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# Mapping personality traits and green entrepreneurship and their direct effect on green entrepreneurship intention among Saudi Arabia's future generation

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**Abstract:** Personality traits refer to enduring patterns of emotions, behaviors, and thoughts that shape an individual's distinct character, influencing how they perceive and engage with their environment. This quantitative study aims to underscore the influence of personal factors and the role of educational institutions in mapping sustainable green entrepreneurial intentions among university students in Saudi Arabia. To examine the impact of personality traits and entrepreneurship education on students' green initiatives, the research employs a quantitative research method, collecting data through a structured questionnaire survey from 494 participants who enrolled in the entrepreneurship education at King Faisal University. Structural equation modeling via SmartPLS 3 is employed for data analysis. The study reveals significant associations between the need for achievement, proactiveness, risk-aversion, self-efficacy, and entrepreneurship education with green entrepreneurial intentions. Our research findings demonstrate that the inclusion of entrepreneurship education in the curriculum has a noteworthy and favorable influence on the intention to engage in green entrepreneurship ( $\beta = -0.105$ ,  $t = 3.270$ ,  $p < 0.001$ ). Additionally, it is worth noting that the desire for achievement remains significantly associated with the intention to engage in green entrepreneurship ( $\beta = 0.120$ ,  $t = 3.588$ ,  $p < 0.000$ ). Furthermore, the proactive behavior of individuals has a positive and constructive impact on the intention to engage in green entrepreneurship ( $\beta = 0.207$ ,  $t = 4.272$ ,  $p < 0.000$ ). Similarly, the inclination to avoid risk is found to have a beneficial and significant influence on the intention to engage in green entrepreneurship ( $\beta = 0.336$ ,  $t = 4.594$ ,  $p < 0.000$ ). Lastly, it is worth highlighting that individuals' belief in their own abilities, referred to as self-efficacy, is positively and significantly linked to the intention to engage in green entrepreneurship ( $\beta = 0.182$ ,  $t = 2.610$ ,  $p < 0.009$ ). The research carries social, economic, and academic implications by emphasizing the positive contribution of green entrepreneurs to the future. Practical recommendations for policymakers and decision-makers are provided.

**Keywords:** personality traits; entrepreneurship education; entrepreneurship intention; green entrepreneurs

## 1. Introduction

Entrepreneurship education is considered a very important field of knowledge. Students can create their own businesses after graduation if they have adequate entrepreneurship education. It helps countries around the world to have a competitive advantage in the knowledge-based market (Boldureanu et al., 2020). This education can enhance students' willingness and motivation to be entrepreneurs. Although there are many other factors like personality and its traits that have a direct impact on people's behavior when deciding to create new ideas, however, entrepreneurship education is essential for preparing people to launch their ideas and new projects

(Garavan and O’Cinneide, 1994). Personality traits help people to react and behave differently in different situations. Managers and employees react and behave according to their personalities. Personality is described as a reliable and valid predictor of employees’ job performance (Chamorro-Premuzic and Furnham, 2010; Ones et al., 2007). The issue of personality studied by many researchers. Different studies tried to understand how business decisions are affected by managers’ personalities (Abatecola et al., 2013; Musteen et al., 2011; Rogers, 2013).

Entrepreneurs are characterized by their unique personalities (Sarason et al., 2006). They can be defined as persons who can create their own new business (Gartner, 1988; Long, 1983). In the current literature, many authors have explored the effect of personality traits on entrepreneurs’ decisions and their behavior (Mei et al., 2017; Vodă and Florea, 2019). In addition, the entrepreneurs’ behaviors can be modified through education, training programs, and the entrepreneur’s level of education (Zhou and Xu, 2012). Entrepreneurship education helps to enhance a major source of employment opportunities, entrepreneurship skills, economic growth, and achieving sustainable development goals (Gavriliuță et al., 2022; Kyrö, 2001; Oosterbeek et al., 2010).

This research tries to explore how personality traits and entrepreneurship education affect green entrepreneurial intentions. The present study aims to investigate the correlation between personality traits and the concept of green entrepreneurship, and further explore the direct impact of these traits on the intention to engage in green entrepreneurship among the future generation of Saudi Arabia. Entrepreneurship intention and its practice is commonly regarded as an essential factor and a driving force of economic growth in all nations. It plays a crucial role in generating employment opportunities, fostering innovation, and enhancing competitiveness within the labor market (Abdullahi et al., 2021). The quantity of research investigations utilizing the concept of entrepreneurial intention as a theoretical framework has witnessed a significant increase in numbers since the early 1990s, thereby validating the importance of the entrepreneurial intention aspect across various contexts (Arasti et al., 2012). Today, majority of research has been focusing on the issue of entrepreneurial intention (Yu et al., 2021). The research aims to apply different models to understand these relationships. The idea of green entrepreneurial behavior is now an international world trend. People around the globe are faced with climate change and its negative consequences. Thus, this research is important because it explores the impact of green entrepreneurial intentions on sustainable development goals and people’s well-being. This research tries to fill the gap in entrepreneurship’s educational role and its literature, especially in Saudi Arabia. There is a gap in the research papers that explore the impact of personality traits, and entrepreneurship education on green entrepreneurs’ behaviors and intentions especially in the Arab region.

The topic of green entrepreneurs and entrepreneurship education has been receiving high importance, especially during the era of climate change and cleaner energy awareness (Mondal et al., 2023). Green behavior is essential to play a proactive role in sustainable developmental goals, especially in reducing the business’s negative impact on the environment (Saari and Joensuu-Salo, 2022; Zabelina et al., 2023). In addition, entrepreneurship education has been adopted in different countries for its

importance in enhancing green economic growth (Farinelli et al., 2011). It has been considered an economic tool that is used to stimulate economic development, innovate technology, and manage the level of employment strategies (Bell and Cui, 2023; Wright et al., 2022).

Many countries around the globe have developed their educational strategy to support entrepreneurs. This leads to building and creating the nation's competitiveness. Previous studies found an association between the level of entrepreneurship activities and countries' economic growth (Reynolds et al., 1999). Thus, the issue of entrepreneurship is very important at the individual as well as country level. This research aims to understand the moderating role played by entrepreneurship education in interpreting the association and direct impact between personal traits and the adoption of green behavioral entrepreneurial intentions. This comes under the context of Saudi 'a universities and higher education institutions which used to develop students and future generation to enroll in an entrepreneurship projects. It also comes aligned with Saudi's vision 2030. Very few studies were conducted in the Saudi's universities to explore how personality traits and entrepreneurship education affect green entrepreneurial intention. Thus, we consider this study important and contribute to the current gap in the literature especially in the Kingdom of Saudi Arabia. In addition, the business environment and entrepreneurial opportunities look different in Saudi Arabia. The majority of families and their members used to enroll in new business and create their own family organizations. In addition, the population of this study is very familiar with the challenges and opportunities of their future business. This due to the Saudi's entrepreneurship culture as well as the entrepreneurship education.

## **2. Literature review**

### **2.1. The concept of personality traits and green entrepreneurial intentions**

The current study is grounded in the trait approach, drawing inspiration from McClelland's (1961) psychological research on entrepreneurs. This approach posits that the distinction between successful and unsuccessful entrepreneurs can be attributed to specific personality traits. Notable traits include locus of control (self-efficacy), innovativeness, and a propensity for risk-taking. Personality is considered the most important determinant of people's behavior generally and entrepreneurs' behavior specifically (Budaev and Brown, 2011). It helps a person to choose the right track that fits his or her emotions. It implies a degree of consistency during times (Zuckerman, 1991). It also helps people and organizations to make the right decisions and compete in the market by innovating new products or services (Brandstätter, 2011). We argue that the role of entrepreneurial education plays an important role in modifying students' personalities. Entrepreneurship education is associated with business creation, innovation, and application (Vesper and Gartner, 1997). This type of education helps students to be proactive and behave as business owners. The green entrepreneurial concepts will help them to respect the environment in the future because they believe in its importance.

This education also leads to building unique traits and characteristics in students' personalities. Traits are defined as a collective system that helps a person to react or behave in a certain way according to his or her perception (Matthews et al., 2003). Many researchers have found that personality traits can affect the behavior of green entrepreneurial intention (Qazi et al., 2020). Previous investigations have indicated that the career choice and success of an entrepreneur are influenced by personality factors (Fragoso et al., 2020; Yi, 2021). Personality traits are not only considered significant in the field of entrepreneurship, but they also play a role in an individual's predisposition to succeed. Despite previous studies highlighting the significance of this personality factor, it is crucial to further examine it in entrepreneurship research, particularly within the confines of this country. Researchers examined the association between proactive personality and entrepreneurial intention, and the findings indicated that individuals with this characteristic are inclined to become entrepreneurs (Noor et al., 2023).

## **2.2. Proactiveness and green entrepreneurial intention**

The concept of proactiveness is defined as a person's ability to reflect responsibility and willingness by introducing new services or products or creating, changing, modifying, and shaping the surrounding environment (Dai et al., 2014). Today, many organizations try to find and attract those who proactively react positively to their mission and objectives. Previous studies found that proactive people always have higher self-efficacy and engage deeply and regularly in task behaviors (Bergeron et al., 2014). Proactive persons are those who create and sustain entrepreneurship projects and demonstrate entrepreneurship intentions (Crant, 1996). They show strong commitment toward their jobs and more work engagement (Bateman and Crant, 1993; Prabhu et al., 2012). We argue that the main responsibility of entrepreneurship instructors is to design their curriculum that helps students behave proactively. This can be done through a field of experience projects, cases of studies, and sharing of successful entrepreneurs' experiences.

Many studies found significant correlations concerning proactive personality and entrepreneurship intention (Hu et al., 2018; Neneh, 2019; Travis and Freeman, 2017; Prabhu et al., 2012). Today, many universities provide their students with an entrepreneurship education. These programs are designed to help students proactively launch their ideas, start their projects, and act as proactive entrepreneurs. We argue that entrepreneurship education is not the only factor that helps students to proactively behave. Many social, economic, and environmental factors shape and modify the proactiveness ability.

There is a need to increase the levels of quality assurance measures in entrepreneurship education. In addition, this education should be linked with the economic development goals (Jones and Matlay, 2011). This requires universities to design entrepreneurship programs that align with their community's needs.

## **2.3. The concept of self-efficacy and green entrepreneurial intention**

The theory of self-efficacy states that self-efficacy positively influences human behavior when following different processes. This concept influences duties, and tasks

that people attempt to undertake. Researchers stated that people at work always seek to control their behavior as well as beliefs because this control provides them with countless personal and social benefits (Bandura, 2000; Neupert et al., 2009). Therefore, people tend to follow and take tasks that they believe they can complete on time. People with a greater belief in their ability and skills to complete a task will work longer and harder to complete (Bandura, 2000). Self-efficacy can easily be enhanced through personal success. Those who succeed in their past experiences tend to repeat their behavior many times (Bandura, 1977). When people believe they feel able to achieve success and able to show the target behaviors this can be defined as Self-efficacy (Krueger Jr et al., 2000).

We can argue that entrepreneurship education helps students to enhance their efficacy. Instructors can provide students with some stories about those who launched their businesses and failed many times before they finally succeeded. The role of Self-efficacy as a factor that correlates with entrepreneurial intention has been studied by many authors. Studies found positive correlations between self-efficacy and green entrepreneur behavior (Alvarez-Risco et al., 2021; Doanh and Bernat, 2019; Hussain et al., 2021b; Newman et al., 2018). Studies found that a positive attitude toward entrepreneurial behavior has a direct influence on entrepreneurial intention (Barba-Sánchez et al., 2022). Self-efficacy leads to improving the entrepreneurs' green behavior (Alvarez-Risco et al., 2021; Wang et al., 2021; Yi, 2021). Many studies found positive correlations between self-efficacy and green entrepreneurial intentions (Doanh and Bernat, 2019; Fuller et al., 2018; Hussain et al., 2021a).

#### **2.4. Risk aversion and green entrepreneurial intention**

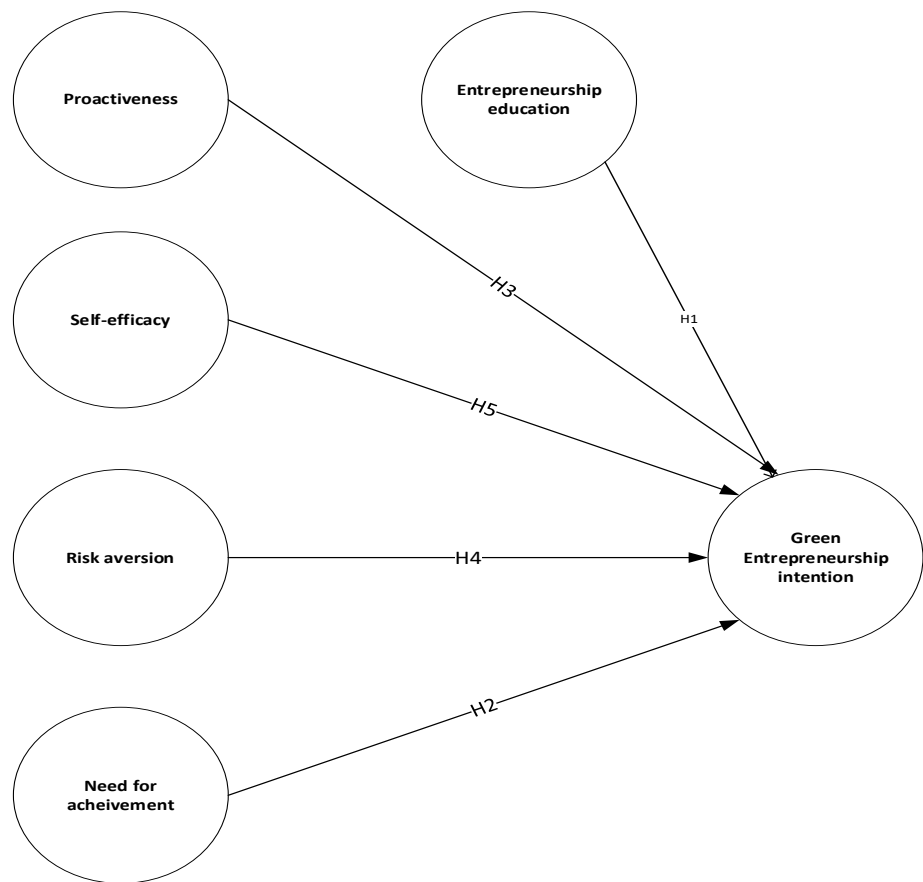
The transformation of new ideas into reality is always associated with risk (Hamböck et al., 2017). Entrepreneurs use to make different business decisions. People who tend to show high risk-taking will succeed and adapt to any changes. Risk aversion is defined as a decision maker's "preference for a guaranteed outcome over a probabilistic one having an equal expected value" (Qualls and Puto, 1989). Individual perception towards taking risks affects future behavior regarding any business decisions. If people have a high level of risk aversion, they tend to create and adopt new ideas or projects. Previous studies show that people with a high tolerance of risk used to start their businesses (Zhang and Cain, 2017). Researchers mentioned that more risk-averse people are described as self-selected into paid jobs and more risk-tolerant people become entrepreneurs (Kan and Tsai, 2006). We can say that the degree of risk aversion is important and it plays a prominent role in student's entrepreneurial decision (Kihlstrom and Laffont, 1979). It also affects the entrepreneurs' decision towards the green choice of entrepreneurship projects (Mazzucato, 2015).

#### **2.5. The need for achievement and green entrepreneurial intention**

People with a great need for achievement tend to have a desire to run their business (Qazi et al., 2020). Researchers found that when students participate in entrepreneurship education, this leads to an improvement in their need for achievement (Borland, 1975; Hansemark, 2003; Soomro and Shah, 2022; Uysal et al.,

2022). Thus, we argue that entrepreneurship education can modify students' behavior and create a high interest for their business success. In addition, the future trends of entrepreneurship education focus on green projects. The entrepreneurs through an effective educational program will behave green and friendly towards their environment (Bouarir et al., 2023). Additional hypotheses added by the researchers, as shown in **Figure 1**, include the following:

- H1: EE is positively associated with GEI.
- H2: The need for achievement is positively associated with GEI.
- H3: Proactiveness is positively associated with GEI.
- H4: Risk aversion is positively associated with GEI.
- H5: Self-efficacy is positively associated with GEI.



**Figure 1.** The research model.

### 3. Methods

#### 3.1. Participants and procedures

This quantitative study employed a structured questionnaire approach. The total population of this study is 984 entrepreneurship's students who were enrolled in a formal university education. They have been aware of the main concepts, practices, and challenges that faced the entrepreneurs. In addition, majority of them (380) have attended a training courses in the entrepreneurship. The study's sample is 494 students from Saudi public universities in the Western region who were chosen at random. 203 people (40.6%) are males, and 291(58.2%) are female. Data was collected during three

months in the summer of 2023. SmartPLS 3 was used to analyze the acquired data to test the hypotheses of this study.

### 3.2. Measures

This study employs the Four-Component Model questionnaires for personality traits adopted by Qazi, Wasimin, and colleagues in 2020 (Qazi et al., 2020). The first dimension is proactiveness, which is measured by five main statements e.g., “*I can tolerate unexpected changes in business conditions*”. The second dimension is the self-efficacy. This is measured by five main statements, e.g., “*I desire and pursue success*”. The third dimension is Risk-aversion which is measured by five main statements like “*I feel driven to make a difference in my community*”. The fourth dimension is the need for achievement which is measured by four main statements like “*I am not willing to take risks when choosing a job or a company to work for*”.

In addition, the researchers used the same model developed by Qazi in 2020 to measure entrepreneurship education by two main statements, “*Have you previously taken or are currently enrolled in the basics of entrepreneurship course at the university?*” (Qazi et al., 2020).

## 4. Results

### 4.1. Respondents profiles

As elucidated in **Table 1**, of the 494 respondents, there were more females (58.2%) than males (40.6%). Regarding age, the most common age (81%) was 18–23 years old, followed by 24–29 (10%), followed by 30–35 (3.6%), and above 30 years (4%). The most common education level among the respondents was preparatory year (43.4%), followed by first-year (25.8%), second year (11%), then third year (5.2%), fourth year (1.2%), finally, furthermore (12.2).

**Table 1.** Respondent profiles.

Type	N	%
Man	203	40.6
Woman	291	58.2
Age		
18–23	406	81.2
24–29	50	10.0
30–35	18	3.6
More than 35	20	4.0
University level	61	12.2
Preparatory year	217	43.4
First year	129	25.8
Second year	55	11.0
Third year	26	5.2
Fourth year	6	1.2
Furthermore	61	12.2

## 4.2. Measurement model

A measurement model is a statistical model that specifies the relationship between the latent constructs and their observable indicators in a research study. It is used to measure the validity and reliability of the indicators used to measure the constructs of interest. The measurement model is an essential component of any research study that involves latent constructs and observable indicators. A well-specified measurement model is crucial for ensuring the validity and reliability of the research findings. By using appropriate statistical techniques to evaluate the measurement model, researchers can ensure that the indicators used to measure the constructs are accurate, reliable, and valid. Initially, we evaluating the indicator reliability by inspecting the item loadings on the relevant constructs to validate the measurement model. Subsequently, we evaluated the internal consistency of the constructs by calculating “Cronbach’s alpha” (CA) and “composite reliability” (CR). Finally, to test the convergent validity, we computed the “average variance extracted” (AVE) scores for all indicators of each construct **Table 2** shows the Item Loadings, CR, AVE, and CA.

**Table 2.** Item loadings, CR, AVE, and CA.

Dimensions	Variables	Loading	“AVE”	“CR”	“CA”
Entrepreneurship Education	EE2	0.735	0.526	0.85	0.76
	EE3	0.715			
Green Entrepreneurship Intention	GEI-1	0.873	0.774	0.954	0.942
	GEI-2	0.903			
	GEI-3	0.890			
	GEI-4	0.859			
	GEI-5	0.891			
	GEI-6	0.861			
Need for achievement	NEE1	0.698	0.629	0.871	0.807
	NEE2	0.802			
	NEE3	0.807			
	NEE4	0.856			
Proactiveness	PRO-1	0.833	0.671	0.859	0.754
	PRO-2	0.867			
	PRO-3	0.754			
Risk-aversion	RIS1	0.810	0.707	0.923	0.896
	RIS2	0.856			
	RIS3	0.847			
	RIS4	0.879			
	RIS5	0.811			



**Table 2.** (Continued).

Dimensions	Variables	Loading	“AVE”	“CR”	“CA”
			0.662	0.907	0.872
Self-efficacy	Sel1	0.773			
	Sel2	0.837			
	Sel3	0.879			
	Sel4	0.842			
	Sel5	0.728			

Based on **Table 2**, the AVE scores were accepted because they extended from 0.526 to 0.774 and CR surpassed the benchmark of 0.85 (Hair et al., 2014). For proper discriminant validity, as proposed by (Fornell and Larcker, 1981), “the square root must be greater than the correlations of the latent constructs”. This is showed in **Table 3**.

**Table 3.** Assessment of discriminant validity using HTMT.

	1	2	3	4	5	6
Entrepreneurship Education						
Green Entrepreneurship Intention	0.575					
Need for achievement	0.183	0.364				
Proactiveness	0.460	0.696	0.316			
Risk-aversion	0.285	0.727	0.343	0.791		
Self-efficacy	0.301	0.691	0.308	0.802	0.850	

### 4.3. Structural model

Path coefficients are used to test the hypotheses of the structural model by inspecting the strength and path coefficient significance between the variables. The path coefficient represents the direct effect of one specific variable on another specific variable in the model, controlling for the effects of all other items in the model. This section explains the outcome of using path coefficients to evaluate the hypotheses of the structural model for the variables under study. This study used SmartPLS 3 and a bootstrapping procedure with 10,000 subsamples and 494 cases to test the paths significance (Hair et al., 2014). The findings are presented in **Figure 2** and **Table 4**.

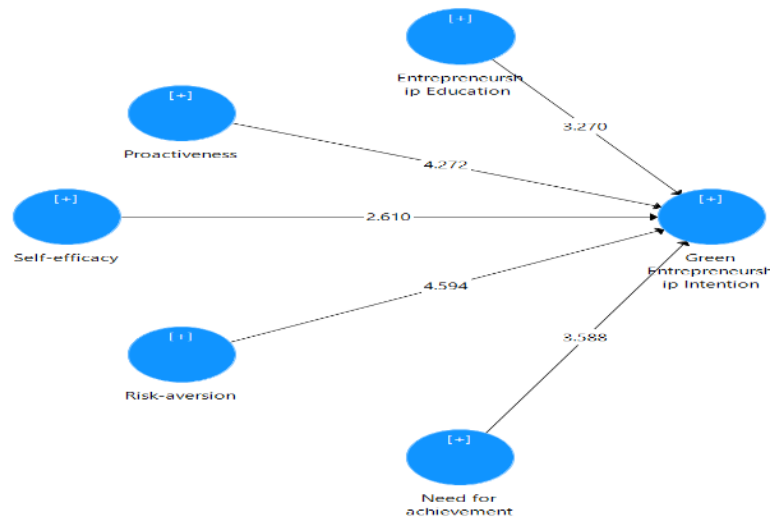


Figure 2. Structural model.

Table 4. Structural model.

	Relationship	Beta	SE	T-Value	P-value	Upper boundary	Lower boundary	Finding
H1	Entrepreneurship Educn → Green Entrepreneurship Intention	0.105	0.032	3.270	0.001	0.039	0.165	YES
H2	Need for achievement → Green Entrepreneurship Intention	0.120	0.033	3.588	0.000	0.187	0.055	YES
H3	Proactiveness → Green Entrepreneurship Intention	0.207	0.048	4.272	0.000	0.298	0.110	YES
H4	Risk-aversion → Green Entrepreneurship Intention	0.336	0.073	4.594	0.000	0.483	0.198	YES
H5	Self-efficacy → Green Entrepreneurship Intention	0.182	0.070	2.610	0.009	0.319	0.046	YES

Table 4 support H1’s contention that entrepreneurship education is positive and significant on green entrepreneurship intention ( $\beta = -0.105, t = 3.270, p < 0.001$ ). Hence, H1 was accepted. The need for achievement maintained a significant association with green entrepreneurship intention ( $\beta = 0.120, t = 3.588, p < 0.000$ ). Thus, H2 was accepted. Furthermore, H3 proposed that proactiveness positively affects green entrepreneurship intention, and Table 4 shows that this is also the case ( $\beta = 0.207, t = 4.272, p < 0.000$ ). Hence, H3 was accepted. Also, risk aversion was found a positive and significant on green entrepreneurship intention ( $\beta = 0.336, t = 4.594, p < 0.000$ ). Therefore, H4 was accepted. Finally, H5 proposed that self-efficacy had a positive and significant link with green entrepreneurship intention ( $\beta = 0.182, t = 2.610, p < 0.009$ ). Hence, H5 was accepted. The authors conducted a confidence interval test by calculating a range that extends plus or minus two standard errors from the observed correlation between the constructs as shown in Table 4. In order to assess

the predictive relevance of the research model, the researchers employed the Stone-Geisser test, a commonly used supplementary measure of goodness-of-fit in PLS-SEM (Duarte and Raposo, 2010). Additionally, blindfolding was employed as another method to evaluate the predictive relevance of the research model in this study. Blindfolding is a technique that involves systematically leaving out portions of the data during model estimation to assess the model’s ability to predict those omitted portions. Together, these methods provide a comprehensive evaluation of the model’s predictive performance. A research model with  $Q^2$  statistics (s) greater than zero is considered to have predictive relevance (Henseler et al., 2009). **Table 5** illustrates the results of  $R^2$  vs.  $Q^2$ .  $R^2$  value for green entrepreneurship intention is 0.522 and  $Q^2$  is 0.398, which shows large effect size.

**Table 5.** Results of green entrepreneurship intention.

Total	$R^2$	$Q^2$	Effect size
Green entrepreneurship intention	0.522	0.398	Large

Notes: Value of the effect size = 0.02 small; = 0.15 medium; = 0.35, Large. A assessing predictive relevance ( $Q^2$ )

## 5. Discussion

The goal of this quantitative study is to highlight the influence of personality factors on green entrepreneurship intentions among King Faisal University students. The study emphasizes the relevance of entrepreneurship education in mediating this link. The findings of this study show a positive significant relationship between entrepreneurship education and green entrepreneurship intention. This result comes to support the previous researchers’ findings (Li et al., 2023). This shows how advanced entrepreneurship education can positively affect the future projects of young entrepreneurs, especially green projects. Therefore, the policymakers and decision-makers at the university should encourage the design and execution of entrepreneurship education to support the direction of green products. We argue that the concentration of universities on the education of entrepreneurship, the establishment of pertinent policies in this area, and the implementation of effective pedagogical approaches can yield positive effects on government and community results. Specifically, this can contribute to reducing unemployment rates, particularly among future generations, and promoting environmental sustainability.

The study also found the need for achievement among students maintained a significant association with green entrepreneurship intention. This refers to how personality traits are important to affect green entrepreneurship intention. This result comes to support previous studies (Brandstätter, 2011; Qazi et al., 2020). The study’s results indicate that students who are driven by achievement are more likely to want to explore green entrepreneurship. This connection can be ascribed to a variety of factors. Students who have a strong desire to succeed may choose ideals such as environmental sustainability and social responsibility. They may be more concerned with making a positive impact on society through their business endeavors, which coincides with green entrepreneurship ideas. Green entrepreneurship may be perceived as a lucrative and gratifying career option for students with a high demand for achievement. They may see possibilities in tackling environmental concerns

through creative business models, which may drive them to explore green entrepreneurship even further. In addition, it is our contention that the cultivation of a desire for accomplishment among students necessitates the implementation of educational measures that facilitate students' exploration of their own enterprises and the provision of assistance for their ideas throughout their educational journey.

The study also finds that proactiveness positively affects green entrepreneurship intention. Comparing with studies in this area, this finding also aligns with the previous findings (Crant, 1996; Dai et al., 2014; Hu et al., 2018). Proactivity influences green entrepreneurship intention positively since it denotes an individual's ability to demonstrate initiative, be proactive enough, and be creative with their thoughts and behaviors. Being proactive allows individuals to uncover possible prospects for environmentally friendly and sustainable business enterprises. It allows them to keep far ahead of the curve and identify market gaps where they can offer eco-friendly solutions. Proactive people are more inclined to look outside the box and come up with novel green business concepts. They are continually looking for methods to improve present practices, create new goods, or find alternative solutions that have a positive environmental impact.

Besides, this study finds that risk-aversion has a positive and significant impact on green entrepreneurship intention. This result supports the previous findings of researchers (Hamböck et al., 2017; Zhang and Cain, 2017). Individuals that are risk-averse have a greater aversion to uncertain and unpredictable outcomes, preferring to avoid taking chances in favor of stability and security. Risk-averse individuals may be more willing to thoroughly assess and evaluate the risks and uncertainties involved with the initiative in the context of green entrepreneurship since ventures frequently involve breaking away from old and established business structures. Risk-averse individuals may be driven by green entrepreneurship's potential benefits and positive results, such as sustainability in the environment and societal benefits, which correspond with their desire for stability and security. As a result, risk aversion might operate as a motivator for people to engage in green entrepreneurship.

In addition, the study found self-efficacy had a positive and significant link with green entrepreneurship intention. This finding comes to support the previous studies (Soomro and Shah, 2022). This suggests that those who have better self-efficacy are more likely to want to engage in green entrepreneurship. Self-efficacy is a person's belief in their own ability to do specific tasks or achieve specified goals. The positive and substantial relationship shows that when people believe in their potential to succeed in green entrepreneurship, they are more likely to undertake such projects. When it comes to engaging in environmentally friendly commercial endeavors, this research emphasizes the importance of self-confidence and belief in one's own talents.

## **6. Conclusion**

In conclusion, our analysis showed a positive significant relationship between entrepreneurship education and green entrepreneurship intention. Entrepreneurship education cultivates an innovative culture by encouraging students to think creatively and generate new ideas. This is critical for generating economic expansion and overcoming complicated issues in a variety of industries. Entrepreneurship education

teaches people to be job creators rather than seeking employment, so promoting economic development and lowering rates of joblessness. Through an effective entrepreneurship education, students can easily start to think and intent to start their own projects.

Our findings also show that the need for achievement among students maintained a significant association with green entrepreneurship intention. Therefore, a proper designed entrepreneurship course helps students to improve their need of achievement which in return translated into green entrepreneurship intention and behaviour. If this happens, the university can contribute positively in the important country's issue such as climate change. There is always a need to involve universities in the international issues especially that related to business and green behaviours (Yuan et al., 2013).

Our study also found that proactiveness positively affects green entrepreneurship intention. Thus, when students' personality traits like proactiveness improved, they can easily demonstrate a green entrepreneurship intention which translated into a green behaviour. Through effective entrepreneurship education, Saudis' universities can modify their students' behaviour to be more proactive in demonstrating and showing a green entrepreneurship intention.

Our analysis shows that risk-aversion has a positive and significant impact on green entrepreneurship intention. We argue that a good design for entrepreneurship program helps students to believe in the idea of taking risk. Story for famous business owners and great entrepreneurs might help students to know why taking risk is sometime important.

Finally, our findings show that self-efficacy had a positive and significant link with green entrepreneurship intention. Thus, students can improve and develop their self-efficacy when they have the essential knowledge, skills, and values related to the entrepreneurs journey. This helps a lot of students to think deeply and practically about creating and maintaining their own business in the future.

## **7. Implications and future research**

This study has economic implications by highlighting the role of entrepreneurship education. Policymakers at universities should design an effective entrepreneurship education as well as develop the personality of students to launch their future projects. Entrepreneurship is a major boost to the economic driver because it generates innovation, promotes rivalry, and generates new markets and possibilities. Entrepreneurship education can help to boost general economic development by teaching people how to start and run their own enterprises. Personality qualities are important in shaping a person's green entrepreneurship ambitions. These characteristics can have an impact on an individual's inspiration, principles, and opinions, as well as their proclivity for participating in green business. Recognizing these factors can assist in identifying and supporting individuals who are most likely to pursue and succeed in green entrepreneurial endeavors.

The study also has an educational implications. When Saudi universities develop their entrepreneurship's education, this will be translated into high level of satisfaction among students specifically when taking their needs to enter the business life. This type of education lead to equip them with the green knowledge, skills, values, and

practices. Absolutely, this aligned with the national and international education standards.

Future researchers can use this model to test the effects of personality traits and entrepreneurship education on the green entrepreneurship attention in the other economic sector like industry, agriculture, and tourism. There is a need to conduct an investigation in these sectors to develop new policies for launching new businesses.

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