepreneurship as a viable career path. Even the findings are aligned with the prior study of Cui et al. (2021) and Syed et al. (2023), highlighting awareness as a precursor to opportunity recognition, while handling the uncertainty. This study fills this gap by showing that awareness initiatives within universities can directly nurture entrepreneurial intention, emphasizing the need for universities to expand exposure to the entrepreneurial ecosystem.

Entrepreneurial inspiration also significantly shaped students' entrepreneurial intention ($\beta = 0.293$, $p = 0.021$). This finding meets the third research objective, confirming that exposure to role models, workshops and entrepreneurial success stories motivates students to transform aspiration

into action. The study also aligns with Khan et al. (2022) and Syed et al. (2023), who emphasized the motivational role of inspiration, and a few connected it directly to intention within a higher education setting. The study demonstrates that inspiration acts as a catalyst, enhancing the students' desire for entrepreneurship. Thus, institutional efforts such as seminars, startup showcases and mentorship programs expanded to amplify inspiration as a driver of entrepreneurial ambition.

The study also revealed a significant positive effect of entrepreneurial orientation on students' intention ($\beta = 0.251$, $p = 0.011$), fulfilling the objective of analyzing entrepreneurial traits in intention formation. Students displaying innovativeness, proactivity and risk-taking tendencies are more inclined to initiate ventures. The findings aligned with international research of Ho & Lu (2024) and San-Martin et al. (2021) emphasize that students can also leverage entrepreneurial orientation when supported by a conducive learning environment. Importantly, this shows the value of integrating entrepreneurial personality development into higher education, ensuring graduates possess resilience and an opportunity-driven mindset.

The moderating analysis of the pivotal role of governmental initiatives in strengthening the relationship between entrepreneurial antecedents and entrepreneurial intention among university students in Pakistan. The results especially show that governmental intervention in the form of training programs, financial support, and policy framework amplifies the positive effects of education, awareness, inspiration, and orientation on students' willingness to pursue entrepreneurship.

The findings show that the moderating effects of governmental initiatives strengthen the impact of entrepreneurial education and intention ($\beta = 0.161$, $p = 0.011$). While education equips students with theoretical knowledge and practical skills, the presence of government-led training, grants, and startup support transforms the competencies into actionable entrepreneurial behaviours. The study, along with Anjum et al. (2018) and Shahzad et al. (2021), who argued that entrepreneurial education becomes more impactful when supported by enabling policies. In Pakistan, programs such as Lanyab Jawan and youth loan schemes serve as catalysts, ensuring students' learning experiences translate into viable business ventures. Thus, governmental support bridges the gap between academic preparation and entrepreneurial practice, reinforcing the central role of practical education in shaping entrepreneurial intention.

The results indicate that governmental initiatives enhance the link between entrepreneurial awareness and entrepreneurial intention ($\beta = 0.178$, $p = 0.016$). The results showed that awareness of opportunities at university-based resources encourages students to consider entrepreneurship, but it is often insufficient to inspire action without supportive structures. The governmental initiatives, such as funding programs, incubation centers, and awareness campaigns, provide the institutional reinforcement needed to convert awareness into action. The findings align with those of Syed et al. (2023), who emphasized the importance of institutional and policy support in fostering awareness-driven entrepreneurship. Thus, integrating awareness with the governmental backing ensures that students not only identify opportunities but also possess the means to act upon them, fostering a stronger entrepreneurial culture in higher education.

The moderating analysis confirms that governmental initiatives strengthen the link between entrepreneurial inspiration and entrepreneurial intention ($\beta = 0.228$, $p = 0.029$). The inspiration derived from role models, workshops, and cusses stories can encourage students to envision entrepreneurship, but external reinforcement is often necessary to convert inspiration into real entrepreneurial activity. These results are consistent with Khan et al. (2022) and Li et al. (2019), who observed that inspiration is most effective when accompanied by institutional support. In the Pakistani context, governmental initiatives legitimize students' entrepreneurial ambitions by lowering financial and structural barriers. Consequently, inspiration evolves from a motivational driver into a practical force that increases entrepreneurial desirability and commitment, particularly in environments where resources and opportunities are otherwise limited.

The findings demonstrate that governmental initiatives significantly reinforce the relationship between entrepreneurial orientation and entrepreneurial intention ($\beta = 0.330$, $p = 0.037$). The findings have shown that governmental initiatives through financial stability, incubation centers, and supportive regulation reduce the constraints and enable students to channel their entrepreneurial traits, such as innovativeness, practices, and risk-taking. The findings are aligned with San-Martin et al. (2021) and Adomako & Nguyen (2024), who emphasized that entrepreneurial orientation flourishes when embedded within supportive institutions. In Pakistan, where young entrepreneurs face barriers such as limited funding and high risks, governmental support mitigates these challenges, empowering students to act on their entrepreneurial traits. Thus, the collaboration between entrepreneurial orientation and policy-driven support encourages risk-taking and innovation, collectively drives entrepreneurial engagement, and new venture creation.

Theoretical and Practical Contributions

This study makes several practical contributions to the fields of entrepreneurship and higher education research. First, it integrates four critical antecedents, entrepreneur education awareness, inspirations, and orientation, into a single empirical framework, demonstrating their combined effect on entrepreneurial tension. In contrast, prior studies examine these constructs individually; the present research shows their interactive role in shipping students' decision making, thus brightening the theoretical understanding of intention formation in the entrepreneurial context. 2nd this study advanced knowledge by introducing governmental initiatives as a moderating factor previous research has emphasized gourmet sport in a general ecosystem development but little empirically work has tested as a moderating influence on education driven psychologically constructs by evidencing that government interventions significantly strengthen the relationship between educational sectors an entrepreneur intention this study extend the intention based theory particularly social cognitive theory by embedding structured sport as a contextual enabler 3rd this research contributes to the literature on entrepreneurship in how structural cultural and institute institutional emerging economy much of the existing scholarships is dominated by evident from developing context overlooking the under developing countries like Pakistan where entrepreneurship is both as a necessity and opportunity bye by situating the study in this constant context it provide novel insight into how structural, cultural and situational realities shape entreprenurial intention at university level.

The finding also provide a valuable implementation for policymakers universities and entrepreneurial precincts for university this study highlights the need for structured entrepreneurial curriculum experimental learning and role model based teaching to install entrepreneurial skills and confidence universities much not limited themselves to the critical instructions but actively engage students in the startup labs and competitions and mentoring programs that foster opportunity recognition and ventures creation for policy makers the study confirmed that governmental initiatives amplify the effectiveness of education and awareness building policies provided funding incubation centers and startup friendly regulations are not supplementary but essentially component in the transforming entrepreneurial tensions into the reality this suggests that government agencies should work closely with the higher education institutions to integrate policy level support into the campus level entrepreneurship in the initiatives. For ecosystem development this study underscores the importance of inspirations and orientations business leaders entrepreneurs and industrial precinct areas should collaborate with the university to deliver seminars workshops and mentorship sessions that provide student with the real word perspectives this practically exposures combined with supportive policies ensure that entrepreneurial behavior are sustained beyond the classroom for emerging economies the evidence demonstrate that entrepreneurial ecosystem in countries like Pakistan require a dual approach fostering individuals

level competencies through education. In contrast, by ensuring institutional backing from the government, this integrated approach enhances students' willingness to initiate ventures, contribute to job creation, and reduce unemployment.

Limitations and Recommendations

No study conducted without limitations, this study is also not without limitations, which also creates avenues for future investigation: first, this study is based on university students in Pakistan, which limits the generalizability of the findings to other cultural or economic contexts. Future research could extend this model to emerging economies or compare results across developed and developing countries. Second, the study employed a cross-sectional design, capturing students' perceptions simultaneously. While this approach identifies associations, it cannot fully establish causality. Future research can be conducted via a longitudinal study to examine how entrepreneurial education and governmental initiatives shape intention and behavior over time. Third, the constructs were measured primarily through self-reported surveys, which may introduce social desirability or response biases. Future research could adopt mixed-method approaches, including interviews or behavioural experiments, to strengthen the validation of the research. Finally, this study focused on entrepreneurial intention as the primary outcome, without examining actual entrepreneurial behavior. Future research could extend the model to include venture creation or startup performance as dependent variables, providing a fuller understanding of how education and institutional support translate the intention into tangible entrepreneurial outcomes.

Conclusion

This study examines how educational awareness, inspiration, and orientation influence entrepreneurial tension among Pakistani university students, while also highlighting the moderating effect of government initiatives. The results confirm that entrepreneurial education builds confidence and skills, awareness cultivates opportunities recognition, inspiration motivates action through role models, and orientation strengthens risk-taking and innovation. Collectively, these factors form the foundation of entrepreneurial drive. Notably, the findings demonstrate that governmental initiatives such as funding, training, and policy support amplify the effect, ensuring that individuals' efforts are translated into real entrepreneurial outcomes. This study extends prior research and highlights the vital role of a supportive ecosystem in nurturing entrepreneurship by bridging the gap between personal readiness and institutional support. Entrepreneurship flourishes when universities cultivate ambition and governments provide structural support, creating a pathway where ideas evolve into ventures that fuel sustainable growth.

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References

AbdelAziz, K., Md Saad, N. H., & Thurasamy, R. (2023). Analyzing the factors influencing customer engagement and value co-creation during COVID-19 pandemic: The case of online modest fashion SMEs in Egypt. Journal of Islamic Marketing, 14(1), 146–173.

Adeniyi, A. O., Gamede, V., & Derera, E. (2024). Individual entrepreneurial orientation for entrepreneurial readiness. Humanities and Social Sciences Communications, 11(1), 1–10.

Adomako, S., & Nguyen, N. P. (2024). Collaborative entrepreneurship and social innovation performance: Effects of institutional support and social legitimacy.

Corporate Social Responsibility and Environmental Management, 31(6), 5881–5893. https://doi.org/10.1002/csr.2900

Al-Qudah, A. A., Al-Okaily, M., & Alqudah, H. (2022). The relationship between social entrepreneurship and sustainable development from economic growth perspective: 15 'RCEP' countries. Journal of Sustainable Finance & Investment, 12(1), 44–61. https://doi.org/10.1080/20430795.2021.1880219

Anisa, A., Kusnadi, N., & Rachmina, D. (2021). Government's role impacts the entrepreneurial orientation of rice farmers. 807(3), 032072.

Anjum, T., Farrukh, M., Heidler, P., Tautiva, J. A. D. J. J. o. O. I. T., Market, & Complexity. (2021). Entrepreneurial intention: Creativity, entrepreneurship, and university support. Journal of Open Innovation: Technology, Market, Complexity, 7(1), 11.

Anwar, I., Alalyani, W. R., Thoudam, P., Khan, R., & Saleem, I. (2022). The role of entrepreneurship education and inclination on the nexus of entrepreneurial motivation, individual entrepreneurial orientation and entrepreneurial intention: Testing the model using a moderated-mediation approach. Journal of Education for Business, 97(8), 531–541. https://doi.org/10.1080/08832323.2021.1997886

Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The Relationship between Entrepreneurship Education and Entrepreneurial Intentions: A Meta–Analytic Review. Entrepreneurship Theory and Practice, 38(2), 217–254. https://doi.org/10.1111/etap.12095

Bandura, A. (2015). Social Cognitive Theory: An Agentic Perspective. Annual Review of Psychology, 52(1), 1–26. https://doi.org/10.1146/annurev.psych.52.1.1

Bandura, A., Freeman, W. H., & Lightsey, R. (1999). Self-Efficacy: The Exercise of Control. Journal of Cognitive Psychotherapy, 13(2), 158–166. https://doi.org/10.1891/0889-8391.13.2.158

Bazkiaei, H. A., Heng, L. H., Khan, N. U., Saufi, R. B. A., Kasim, R. S. R. J. C. b., & management. (2020). Do entrepreneurial education and big-five personality traits predict entrepreneurial intention among universities students? Cogent business management, 7(1), 1801217.

Biraglia et al. (2017). The role of entrepreneurial passion and creativity in developing entrepreneurial intentions: Insights from American homebrewers. Journal of small business management, 55(1), 170-188.

Boldureanu, G., Ionescu, A. M., Bercu, A.-M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. Sustainability, 12(3), 1267.

Chin, W. W., Henseler, J., & Wang, H. (2010). Handbook of partial least squares: Concepts, methods and applications. Springer-Verlag Berlin Heidelberg.

Cui, J., Sun, J., & Bell, R. (2021). The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: The mediating role of inspiration and the role of educational attributes. The International Journal of Management Education, 19(1), 100296.

Davis, J. (2023). How to become an entrepreneurial teacher: Being innovative, leading change. Routledge.

Farrukh, M., Alzubi, Y., Shahzad, I. A., Waheed, A., & Kanwal, N. (2018). Entrepreneurial intentions: The role of personality traits in perspective of theory of planned behaviour. Asia Pacific Journal of Innovation and Entrepreneurship, 12(3), 399-414. https://doi.org/https://doi.org/10.1108/APJIE-01-2018-0004

Francis, R. D. J. R. T. R. S. F. J. o. t. S. S. (2022). Movin'On Up? The Role of Growing Up Rural in Shaping Why Working-Class Men Do—and Don't—Seek to Improve Their

Labor-Market Prospects. The Russell Sage Foundation Journal of the Social Sciences, 8(4), 68-86.

Hair et al. (2017). Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods. Journal of the academy of marketing science, 45, 616-632.

Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. Journal of Family Business Strategy, 12(3), 100392. https://doi.org/10.1016/j.jfbs.2020.100392

Handayati, P., Wulandari, D., Soetjipto, B. E., Wibowo, A., & Narmaditya, B. S. J. H. (2020). Does entrepreneurship education promote vocational students' entrepreneurial mindset? Heliyon, 6(11), e05426.

Hassan, A., Saleem, I., Anwar, I., & Hussain, S. A. J. E. T. (2020). Entrepreneurial intention of Indian university students: the role of opportunity recognition and entrepreneurship education. Education+ Training.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the academy of marketing science, 43, 115-135. https://doi.org/https://doi.org/10.1007/s11747-014-0403-8

Ho, C. S. M., & Lu, J. (2024). Measuring teacher entrepreneurial behavior: A scale development and validation study. Journal of Professional Capital and Community.

Kayani, S., Aajiz, N. M., Raza, K. K., Kayani, S., & Biasutti, M. (2022). Cognitive and Interpersonal Factors Affecting Social Adjustment of University Students in Pakistan. International Journal of Environmental Research and Public Health, 20(1), 655. https://doi.org/10.3390/ijerph20010655

Keyhani, N., & Kim, M. S. (2021). A Systematic Literature Review of Teacher Entrepreneurship. Entrepreneurship Education and Pedagogy, 4(3), 376–395. https://doi.org/10.1177/2515127420917355

Khan, S. U., Shah, S. I., & Ali, M. D. (2022). Understanding the Entrepreneurial Motivations and Barriers for Aspiring Entrepreneurs: A case of religious education institutions' students in Pakistan. Journal of Management Research, 8(2), 96–128.

Khawar, R., Amin, R., Zulfqar, A., Hussain, S., Hussain, B., & Muqaddas, F. (2022). Dark personality traits and entrepreneurial intentions among Pakistani university students: The role of executive functions and academic intent to entrepreneurship. Frontiers in psychology, 13, 989775.

Kishore, S. (2021). Role of entrepreneurship awareness in engineering education. Journal of Management and Science, 11(3), 43–46.

Klyver, K., & Arenius, P. (2022). Networking, social skills and launching a new business: A 3-year study of nascent entrepreneurs. Entrepreneurship Theory and Practice, 46(5), 1256–1283.

Liu, T., Walley, K., Pugh, G., & Adkins, P. (2020). Entrepreneurship education in China: Evidence from a preliminary scoping study of enterprising tendency in Chinese university students. Journal of Entrepreneurship in Emerging Economies.

Lukman, S., Bao, P. X., Kweku-Lugu, B., Arkorful, V. E., Latif, A., Gadabu, A., Charmaine-Kwade, P., Basiru, I., & Sadiq, M. A. (2021). Diasporan students social entrepreneurship intention: The moderating role of institutional support. Journal of Public Affairs, 21(1), e2108.

Munawar, S., Yousaf, H. Q., Ahmed, M., & Rehman, S. (2023). The influence of online entrepreneurial education on entrepreneurial success: An empirical study in Pakistan. The International Journal of Management Education, 21(1), 100752.

Munir et al. (2022). Combining the social cognitive career theory, contextual factors and entrepreneurship education programs in intention-based model: a tale of two diverse regions. Journal of Entrepreneurship in Emerging Economies, 14(3), 392-421.

Naseer, Q. (2024). Perceived Entrepreneurial Orientation to Academic Entrepreneurship Intention: An Understanding of an Integrated Model. Pakistan Journal of Life and Social Sciences (PJLSS), 22(2). https://doi.org/10.57239/PJLSS-2024-22.2.00753

Nurhusna, N., Rapi, M., & Shafariana, S. (2024). The Impact of Persuasive Writing Learning Model on Students' Entrepreneurial Spirit. Ranah: Jurnal Kajian Bahasa, 13(2), 282–294.

Onyeoke, J. E., Owenvbiugie, R. O. J. M. J. o. V. E., & Research. (2021). Skills and knowledge required by business Education Graduates for Entrepreneurship Survival. Multidisciplinary Journal of Vocational Education Research, 1(4).

Osei, C. D., & Zhuang, J. (2024). The Effects of Institutional Supports on Farm Entrepreneurial Performance: Exploring the Mediating Role of Entrepreneurial Orientation. Sage Open, 14(1), 21582440241227713. https://doi.org/10.1177/21582440241227713

Otache, I., Edopkolor, J. E., & Kadiri, U. J. T. I. J. o. M. E. (2022). A serial mediation model of the relationship between entrepreneurial education, orientation, motivation and intentions. The International Journal of Management Education, 20(2), 100645.

Pandit, D., Joshi, M. P., & Tiwari, S. R. J. T. J. o. E. (2018). Examining entrepreneurial intention in higher education: An exploratory study of college students in India. The Journal of Entrepreneurship, 27(1), 25-46.

Pliakoura, A. P., Beligiannis, G. N., Chatzitheodoridis, F., & Kontogeorgos, A. (2022). The impact of locus of control and motivations in predicting entrepreneurial intentions among farmers: A field research. Journal of Agribusiness in Developing and Emerging Economies, 12(2), 183–203. https://doi.org/10.1108/JADEE-11-2020-0272

Safdar, U., Riaz, M., Shah, S. S. H., & Akhtar, N. (2022). What Matters The Most Is Entrepreneurial Personality Or Entrepreneurial Skills To Augment The Entrepreneurial Intentions.

San-Martín, P., Fernández-Laviada, A., Pérez, A., & Palazuelos, E. (2021). The teacher of entrepreneurship as a role model: Students' and teachers' perceptions. The International Journal of Management Education, 19(1), 100358. https://doi.org/10.1016/j.ijme.2019.100358

Shahzad, M. F., Khan, K. I., Saleem, S., & Rashid, T. (2021). What factors affect the entrepreneurial intention to startups? The role of entrepreneurial skills, propensity to take risks, and innovativeness in open business models. Journal of Open Innovation: Technology, Market, and Complexity, 7(3), 173.

Soomro, B. A., K. Almahdi, H., & Shah, N. (2021). Perceptions of young entrepreneurial aspirants towards sustainable entrepreneurship in Pakistan. Kybernetes, 50(7), 2134–2154. https://doi.org/10.1108/K-07-2019-0504

Srivastava, S. (2025). Investigating how individual entrepreneurial orientation impacts entrepreneurial intention: The mediating role of positivity and moderating affect of institutional support among university students. Journal of the International Council for Small Business, 6(4), 770–790. https://doi.org/10.1080/26437015.2024.2442391

Stock, D. M., & Erpf, P. (2023). Systematic literature review on entrepreneurial orientation in nonprofit organizations – Far more than business-like behavior. Journal of Philanthropy and Marketing, 28(4), e1753. https://doi.org/10.1002/nvsm.1753

Suyudi, M., Rahmatullah, A. S., & Rachmawati, Y. (2020). Investigating the Influence of Entrepreneurial Leadership on Students' Entrepreneurial Intentions: Teacherpreneurship as a Mediating Variable. European Journal of Educational Research, 9(4), 1605–1614.

Suyudi, M., Rahmatullah, A. S., & Rachmawati, Y. (2020). Investigating the Influence of Entrepreneurial Leadership on Students' Entrepreneurial Intentions: Teacherpreneurship as a Mediating Variable. European Journal of Educational Research, 9(4), 1605–1614.

Swarupa, S. G., Goyal, R. K. J. I. J. o. S., & Research, E. (2020). Entrepreneurial intentions of students: Review of academic literature. International Journal of Scientific Engineering Research, 11(1), 1146-1168.

Syed, R. T., Singh, D., & Spicer, D. (2023). Entrepreneurial higher education institutions: Development of the research and future directions. Higher Education Quarterly, 77(1), 158–183. https://doi.org/10.1111/hequ.12379

Tahir, R. (2022). Work–life balance: is an entrepreneurial career the solution? Journal of Entrepreneurship in Emerging Economies. https://doi.org/https://doi.org/10.1108/JEEE-03-2022-0077

Tajpour, M., Hosseini, E., & Salamzadeh, A. J. I. J. o. P. S. P. M. (2020). The effect of innovation components on organizational performance: case of the governorate of Golestan Province. International Journal of Public Sector Performance Management, 6(6), 817-830.

Tan, R. K. J., Tang, W., & Tucker, J. D. (2023). Public health services and intersectional stigma: a social sciences perspective with implications for HIV service design and delivery. Current Opinion in HIV and AIDS, 18(1), 18-26.

Tuychiyevna, R. L. (2024). Development of Creative Thinking of Students in an Innovative Educational Environment. EUROPEAN JOURNAL OF MODERN MEDICINE AND PRACTICE, 4(3), 22–25.

Vogel, R., Göbel, M., Grewe-Salfeld, M., Herbert, B., Matsuo, Y., & Weber, C. (2022). Cross-sector partnerships: Mapping the field and advancing an institutional approach. International Journal of Management Reviews, 24(3), 394–414.

Wilkins, C., Gobby, B., & Keddie, A. (2021). The neo-performative teacher: School reform, entrepreneurialism and the pursuit of educational equity. British Journal of Educational Studies, 69(1), 27–45.

Yang, K. M., Tang, J., Donbesuur, F., & Adomako, S. (2023). Institutional support for entrepreneurship and new venture internationalization: Evidence from small firms in Ghana. Journal of Business Research, 154, 113360.

Yuan, C.-H., Wang, D., Mao, C., & Wu, F. J. S. (2020). An empirical comparison of graduate entrepreneurs and graduate employees based on graduate entrepreneurship education and career development. Sustainability, 12(24), 10563.