



THE EFFECT OF SOCIO-DEMOGRAPHIC, INDIVIDUAL CHARACTERISTICS, AND LEADERSHIP ORIENTATIONS ON THE ENTREPRENEURSHIP TENDENCIES OF UNIVERSITY STUDENTS

Seda SARIKÖSE¹, Nilgün GÖKTEPE²

Abstract

This study examines the effect of socio-demographics, individual characteristics, and leadership orientations on students' entrepreneurial tendencies. This study consisted of 333 undergraduate students. The data were collected via an online questionnaire form consisting of the "Information Form on Socio-Demographic and Individual Characteristics of Students," "Entrepreneurial Tendencies Scale for University Students," and the "Multidimensional Leadership Orientations Scale (MLOS)." Linear regression analysis was used to analyze the data. University students' total score of entrepreneurial tendencies was high. It was found that students' entrepreneurial tendencies were affected by subdimensions of the MLOS and some variables such as gender, class, work experience, entrepreneurship course status, and having an entrepreneur in the family. Policymakers and educational institutions should integrate leadership and entrepreneurship courses in undergraduate programs and plan activities based on gender equality to increase women's entrepreneurial tendencies, provide opportunities, and create policies in this direction.

Keywords: *Entrepreneurship, Entrepreneurial Behaviour, Entrepreneurship Education, Entrepreneurial Leadership*

JEL Classification: A22, I20, I25, L26, L31

ÜNİVERSİTE ÖĞRENCİLERİNİN SOSYO DEMOGRAFİK VE BİREYSEL ÖZELLİKLERİ İLE LİDERLİK YÖNELİMLERİNİN GİRİŞİMCİLİK EĞİLİMLERİNE ETKİSİ

Öz

Bu çalışma, sosyo-demografik özelliklerin, bireysel özelliklerin ve liderlik yönelimlerinin üniversite öğrencilerinin girişimcilik eğilimleri üzerindeki etkisini incelemektedir. Bu çalışmanın örneklemini 333 lisans öğrencisi oluşturmaktadır. Veriler, "Öğrencilerin Sosyo-Demografik ve Bireysel Özelliklerine İlişkin Bilgi Formu", "Üniversite Öğrencileri İçin Girişimcilik Eğilimleri Ölçeği" ve "Çok Boyutlu Liderlik Yönelimleri Ölçeği (ÇBLYÖ)"'nden oluşan çevrimiçi bir anket formu aracılığıyla toplanmıştır. Verilerin analizinde doğrusal regresyon analizi kullanılmıştır. Üniversite öğrencilerinin girişimcilik eğilimleri toplam puan ortalaması yüksek olarak bulunmuştur. Öğrencilerin girişimcilik eğilimlerinin ÇBLYÖ'nin alt boyutlarından, cinsiyet, sınıf, iş deneyimi, girişimcilik dersi alma durumu ve ailede girişimci olması gibi bazı değişkenlerden etkilendiği belirlenmiştir. Politika yapıcılar ve eğitim kurumları, kadınların girişimcilik eğilimlerini artırmak için lisans programlarına liderlik ve girişimcilik derslerini entegre etmeye, toplumsal cinsiyet eşitliğine dayalı faaliyetler planlamaya yönelik politikalar oluşturmalıdır.

Anahtar Kelimeler: *Girişimcilik, Girişimcilik Eğilimi, Girişimcilik Eğitimi, Girişimci Liderlik*

JEL Sınıflandırması: A22, I20, I25, L26, L31

¹Asst. Prof., Koç University School of Nursing, sesarikose@ku.edu.tr, ORCID:0000-0003-0669-6451

²Assoc. Prof., Ordu University Faculty of Health Science, Department of Nursing, nilgungoktepe@hotmail.com, ORCID: 0000-0003-3567-7399

1. Introduction

Although many researchers have defined entrepreneurship and related concepts, it is known that one of the most widely accepted definitions of entrepreneurship is "the process of initiating initiatives that have value in which material or moral satisfaction is obtained as a result of spending the necessary time and effort and undertaking economic, physical and social risks" (Hisrich et al., 2007). At the center of entrepreneurship theory is the concept of "entrepreneur," which Richard Cantillon (1680–1755) defined as a person who takes risks in the face of uncertainty, Jean Baptiste Say (1767–1818) defined as a person who creates economic value by combining production factors, and Joseph Schumpeter (1911–1934) defined as a person who realizes innovative combinations by quickly defining new products and/or processes (Clamp & Alhamis, 2010). On the other hand, entrepreneurial tendency refers to the display of entrepreneurial behaviours to create value, whether a person realizes the venture in his/her mind (Henrekson & Sanandaji, 2020).

In a broader context, entrepreneurship is understood as the foundation of job creation, innovation, and sustainable economic development; it is an essential concept for adapting to the requirements of age, achievement, and the sustainment of success in the working environment (Frederick et al., 2018). In parallel, university students are recognised by societies as the most promising source of socioeconomic development initiatives (Veciana, 1998). Therefore, governments worldwide recognise entrepreneurship as a priority and encourage students to engage in entrepreneurship through policy provision, financial support, entrepreneurship education, and entrepreneurship development (Lu et al., 2021). It is also known that the importance of entrepreneurship is steadily increasing in today's globalized and increasingly competitive world; accordingly, educational and training institutions, as well as governments, make essential contributions to empowering students who will constitute the future entrepreneurial workforce (Valencia-Arias et al., 2022; Hahn et al., 2020). Entrepreneurship can help university students generate new business ideas to reduce unemployment rates and provide sustainable development through employment, welfare, and competitiveness (López & Álvarez, 2018). Furthermore, entrepreneurship can improve regional economies, stimulate technology development, increase added value, and boost innovation (Ferreira et al., 2019).

However, despite the growing body of research on university students' entrepreneurial intentions, there is limited empirical evidence on how students' leadership orientations influence their entrepreneurial tendencies. Most existing studies focus separately on either personality traits or external factors, often neglecting the role of leadership characteristics in shaping entrepreneurial behaviour. This gap in literature indicates a need to explore how various leadership orientations, such as political, charismatic, structural, and people-oriented leadership, might relate to students' entrepreneurial potential. Accordingly, the purpose of this study is to examine the effect of university students' socio-demographic, individual, and multidimensional leadership characteristics on their entrepreneurial tendencies. By addressing this underexplored connection, the study contributes to a more integrated understanding of the individual-level factors that may influence entrepreneurial development in higher education contexts and provides evidence-based insights for curriculum design and entrepreneurship education strategies.

2. Theoretical Framework

This section presents the study's conceptual model based on Trait Theory and Entrepreneurial Self-Efficacy, followed by research questions and a review of relevant literature. It outlines how leadership orientations and individual characteristics relate to entrepreneurial tendencies and highlights key findings from previous studies that support this relationship.

2.1. Conceptual Model

Previous research has proven that entrepreneurial tendency best predicts entrepreneurial behaviour (Farashah, 2015). Therefore, entrepreneurial intention and the factors affecting it are increasingly attracting the attention of researchers. In the literature, studies examining the

entrepreneurial tendencies of university students are based on the social model (which concerns the background, career status, and life experiences of individuals and their families), the environmental model (which concerns the financial situation, market conditions, and socioeconomic environment), or the traits model (which deals with individual personality traits and qualities) (Alstete, 2002; Thomas & Mueller, 2000). The theoretical framework of this study is primarily grounded in Trait Theory and Entrepreneurial Self-Efficacy (ESE). Trait Theory suggests that relatively stable personality characteristics, such as leadership orientations, influence how individuals behave across different situations, including entrepreneurship (Costa & McCrae, 1992). Entrepreneurial Self-Efficacy, originally conceptualized by Bandura (1977) and later applied to entrepreneurship by Boyd and Vozikis (1994), refers to an individual's belief in their ability to successfully perform entrepreneurial tasks. ESE is considered a key psychological capital that reflects confidence in one's entrepreneurial competence, and it has been widely accepted as a useful construct in explaining the formation of entrepreneurial intention and subsequent decision-making processes (Chen et al., 1998; Liu et al., 2019). ESE is influenced by both personal traits and environmental conditions and can be developed over time through exposure to entrepreneurial challenges (Shepherd, 2004). Individuals with strong leadership orientations tend to exhibit higher levels of ESE, as they are more likely to take initiative, manage uncertainty, and mobilise resources, skills closely linked with entrepreneurial behaviour. Therefore, leadership orientations are expected to play a significant role in shaping entrepreneurial tendencies. For this reason, this study's research questions were formed based on these frameworks.

2.2. Research Questions

The study seeks to address three research questions:

- 1) What are the entrepreneurship tendency levels of university students?
- 2) What are the leadership orientations of university students?
- 3) What are the socio-demographic factors affecting the entrepreneurship tendencies of university students?

2.3. Literature Review

Studies on this subject have consistently shown that various demographic and individual characteristics of university students influence their entrepreneurial tendencies. Among these factors, students' financial resources, education level, role models, work experience, family occupations, culture, gender, and personality traits stand out (Anwar & Saleem, 2019; Che Embi et al., 2019; Cochran, 2019). Personality traits such as proactiveness, high achievement motivation, innovativeness, risk-taking, tolerance of uncertainty, and determination have been frequently associated with higher entrepreneurial tendencies (Frisch Aviram et al., 2020). These attributes are often aligned with leadership traits, suggesting a conceptual link between entrepreneurship and leadership (Bagheri & Harrison, 2020). The theoretical relationship between leadership and entrepreneurship has been discussed within the framework of trait theory, transformational leadership, and entrepreneurial self-efficacy. According to Bagheri (2017), leadership skills enhance innovative business behavior and opportunity recognition, thus fostering entrepreneurial tendency. Furthermore, both leadership and entrepreneurship involve future-oriented thinking, strategic planning, and initiative-taking, which makes their intersection theoretically relevant in educational contexts. A qualitative study by Karabekir et al. (2015) examining the entrepreneurial intentions of Turkish university students revealed that students value leadership characteristics such as team spirit, strategic execution, vision, and decisiveness. Similarly, Yılmaz and Sünbül (2009) emphasized that students who possess these characteristics are more likely to exhibit entrepreneurial potential. In recent years, Turkish studies have increasingly focused on students' entrepreneurial orientations, though few have directly addressed leadership as a predictive factor. For example, İspir et al. (2019) investigated the role of individual differences in entrepreneurship,

while Sarıköse and Göktepe (2023) examined how personality traits impact entrepreneurial intention among health sciences students in Türkiye.

University students who are future employees and entrepreneur candidates should prepare for business life by developing leadership skills and undertaking entrepreneurial missions during their education. Students who graduate with entrepreneurial leadership qualities are predicted to be more successful and make a difference in their career lives after graduation (Bodolica & Spraggon, 2021; Li et al., 2020). The literature primarily includes studies in which students' entrepreneurial tendencies and personality traits are related (İspir et al., 2019; Li et al., 2022; Sarıköse & Göktepe, 2023). Li et al. (2022) stated that neuroticism in personality traits significantly negatively impacts entrepreneurial intention, while conscientiousness, openness, and extraversion have a significant positive impact. In the literature, no study has been encountered that associates leadership orientations with entrepreneurial tendencies. It is suggested that the findings of this study may contribute to addressing the identified gap in the literature. In addition, the results have the potential to inform faculty members in developing strategies aimed at enhancing students' entrepreneurial tendencies and guiding improvements in entrepreneurship education. The findings might also serve as a reference point for identifying the characteristics of future entrepreneurial leaders and supporting the development of entrepreneurship education models in university settings.

3. Method and Materials

This section outlines the methodological framework of the study, including the research aim and design, characteristics of the participants, data collection procedures, measurement tools employed, data analysis strategies, and ethical considerations. Each subsection provides detailed information to ensure transparency and reproducibility of the research process.

3.1. Aim and Design

This study examines the effect of university students' socio-demographic, individual, and leadership characteristics on their entrepreneurial tendencies. This descriptive study applied the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) steps. It was conducted between April 2020 and February 2021 via an online survey form distributed to undergraduate students studying at a foundation university in Türkiye.

3.2. Participants and Data Collection

The population of this study consisted of 4,583 undergraduate students studying in the Faculty of Economics and Administrative Sciences (n:1,468), Faculty of Science (n:232), Faculty of Social Sciences and Humanities (n:741), Faculty of Engineering (n:1,413), Faculty of Law (n:377), Faculty of Medicine (n:272), and Faculty of Nursing (n:80) at a foundation university in Türkiye. The sample did not include preparatory-year undergraduate students, and 333 completed the survey. The post hoc power analysis and regression analysis determined the sample size to be sufficient. The data were gathered from an online questionnaire (Qualtrics) collected by the dean of students at the designated university. An invitation to participate in the study was sent to all students by e-mail, and recurring reminders were provided at specific intervals. The average time taken to complete the questionnaire was 10-15 minutes.

3.3. Measurements

This study used a questionnaire form consisting of the "Information Form on Socio-Demographic and Individual Characteristics of Students," the "Scale of University Students Entrepreneurship," and the "Multidimensional Leadership Orientations Scale."

3.3.1. Information Form on Socio-Demographic and Individual Characteristics of Students

The researchers created this form in line with the literature. They consisted of 10 questions concerning students' gender, age, faculty type, class degree, entrepreneurship education status,

work experience, entrepreneurial status in the family, career goals, and level of entrepreneurship characteristics.

3.3.2. The Scale of University Students' Entrepreneurship

"The Scale of University Students Entrepreneurship," developed by Yılmaz and Sünbül (2009) to measure the entrepreneurial tendency of students, has a single-factor structure and consists of 36 questions. The scale is a 5-point Likert scale (1=Never, 2=Rarely, 3=Sometimes, 4=Frequently, 5=Very often). All scale items are positive; the minimum score that can be obtained from the scale is 36, and the maximum score is 180. According to the scores obtained from the scale, the participants exhibited very low entrepreneurship (a score of 36-64), low entrepreneurship (a score of 65-92), moderate entrepreneurship (a score of 93-123), high entrepreneurship (a score of 124-151), and very high entrepreneurship (a score of 152-180) tendencies. The Cronbach's alpha value of the scale was 0.90 in the study by Yılmaz and Sünbül (2009) and 0.93 in this study.

3.3.3. Multidimensional Leadership Orientations Scale (MLOS)

The MLOS, developed by Dursun et al. (2019), was scaled down to 19 items and four subdimensions: political leadership, people-oriented leadership, charismatic leadership, and structural leadership. The political leadership subdimension consists of five items, the human resource leadership subdimension consists of five items, the charismatic leadership subdimension consists of five items, and the structural leadership subdimension consists of four items. The items in the MLOS are rated on a 5-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." The scale is evaluated within the scope of subdimensions. High scores from the scale's subdimensions indicate that the individual's tendency toward leadership orientation is also high. The total Cronbach's alpha value of the scale was 0.85 in the study by Dursun et. al. (2019) and 0.82 in the current study. The scale's subdimensions' Cronbach's alpha values in the current study were 0.75 in the political leadership subdimension, 0.73 in the people-oriented leadership subdimension, 0.62 in the charismatic leadership subdimension, and 0.71 in the structural leadership subdimension, respectively.

3.4. Data Analysis

This study's data were analyzed using SPSS 26.0 package software. The independent variables that affected the entrepreneurial tendencies of students in the primary analyses were evaluated by linear regression analysis. The backward method was used as one of the estimation methods, and variables that were not significant at the 0.05 level were eliminated in the final model. The regression model included the five subdimensions of the MLOS, gender, age, type of faculty, type of class, the status of leadership education, the status of entrepreneurship education, work experience, presence of entrepreneurs in the family, career goals after graduation, and perception of entrepreneurship level variables.

3.5. Ethical Considerations

Ethics committee approval (2020.090.IRB3.046) was obtained from this study's relevant university ethics committee. The informed consent form for students participating in the study was included on the first page of the online data collection tool. Participants were informed about the study, and their consent was obtained. Permission to use the scales was obtained by e-mail from the researchers who developed the scales and conducted the validity and reliability of the scales. Institutional permission to conduct the research was obtained from the university rectorate.

4. Results

This section presents the findings of the study, organized into three main subsections: the socio-demographic and individual characteristics of university students, their entrepreneurship tendency levels and leadership orientations, and the results of the regression analysis identifying significant factors influencing their entrepreneurial tendencies.

4.1. Socio-Demographic and Individual Characteristics of University Students

The socio-demographic characteristics of the students participating in the study are shown in Table 1.

Table 1: Socio-Demographic and Individual Characteristics of Students (n: 333)

Variables		n	%
Gender	Female	168	50.5
	Male	164	49.5
Age x ± SD (21±2.23)	< 21	120	36.0
	≥ 21	213	64.0
Type of Faculty	Economic and Administrative	70	21.0
	Science	18	5.4
	Social Sciences and Humanities	67	20.1
	Engineering	112	33.6
	Law	20	6.0
	Medicine	11	3.3
Class	Nursing	35	10.5
	1 th	89	26.7
	2 nd	83	24.9
	3 rd	64	19.2
	4 th	77	23.1
	5 th	11	3.3
Entrepreneurship Course Status	6 th	9	2.7
	Yes	17	5.1
Leadership Course Status	No	316	94.9
	Yes	32	9.6
Work Experience	No	301	90.4
	Yes	164	49.2
Having an Entrepreneur in the Family	No	169	50.8
	Yes	131	39.3
Career Goals	No	202	60.7
	Aiming to work in the public sector	8	2.4
	Aiming to work in the private sector	98	29.4
	Start a business	112	33.6
Entrepreneurship perception level	Continue higher education	115	34.5
	Very poor	0	0.0
	Poor	2	0.6
	Average	64	19.2
	Good	200	60.1
	Excellent	67	20.1

In Table 1, approximately 50.5% of the participants were female, and the average age was 21 (SD ± 2.23). Participants were primarily undergraduate students studying in the Faculty of Engineering (33.6%), which had the highest participation rate, whereas the Faculty of Medicine had the lowest number of participants (3.3%). Most students were in their first (26.7%) or second (24.9%) year of study. A large majority stated that they had not received any previous entrepreneurship training (approximately 94.9%), had not received leadership training (approximately 90.4%), had no previous work experience (approximately 50.8%), and had no entrepreneur in their family (approximately 60.7%). Regarding career goals, approximately 34.5% of the students aimed to continue their higher education, while 33.6% planned to start a business. Additionally, approximately 60.1% of the participants perceived their level of entrepreneurship as good.

4.2. Entrepreneurship Tendency Levels and Leadership Orientations of University Students

The total score and subdimension mean scores of the scale of university students' entrepreneurship and the MLOS are shown in Table 2.

Table 2: Mean Scores for MLOS and Scale of University Students Entrepreneurship Total and Sub-Scales

Scale	Mean	\bar{X}	SD	Cronbach's Alpha
The Scale of University Students Entrepreneurship Overall Score	137.60	138.00	17.03	0.93
MLOS Sub-Scales Score				
F1: Political Leadership	18.93	19.00	3.09	0.75
F2: People-Oriented Leadership	20.38	21.00	3.03	0.73
F3: Charismatic Leadership	18.98	19.00	2.73	0.62
F4: Structural Leadership	16.38	17.00	2.56	0.71

Note: MLOS: Multidimensional Leadership Orientations Scale

In Table 2, the total score of the entrepreneurial tendencies scale for university students was $137,60 \pm 17,03$ and was found to be high. Among the MLOS subdimensions, the highest mean score was in people-oriented leadership (20.38 ± 3.03), and the lowest was in structural leadership (16.38 ± 2.56).

4.3. Factors Determining Entrepreneurship Tendencies of University Students

Linear regression results for the factors affecting university students' entrepreneurship tendencies are presented in Table 3.

Table 3: Factors Affecting the Entrepreneurial Tendencies of Students

Variables	B	SE	Exp (β)	p	95% CI	
					Lower limit	Upper limit
Constant	83.93	10.58		0.00	63.12	104.7
Political Leadership	0.77	0.29	0.14	0.01	0.20	1.33
People-Oriented Leadership	1.01	0.28	0.18	0.00	0.46	1.57
Charismatic Leadership	1.88	0.33	0.30	0.00	1.23	2.53
Structural Leadership	0.84	0.32	0.13	0.01	0.21	1.48
Gender	4.59	1.42	0.14	0.00	1.80	7.37
Class	-1.23	0.53	-0.10	0.02	-2.27	-0.19
Entrepreneurship Course Status	10.56	3.16	0.14	0.00	16.77	4.35
Work Experience	5.24	1.40	0.15	0.00	8.00	2.48
Having an Entrepreneur in the Family	3.80	1.42	0.11	0.01	6.60	1.01

Note: R²: %48,9, p:0.000, F: 34,277, d: 0,831 SE: Standard error, d: Durbin Watson

Table 3 presents the results of the linear regression analysis examining the factors associated with students' entrepreneurial tendencies, which served as the dependent variable in the model. The analysis revealed that nine variables were significantly related to entrepreneurial tendencies. The model's R² value was 48.9%, indicating that nearly half of the variance in entrepreneurial tendencies could be explained by the included variables (F = 34.277, p < 0.001). Among the leadership orientation dimensions, political leadership (B = 0.77, p = 0.01), people-oriented leadership (B = 1.01, p = 0.00), charismatic leadership (B = 1.88, p = 0.00), and structural leadership (B = 0.84, p = 0.01) were all found to have a statistically significant and positive relationship with students' entrepreneurial tendencies. This suggests that as students score higher in these leadership dimensions, their entrepreneurial tendency scores increase accordingly. In terms of socio-demographic and individual factors, being male (B = 4.59, p = 0.01) and having prior work experience (B = 5.24, p = 0.00) were positively associated with higher entrepreneurial tendencies. Additionally, students who had received entrepreneurship education (B = 10.56, p = 0.00) showed significantly higher entrepreneurial scores. Conversely, students' class level was negatively

associated with entrepreneurial tendencies ($B = -1.23$, $p = 0.02$), indicating that lower-year students exhibited higher entrepreneurial tendencies compared to those in upper years. Furthermore, having an entrepreneur in the family ($B = 3.80$, $p = 0.01$) was also positively related to entrepreneurial tendencies.

5. Discussion

This study found that university students possess a high level of entrepreneurial tendencies. Other studies also support this finding (Eyel et al., 2020; İspir et al., 2019). As such, it can be concluded that university students believe they have entrepreneurial potential and tend to become entrepreneurs. This study determined that the leadership orientations of university students affect their entrepreneurial tendencies. It was found that students with political leadership orientation, people-oriented leadership orientation, structural leadership orientation, and charismatic leadership orientation had higher entrepreneurial tendencies, and charismatic leadership characteristics had the most effect on the entrepreneurial tendency of students. Previous studies have also found that students' leadership orientations increase their entrepreneurial intentions (Che Embi et al., 2019; Henley et al., 2017). Similarly, Felix et al. (2019) found that leadership orientation increases entrepreneurial tendencies in individuals and that charismatic leadership orientation is the most influential variable in entrepreneurial tendency. In line with these findings, charismatic leadership orientations, which form the basis of a transformational perspective, may encourage entrepreneurial characteristics such as the ability to create opportunities, the adoption of pioneer-like qualities, and a tendency towards proactivity (Felix et al., 2019). The results of this study show that the type of class university students study affects their entrepreneurial tendencies. As the grade level increases, students' entrepreneurial tendencies decrease. In contrast to this finding, Trotte et al. (2021), who compared the entrepreneurial tendencies of senior university students and undergraduate students who had just begun university, reported that the entrepreneurial tendencies of senior students were higher. On the other hand, Kaya et al. (2019) stated that there was no significant difference between the entrepreneurial tendencies of first-year and senior students. These findings may suggest that decrease in entrepreneurial tendencies among upper-year students may be that, as they near graduation, students begin to prioritize more structured career paths based on clearer perceptions of job opportunities, self-efficacy, and expectations within their chosen field.

This study determined that students' gender affects their entrepreneurial tendencies, with males exhibiting higher entrepreneurial tendencies. Studies prove that entrepreneurship is a male-dominated career choice and that male students' entrepreneurial tendencies are higher than female students' (Alshagawi, 2019; Choukir et al., 2019). Contrary to these findings, Contreras-Barraza et al. (2021) reported that gender did not affect students' entrepreneurial tendencies. Considering these findings, gender perception, traditional gender-based roles, and expectations from students' cultural structure may impact students' entrepreneurial intentions.

This study found that the status of receiving entrepreneurship education/courses positively affected students' entrepreneurial tendencies. In parallel with these findings, studies conducted with university students have also found that students in institutions where entrepreneurship education is provided have higher entrepreneurial intentions (Hahn et al., 2020; Mei et al., 2020; Otache et al., 2022). Therefore, it can be concluded that students' university entrepreneurship education activates creativity by providing the opportunity to produce solutions for existing social or professional problems and encourages proactivity, thus increasing students' entrepreneurial intention.

Students with work experience had high entrepreneurial tendencies in this study. In their studies conducted to determine the factors affecting the entrepreneurial tendencies of university students, Kaya et al. (2019) also found that students with work experience and long-term internship experience had higher entrepreneurial tendencies. Such findings may be explained by the fact that students who experience business life during their education and training periods,

even if for a short time, are more likely to produce new business ideas and establish connections with people in the field. This study also found that the presence of entrepreneurs in the family increased students' entrepreneurial tendencies. Other studies also support this finding (Alshagawi, 2019; Criaco et al., 2017). Therefore, close entrepreneurial role models may encourage students' entrepreneurial tendencies.

Contrary to expectations, this study found that the types of university students' faculties did not affect their entrepreneurial tendencies. However, the literature states that the entrepreneurial tendencies of university students in business and engineering faculties are higher than those of other faculties (Alshagawi, 2019; Kaya et al., 2019). Considering this, students' entrepreneurial tendencies may differ depending on the faculties' curricula and university culture. This outcome might reflect a university-wide approach to fostering entrepreneurship, where all faculties provide students with similar opportunities to develop entrepreneurial competencies.

5.1. Limitations and Suggestions for Future Studies

Firstly, this research was conducted in the country's central and most populous province and is limited to the opinions of the students who volunteered to participate. Since the universities selected from other regions of the country may have more student diversity, the results may have differed if other regions were included in the study. Therefore, future studies may consider replicating this study in other regions of the country. On the other hand, the study's sample only includes undergraduate students from foundation universities and does not consider the conditions of undergraduate students attending public universities. Although the study was conducted with university students from different faculties, engineering and economic and administrative sciences students responded more to the questionnaire form. This limited the comparison of entrepreneurial tendencies of students according to faculty type. Future research examining the entrepreneurial tendencies of university students attending all types of universities is recommended.

6. Conclusion

This research reveals the factors affecting the entrepreneurial tendencies of university students studying in different types of faculties and shows the relationship between their entrepreneurial tendencies and leadership orientations. Activities designed to increase/develop university students' leadership skills may positively contribute to promoting students' entrepreneurial tendencies. This study showed that well-structured entrepreneurship courses increased students' entrepreneurial tendencies. Therefore, universities should integrate leadership and entrepreneurship courses in all undergraduate programs. In addition, it is recommended that each faculty should include elective courses that aim to foster the spirit of entrepreneurship. This study also found that male students possessed higher entrepreneurial tendencies. Considering this, policymakers and educational institutions should plan activities based on gender equality to increase women's entrepreneurial tendencies, provide opportunities, and create policies in this direction.

Theoretically, this study contributes to the literature by integrating Trait Theory and Entrepreneurial Self-Efficacy into the investigation of students' entrepreneurial tendencies, with a specific focus on multidimensional leadership orientations an underexplored area in previous research. By establishing a direct link between distinct leadership styles and entrepreneurial behaviour, the study extends existing theories by demonstrating how leadership traits shape entrepreneurial potential among university students. From a managerial perspective, the findings provide actionable insights for higher education institutions aiming to foster entrepreneurship. The results emphasize the importance of including leadership development in entrepreneurship curricula and suggest that providing structured opportunities for students to gain leadership experience may enhance their entrepreneurial capabilities. These insights can guide academic

planners, faculty members, and policymakers in designing more effective and inclusive entrepreneurship education models.

References

- Alshagawi, M. (2019). Entrepreneurial Intentions Among Saudi University Students: Examining the Role of Personality Traits, Demographic Factors and Government Support. *Journal of the Faculty of Commerce for Scientific Research*, 56(1), 11–22.
- Alstete, J. W. (2002). On Becoming an Entrepreneur: An Evolving Typology. *International Journal of Entrepreneurial Behavior & Research*, 8(4), 222–234. doi: 10.1108/13552550210436521.
- Anwar, I., and Saleem, I. (2019). Exploring Entrepreneurial Characteristics Among University Students: Evidence from India. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(3), 282–295. doi: 10.1108/APJIE-07-2018-0044.
- Bagheri, A. (2017). The Impact of Entrepreneurial Leadership on Innovation Work Behavior and Opportunity Recognition In High-Technology Smes. *The Journal of High Technology Management Research*, 28(2), 159–166. doi: 10.1016/j.hitech.2017.10.003.
- Bagheri, A., and Harrison, C. (2020). Entrepreneurial Leadership Measurement: A Multi-Dimensional Construct. *Journal of Small Business and Enterprise Development*, 27(4), 659–679. doi: 10.1108/JSBED-01-2019-0027.
- Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change. *Psychological Review*, 84(2), 191–215. doi: 10.1037/0033-295X.84.2.191
- Bodolica, V., and Spraggon, M. (2021). Incubating Innovation in University Settings: Building Entrepreneurial Mindsets in the Future Generation of Innovative Emerging Market Leaders. *Education+ Training*, 63(4), 613–631. doi: 10.1108/ET-06-2020-0145.
- Boyd, N. G., & Vozikis, G. S. (1994). The Influence of Self-Efficacy on the Development of Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 18(4), 63–77. doi: 10.1177/104225879401800404
- Che Embi, N. A., Jaiyeoba, H. B., and Yussof, S. A. (2019). The Effects of Students' Entrepreneurial Characteristics on Their Propensity to Become Entrepreneurs in Malaysia. *Education+ Training*, 61(8), 1020–1037. doi: 10.1108/ET-11-2018-0229.
- Chen, G., Greene, P. G., & Crick, A. (1998). Does Entrepreneurial Self-Efficacy Distinguish Entrepreneurs from Managers? *Journal of Business Venturing*, 13(4), 295–316. doi: 10.1016/S0883-9026(97)00029-3
- Choukir, J., Aloulou, W. J., Ayadi, F., and Mseddi, S. (2019). Influences of Role Models and Gender on Saudi Arabian Freshman Students' Entrepreneurial Intention. *International Journal of Gender and Entrepreneurship*, 11(2), 186–206. doi: 10.1108/IJGE-08-2018-0083.
- Clamp, C. A., and Alhamis, I. (2010). Social Entrepreneurship in the Mondragon Co-Operative Corporation and the Challenges of Successful Replication. *The Journal of Entrepreneurship*, 19(2), 149–177. doi: 10.1177/097135571001900204.
- Cochran, S. L. (2019) What's Gender Got to Do with It? The Experiences of US Women Entrepreneurship Students. *Journal of Small Business Management*, 57, 111–129. doi: 10.1111/jsbm.12508.
- Contreras-Barraza, N., Espinosa-Cristia, J. F., Salazar-Sepulveda, G., and Vega-Muñoz, A. (2021). Entrepreneurial Intention: A Gender Study in Business and Economics Students From Chile. *Sustainability*, 13(9), 4693. doi: 10.3390/su13094693.

- Costa, P. T., Jr. and McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional Manual. Psychological Assessment Resources.
- Criaco, G., Sieger, P., Wennberg, K., Chirico, F. and Minola, T. (2017). Parents' Performance in Entrepreneurship as A "Double-Edged Sword" for the Intergenerational Transmission of Entrepreneurship. *Small Business Economics*, 49, 841-864. doi: 10.1007/s11187-017-9854-x.
- Dursun, M., Günay, M., and Yenel, İ. F. (2019). Multidimensional Leadership Orientations Scale (MLOS): Validity and Reliability Study. *International Academy of Management Journal*, 2(2), 333-347. doi: 10.33712/mana.596370.
- Eyel, C. Ş., Kaplan, B., and Ünkaya, G. (2020). The Effect of Business Administration Students' Individual Values on Their Entrepreneurial Tendency in Istanbul. *Economics & Sociology*, 13(4), 187-212. doi: 10.14254/2071-789X.2020/13-4/12.
- Farashah, A. D. (2015). The Effects of Demographic, Cognitive, and Institutional Factors on the Development of Entrepreneurial Intention: Toward a Socio-Cognitive Model of Entrepreneurial Career. *Journal of International Entrepreneurship*, 13(4), 452. doi: 10.1007/s10843-015-0144-x.
- Felix, C., Aparicio, S., and Urbano, D. (2019). Leadership as a Driver of Entrepreneurship: An International Exploratory Study. *Journal of Small Business and Enterprise Development*, 26(3), 397-420. doi: 10.1108/JSBED-03-2018-0106.
- Ferreira, J. J., Fernandes, C. I., and Kraus, S. (2019). Entrepreneurship Research: Mapping Intellectual Structures and Research Trends. *Review of Managerial Science*, 13, 181-205. doi: 10.1007/s11846-017-0242-3.
- Frederick, H., O'Connor, A., and Kuratko, D. F. (2018). *Entrepreneurship*. Cengage AU.
- Frisch Aviram, N., Cohen, N., and Beerli, I. (2020). Wind (ow) of Change: A Systematic Review of Policy Entrepreneurship Characteristics and Strategies. *Policy Studies Journal*, 48(3), 612-644. doi: 10.1111/psj.12339
- Hahn, D., Minola, T., Bosio, G., and Cassia, L. (2020). The Impact of Entrepreneurship Education on University Students' Entrepreneurial Skills: A Family Embeddedness Perspective. *Small Business Economics*, 55, 257-282. doi: 10.1007/s11187-019-00143-y
- Henley, A., Contreras, F., Espinosa, J. C., and Barbosa, D. (2017). Entrepreneurial Intentions of Colombian Business Students: Planned Behaviour, Leadership Skills and Social Capital. *International Journal of Entrepreneurial Behavior & Research*, 23(6), 1017-1032. doi: 10.1108/IJEER-01-2017-0031
- Henrekson, M., and Sanandaji, T. (2020). Measuring Entrepreneurship: Do Established Metrics Capture Schumpeterian Entrepreneurship? *Entrepreneurship Theory and Practice*, 44(4), 733-760. doi: 10.1177/1042258719844500
- Hisrich, R., Langan-Fox, J., and Grant, S. (2007). Entrepreneurship Research and Practice: A Call to Action for Psychology. *American Psychologist*, 62(6), 575. doi: 10.1037/0003-066X.62.6.575
- İspir, Ö., Elibol, E., and Sönmez, B. (2019). The Relationship of Personality Traits and Entrepreneurship Tendencies with Career Adaptability of Nursing Students. *Nurse Education Today*, 79, 41-47. doi: 10.1016/j.nedt.2019.05.017

- Karabekir, M., Tozlu, E., and Şencan, M. N. M. (2015). Investigation of Entrepreneurial Characteristics of Entrepreneur Candidate University Students with Focus Group Interview. *Sdu Faculty of Arts and Sciences, Journal of Social Sciences*, 1(35), 203-216.
- Kaya, T., Erkut, B., and Thierbach, N. (2019). Entrepreneurial Intentions of Business and Economics Students in Germany and Cyprus: A Cross-Cultural Comparison. *Sustainability*, 11(5), 1437. doi: 10.3390/su11051437
- Li, C., Murad, M., Shahzad, F., Khan, M. A. S., Ashraf, S. F., and Dogbe, C. S. K. (2020). Entrepreneurial Passion to Entrepreneurial Behavior: Role of Entrepreneurial Alertness, Entrepreneurial Self-Efficacy and Proactive Personality. *Frontiers in Psychology*, 11, 1611. doi: 10.3389/fpsyg.2020.01611
- Li, L. N., Huang, J. H., and Gao, S. Y. (2022). The Relationship Between Personality Traits and Entrepreneurial Intention Among College Students: The Mediating Role of Creativity. *Frontiers in Psychology*, 13(1), 10. doi: 10.3389/fpsyg.2022.822206.
- Liu, F., Lin, W., and Wang, L. (2019). Self-Efficacy and Entrepreneurial Intention: The Mediating Role of Entrepreneurial Self-Efficacy. *Frontiers in Psychology*, 10, 869. doi: 10.3389/fpsyg.2019.00869
- López, T., and Álvarez, C. (2018). Entrepreneurship Research in Latin America: A Literature Review. *Academia Revista Latinoamericana de Administración*, 31(4), 736-756. doi: 10.1108/ARLA-12-2016-0332
- Lu, G., Song, Y., and Pan, B. (2021). How University Entrepreneurship Support Affects College Students' Entrepreneurial Intentions: An Empirical Analysis From China. *Sustainability*, 13(6), 3224. doi: 10.3390/su13063224
- Mei, H., Lee, C.-H., and Xiang, Y. (2020). Entrepreneurship Education and Students' Entrepreneurial Intention in Higher Education. *Education Sciences*, 10(9), 257. doi: 10.3390/educsci10090257
- Otache, I., Edopkolor, J. E., and Kadiri, U. (2022). A Serial Mediation Model of The Relationship Between Entrepreneurial Education, Orientation, Motivation, and Intentions. *The International Journal of Management Education*, 20(2), 100645. doi: 10.1016/j.ijme.2022.100645.
- Sarıköse, S., and Göktepe, N. (2023). Do Personality Traits Affect The Entrepreneurial Tendencies of Nursing Students? A Cross-Sectional Study. *Fenerbahçe University Journal of Health Sciences*, 3(1), 69-77. doi: 10.56061/fbuj
- Shepherd, D. A. (2004). Educating Entrepreneurship Students About Emotion and Learning from Failure. *Academy of Management Learning & Education*, 3(3), 274-287. doi: 10.5465/amle.2004.14242162
- Thomas, A. S., and Mueller, S. L. (2000). A Case for Comparative Entrepreneurship: Assessing the Relevance of Culture. *Journal of International Business Studies*, 31, 287-301. doi: 10.1057/palgrave.jibs.8490906
- Trotte, L. A. C., Santos, J. L. G. d., Sarat, C. F. N., Mesquita, M. G. d. R., Stipp, M. A. C., Souza, P. d., Duarte, Q. G. d. M., Gobato, B. d. C., and Lima, C. F. d. M. (2021). Entrepreneurial Tendency of Nursing Students: A Comparison Between Graduating Beginners and Undergraduate Students. *Revista Latino-Americana de Enfermagem*, 29, e3402. doi: 10.1590/1518-8345.4397.3402
- Valencia-Arias, A., Arango-Botero, D., and Sánchez-Torres, J. A. (2022). Promoting Entrepreneurship Based on University Students' Perceptions of Entrepreneurial Attitude, University

Environment, Entrepreneurial Culture and Entrepreneurial Training. *Higher Education, Skills and Work-Based Learning*, 12(2), 328-345. doi: 10.1108/HESWBL-07-2020-0169

Veciana, J. (1998). *Entrepreneurship Education at the University Level: A Challenge and A Response*. Rencontres de St. Gall.

Yılmaz, E., and Sünbül, A. M. (2009). Developing Scale of University Students Entrepreneurship. *Selçuk University Journal of Institute of Social Sciences*, (21), 195-203.

