



Exploring the impact of entrepreneurial challenges on student motivation at the Innobiz DUT centre for entrepreneurship and innovation

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Abstract: This study examines the impact of entrepreneurial challenges on student motivation at the Innobiz Centre for Entrepreneurship and Innovation at Durban University of Technology (DUT). Based on the Theory of Planned Behavior, the research analyzes how financial, psychological, experiential, and time-related obstacles influence students' attitudes, perceived behavioral control, and subjective norms, ultimately affecting their entrepreneurial intentions. A quantitative methodology was employed, collecting data from 76 student entrepreneurs through structured questionnaires, which were analyzed using descriptive and inferential statistics, including Spearman's rho correlations. The findings indicate that while intrinsic motivators—such as autonomy, passion, and the excitement of entrepreneurship—have a strong positive effect on motivation, external challenges significantly influence perceived behavioral control and entrepreneurial self-efficacy. The lack of institutional and community support exacerbates cultural stigma and restricts collaboration, while financial and academic limitations appear to operate independently of peer networks. This study highlights the essential role of incubator support structures in enhancing entrepreneurial resilience and suggests the need for targeted interventions to address systemic barriers, promote interdisciplinary engagement, and cultivate intrinsic motivation. These insights are valuable for designing more inclusive and effective entrepreneurial ecosystems within higher education.

Keywords: *Entrepreneurial Challenges, Entrepreneurial Motivation, Higher Education Incubators, Student Entrepreneurship, Theory of Planned Behavior (TPB).*

1. Introduction

Entrepreneurship has traditionally been viewed as a significant driver of economic growth, innovation, and job creation, particularly in developing economies such as South Africa [1]. With high unemployment rates, particularly among the youth, entrepreneurship has emerged as a promising option for individuals seeking to contribute meaningfully to the economy while establishing sustainable livelihoods [2]. According to Tomy and Pardede [3]. Higher education institutions are increasingly recognized for their role in cultivating entrepreneurial intentions and activities among students. The Durban University of Technology (DUT), through its Innobiz Centre for Entrepreneurship and Innovation, provides students with an environment conducive to developing entrepreneurial skills and turning business ideas into successful ventures. Nonetheless, despite the support offered by incubators like Innobiz, student entrepreneurs frequently encounter various challenges that significantly affect their motivation to pursue entrepreneurial endeavors.

The South African economy has been grappling with high unemployment rates and an over-reliance on traditional sectors. According to Dunga and Maloma [4] youth unemployment in South Africa is alarmingly high at 56%, which poses a substantial hurdle to the country's economic advancement. In

response to this pressing issue, the South African government and universities have increasingly recognized the importance of fostering entrepreneurship among young people as a strategy to mitigate the unemployment crisis [5]. Incubators such as Innobiz provide a supportive environment for students to cultivate their business ideas, backed by mentorship programs, networking opportunities, funding avenues, and specialized workshops. These incubators aim to create structured pathways for students to evolve their ventures into sustainable enterprises.

Despite the substantial resources offered by university incubators, student entrepreneurs often face numerous barriers that impede their success. Financial constraints are particularly prominent, as many student entrepreneurs struggle to secure sufficient capital to finance their startups, limiting their ability to scale beyond initial stages. Young entrepreneurs typically lack the credit history or collateral necessary to meet the requirements of traditional financial institutions [6]. This challenge is compounded by limited access to venture capital or angel investors, which are crucial for high-growth businesses. While Innobiz provides some level of seed funding, it may not sufficiently cover all the expenses required for a business to achieve self-sustainability.

This article aims to investigate the effects of entrepreneurial challenges on the motivation of student entrepreneurs at the Innobiz DUT Centre for Entrepreneurship and Innovation. This study seeks to provide a comprehensive understanding of how these factors influence entrepreneurial motivation and intentions by analyzing the financial, psychological, and experiential barriers faced by students, along with the time management challenges they encounter. Additionally, it will consider the role of resources and support provided by Innobiz in helping to mitigate these challenges and foster the motivation for student entrepreneurs to succeed.

2. Theoretical Perspective - Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) serves as a prominent framework for understanding human behavior, particularly in scenarios involving intentional decision-making, such as entrepreneurship [7]. This theory posits that an individual's behavior is shaped by three key factors: attitudes toward the behavior, subjective norms, and perceived behavioral control. For student entrepreneurs at the Innobiz DUT Centre for Entrepreneurship and Innovation, the TPB provides critical insights into how entrepreneurial challenges—such as financial limitations, a lack of experience, and psychological barriers—affect their motivation and intentions to engage in entrepreneurial activities.

2.1. Attitudes Toward Entrepreneurial Behavior

According to Acheampong and Siiba [8] attitudes are an individual's evaluation of a behavior, based on perceived benefits and drawbacks associated with that behavior. For student entrepreneurs at Innobiz, their attitudes towards entrepreneurship are shaped by a variety of internal and external factors, including the entrepreneurial challenges they face [9].

2.2. Positive Attitudes

Student entrepreneurs who hold a positive attitude towards entrepreneurship are generally more motivated to seek out entrepreneurial opportunities. They often perceive entrepreneurship to achieve personal fulfillment, independence, and innovation [10]. However, challenges such as limited financial resources and inadequate business knowledge can alter their perception, causing them to view entrepreneurship as a risky or undesirable endeavor, which may, in turn, reduce their motivation [11].

2.3. Negative Attitudes

In contrast, students who encounter substantial barriers—such as financial challenges, fear of failure, or lack of experience—may cultivate negative attitudes towards launching a business. These negative attitudes can diminish their motivation and reduce their entrepreneurial intentions [12]. When faced with these challenges, especially without sufficient support, these students might see entrepreneurship as less feasible compared to traditional career paths. According to the Theory of

Planned Behavior, such attitudes directly impact entrepreneurial intentions, suggesting that negative attitudes are associated with a lower propensity to engage in entrepreneurial pursuits [7].

2.4. Subjective Norms

Subjective norms relate to perceived social pressures to either engage in or abstain from behaviors. For student entrepreneurs at Innobiz, these norms significantly affect their entrepreneurial intentions and are influenced by social interactions with family, friends, mentors, peers, and the wider community [13].

2.5. Social Pressure and Support

At Innobiz, students may experience both supportive and discouraging subjective norms that influence their motivation to embark on entrepreneurial ventures. A robust culture favoring entrepreneurial initiatives within the university, coupled with encouragement from mentors and peers, can positively impact students' motivation to pursue their business ideas [14]. When subjective norms are favorable, they are likely to contribute to an increase in entrepreneurial intentions. However, if students perceive pressure to prioritize academic success over entrepreneurial endeavors, they may feel discouraged from committing time and resources to their startup projects. For example, receiving recommendations to focus solely on academic obligations may result in neglecting entrepreneurial aspirations [15]. The Theory of Planned Behavior highlights the significant influence of social pressures in determining students' engagement in entrepreneurial activities [16].

2.6. Fear of Failure and Stigma

Cultural and societal norms in South Africa, as well as those prevalent within academic environments, can shape student entrepreneurs' perceptions of failure. The stigma associated with entrepreneurial failure can further deter students from pursuing their ventures [17]. This fear may be exacerbated by external factors such as financial constraints or a lack of visible success stories among peers. When students sense societal pressures to avoid failure in entrepreneurship, their likelihood of acting on entrepreneurial intentions may be significantly diminished. The Theory of Planned Behavior underscores the central role of subjective norms in shaping students' motivation to engage in entrepreneurial activities [18].

2.7. Perceived Behavioral Control

The third component of the Theory of Planned Behavior, perceived behavioral control, refers to an individual's assessment of the relative ease or difficulty of executing a behavior, considering available resources and external challenges [19]. For student entrepreneurs at Innobiz, this perception is heavily influenced by the entrepreneurial obstacles they face.

2.8. Internal Barriers

Student entrepreneurs frequently encounter internal barriers, such as insufficient skills and experience, fear of failure, and self-doubt. These limitations can significantly lower their sense of control over the entrepreneurial process. If students believe they lack the necessary skills or resources for success, they may perceive starting a business as beyond their capabilities. A diminished sense of control can adversely affect their motivation to engage in entrepreneurship [20].

2.9. External Barriers

Beyond internal challenges, external factors—such as financial limitations, restricted access to venture capital, and inadequate infrastructure or support—can further decrease students' perceived behavioral control. Financial difficulties are well-documented obstacles hindering student entrepreneurship [4]. Struggles to secure funding or access capital can make the entrepreneurial

process appear daunting and unmanageable. If students believe that external barriers exceed their ability to overcome them, their motivation to pursue entrepreneurship may significantly decline.

2.10. Support Systems at Innobiz

The support systems provided at Innobiz are essential in enhancing students' perceived behavioral control. The center offers critical resources such as mentorship, workshops, and networking opportunities that assist students in navigating the challenges they face. When students recognize that they have access to essential resources and support, they are more likely to feel empowered to pursue their entrepreneurial ambitions. Conversely, if students view the available support as inadequate, or if they face ongoing challenges despite the resources provided, they may come to regard entrepreneurship as unattainable, which can undermine their motivation [21].

3. Literature Review

Entrepreneurship is essential for economic development, particularly in emerging markets such as South Africa. Student entrepreneurship, particularly within incubators like the Innobiz DUT Centre for Entrepreneurship and Innovation, has garnered significant attention to cultivating future business leaders and stimulate innovation. Nevertheless, despite the support these centers provide, student entrepreneurs frequently encounter various challenges that affect their motivation and entrepreneurial intentions. This literature review examines the primary entrepreneurial challenges faced by student entrepreneurs, the effects of these challenges on their motivation, and how these factors influence their entrepreneurial intentions, using the Theory of Planned Behavior (TPB) as a conceptual framework.

3.1. Entrepreneurial Challenges Faced by Student Entrepreneurs

Student entrepreneurs are confronted with distinctive challenges that differ from those experienced by more established entrepreneurs. Various studies identify common issues, including financial constraints, lack of experience, limited networks, and psychological barriers such as the fear of failure [22]. These challenges are particularly evident within incubator environments, where students are expected to innovate and establish businesses with restricted resources.

3.1.1. Financial Constraints

Financial limitations constitute a significant barrier to entrepreneurship. Research by Rusu and Roman [6] emphasizes that access to capital is one of the principal obstacles for student entrepreneurs. Without adequate funding, students often struggle to cover operational expenses, product development, and marketing efforts. A shortage of financial resources can contribute to frustration and diminished entrepreneurial motivation [20]. While the availability of seed funding and mentorship in incubators can alleviate some of these challenges, insufficient financial support continues to be a substantial concern [23].

3.1.2. Lack of Experience

Many student entrepreneurs lack the necessary business acumen and experience to effectively navigate the complexities of starting and managing a business. Alam, et al. [24] notes that this inexperience often leads to uncertainty in decision-making and increases the perceived risks associated with entrepreneurship. Additionally, limited access to entrepreneurial networks can hinder the flow of critical information and resources [25]. This lack of exposure may undermine confidence and discourage students from pursuing their entrepreneurial goals.

3.1.3. Psychological Barriers

The fear of failure represents another significant challenge for student entrepreneurs Al Halbusi, et al. [22]. This fear can be exacerbated by societal and cultural pressures, especially within academic environments where failure is often stigmatized. Such psychological barriers can result in self-doubt and

a reluctance to take risks, ultimately reducing entrepreneurial motivation [26]. A lack of psychological resilience in the face of setbacks may prevent students from fully engaging in entrepreneurial opportunities.

3.2. *The Impact of Entrepreneurial Challenges on Motivation*

Motivation is a critical determinant of whether students act on their entrepreneurial intentions. According to the Theory of Planned Behavior (TPB), motivation is shaped by attitudes, subjective norms, and perceived behavioral control. Entrepreneurial challenges significantly influence these three components, directly impacting students' entrepreneurial motivation.

3.2.1. *Attitudes Toward Entrepreneurship*

Entrepreneurial attitudes, which reflect an individual's evaluation of entrepreneurship as a valid and desirable career path, are crucial to motivation. The TPB posits that individuals are more inclined to pursue behaviors they perceive as beneficial [27]. For student entrepreneurs, challenges such as financial constraints and inexperience can adversely affect their attitudes toward entrepreneurship. For instance, students facing significant financial barriers may develop negative perceptions of starting a business, viewing it as an unsustainable or risky undertaking [28]. Conversely, students who feel supported and perceive entrepreneurship as a pathway to personal fulfillment and autonomy may cultivate more positive attitudes, even in the face of challenges [29].

3.2.2. *Subjective Norms*

Subjective norms, or perceived societal pressures, also shape motivation. TPB suggests that individuals are more likely to engage in behaviors if they perceive social support for those actions. In the context of student entrepreneurship, the presence of supportive peers, mentors, and family can enhance motivation [30]. However, if students perceive a prevailing expectation to prioritize academics over entrepreneurship or encounter cultural stigmas associated with entrepreneurial failure, their motivation to engage in entrepreneurial activities may diminish [31]. Thus, subjective norms play a significant role in shaping the entrepreneurial intentions of students, particularly within a university incubator setting like Innobiz.

3.2.3. *Perceived Behavioral Control*

The third component of TPB is perceived behavioral control, which reflects an individual's assessment of their ability to execute a specific behavior. For student entrepreneurs, challenges such as financial constraints and lack of experience can diminish their perceived control over the entrepreneurial process. Bandura [32] indicates that individuals are more likely to act when they believe they possess the requisite skills and resources. When students face obstacles that reduce their sense of control, such as limited access to financial resources or insufficient mentorship, their motivation to pursue entrepreneurship may wane [33]. In contrast, support from incubators like Innobiz can enhance students' perceived control by offering mentorship, funding opportunities, and networking platforms.

3.3. *Entrepreneurial Support Systems and Motivation*

Support systems, such as those provided by incubators like Innobiz DUT, are vital in alleviating the challenges faced by student entrepreneurs. These systems may include mentorship, funding access, networking opportunities, and entrepreneurship training programs. Research indicates that incubators can significantly bolster the entrepreneurial motivation of students by supplying resources that address core challenges.

3.3.1. *Mentorship*

Mentorship is a crucial factor in the success of student entrepreneurs. Research by Marshall, et al. [34] underscore the importance of experienced mentors who provide guidance, emotional support, and

practical advice. In incubator settings, mentorship aids students in navigating challenges, improving decision-making, and building confidence, all of which enhance entrepreneurial motivation.

3.3.2. Funding and Access to Resources

One of the primary challenges for student entrepreneurs is the lack of available capital. Boldureanu, et al. [35] highlight that access to funding can determine students' ability to realize their ideas. Incubators like Innobiz offer financial support, either through seed funding or by connecting students to potential investors. This assistance mitigates one of the major obstacles, thereby increasing students' perceived control and motivation.

3.3.3. Networking Opportunities

Networking is essential in entrepreneurship. As noted by Hernández-Carrión, et al. [36] networks provide entrepreneurs with access to valuable resources, including knowledge, capital, and opportunities. Incubators facilitate networking by bringing together students, mentors, investors, and industry professionals, thereby enhancing the support systems available to student entrepreneurs and, consequently, their motivation to pursue their business ideas.

4. Methods

This study utilized a quantitative research design based on a positivist paradigm to systematically explore the motivations driving student entrepreneurship at the Innobiz DUT Centre for Entrepreneurship and Innovation. This approach facilitated the objective measurement and statistical analysis of factors related to entrepreneurial intentions among students at the Durban University of Technology (DUT). Data was collected using a structured, closed-ended questionnaire administered to a convenience sample of 90 students engaged in entrepreneurial activities. The study achieved 76 valid responses, resulting in an 84% response rate, which enhances the reliability and validity of the findings. The questionnaire examined key motivational factors including personal fulfillment, economic opportunity, problem-solving, autonomy, role models, career aspirations, and networking, utilizing a five-point Likert scale to ensure consistency and comparability in responses. Ethical considerations were rigorously upheld through voluntary participation, informed consent, and confidentiality throughout the research process. Data analysis was performed using SPSS version 30, incorporating both descriptive and inferential statistical techniques to identify trends, relationships, and thematic insights that contribute to a deeper understanding of student entrepreneurial motivation at DUT.

4.1. Reliability and Validity

To evaluate the reliability of the items measuring the factors motivating students to pursue entrepreneurship, Cronbach's alpha coefficient (α) was utilized. Reliability serves as an indicator of internal consistency among constructs and their stability [37]. Cronbach's alpha coefficient ranges from 0 to 1, with a value exceeding 0.6 indicating consistency and reliability for data analysis [38]. In this study, the α value was recorded at 0.759, suggesting that the items measuring the motivational factors for student entrepreneurship were consistent with one another (see Table 1).

Table 1.
Students Reliability Statistics.

Section	Items	Cronbach's Alpha
B. Factors motivating students to engage in entrepreneurship	15	0.759
C. Obstacles faced by students pursuing entrepreneurship	15	0.783
D. Impact of entrepreneurial obstacles on the motivations and intentions of student entrepreneurs	15	0.815
Overall	45	0.880

A Cronbach's Alpha value exceeding 0.7 is typically regarded as acceptable, values above 0.8 are considered good, and those nearing 0.9 are deemed excellent. All sections of the questionnaire, as well as the overall instrument, meet or exceed these thresholds, indicating that the survey items are both coherent and reliable.

Table 2.
Demographic characteristics of the respondents (n = 76).

Variable		Frequency (%)
Age/Generation	Gen Z (1997-2012) 12 -27 years	48 (63.2)
	Millennials (1981-1996) 28-43 years	23 (30.3)
	Gen X (1965-1980) 44-59 years	4 (5.3)
	Boomers (1955-1964) 60-69 years	1 (1.3)
Gender	Female	45 (59.2)
	Male	31 (40.8)
Race	African	72 (94.7)
	Indian	2 (2.6)
	Other	2 (2.6)
Faculty	Accounting and Informatics	3 (3.9)
	Applied Sciences	1 (1.3)
	Health Sciences	3 (3.9)
	Management Sciences	69 (90.8)
Academic year	Advanced Diploma/Degree	34 (44.7)
	Diploma 1st year	1 (1.3)
	Diploma 2nd year	9 (11.8)
	Diploma 3rd years	25 (32.9)
	Masters	1 (1.3)
	Post-graduate diploma/Honours	6 (7.9)

The demographic profile of the respondents provides valuable insights into the entrepreneurial landscape at DUT's Innobiz Centre. The notable presence of Gen Z students indicates that younger individuals, likely due to their familiarity with technology and innovative thinking, are more actively engaged in entrepreneurship. In contrast, the lower involvement of Gen X and Baby Boomers may reflect reduced participation in academic entrepreneurial programs. The higher percentage of female respondents (59.2%) signifies a positive shift toward gender inclusivity; however, it also highlights the necessity to address ongoing challenges faced by female entrepreneurs, including limited access to funding and mentorship [32]. The significant representation of African students aligns with South Africa's demographic realities, yet the limited racial diversity may impact the generalizability of the findings. Additionally, the predominance of Management Sciences students underscores a concentration of entrepreneurial initiatives within this discipline, indicating a need for broader participation from other faculties such as Applied and Health Sciences. Lastly, the strong engagement of advanced and final-year students suggests that interest in entrepreneurship increases with academic progression, emphasizing the importance of introducing entrepreneurial opportunities earlier in students' academic careers to foster foundational skills and interest.

Table 3.
Spearman's rho correlations.

Constructs	Correlation	p-value	Decision
Factors motivating students to engage in entrepreneurship ↔ Obstacles faced by students pursuing entrepreneurship	0.095	0.414	Not supported
Factors motivating students to engage in entrepreneurship ↔ Impact of entrepreneurial obstacles on the motivations and intentions of student entrepreneurs	0.345	0.002*	Supported
Obstacles faced by students pursuing entrepreneurship ↔ Impact of entrepreneurial obstacles on the motivations and intentions of student entrepreneurs	0.641	<0.001*	Supported

Note: *Statistically significant at the 0.05 level (2-tailed).

Table 3 provides an analysis of the correlation among constructs related to student entrepreneurship, specifically examining factors that motivate students, the obstacles they encounter, and the influence of these obstacles on their entrepreneurial intentions. The analysis reveals a weak positive correlation ($\rho = 0.095$, $p = 0.414$) between motivating factors and obstacles, indicating a minimal association without statistical significance. This suggests that motivations tend to function independently of the obstacles faced. In contrast, a moderate positive correlation ($\rho = 0.345$, $p = 0.002$) between motivating factors and the impact of obstacles indicates a significant relationship, suggesting that motivation affects how students perceive and respond to challenges. Furthermore, a strong positive correlation ($\rho = 0.641$, $p < 0.001$) between obstacles and their impact highlights the considerable effect that barriers have on entrepreneurial intentions. These results are consistent with Theory of Planned Behavior which emphasizes the role of external constraints in reducing perceived behavioral control [39]. While motivational factors are essential for fostering resilience against obstacles, it is important to address barriers to sustain entrepreneurial intentions [40]. To support enhanced entrepreneurial outcomes, educational institutions and policymakers should prioritize efforts to mitigate obstacles while reinforcing motivating factors [41]. Future research may consider investigating mediating variables, such as resilience or self-efficacy, to further enrich understanding.

Table 4.

Impact of entrepreneurial obstacles on the motivations and intentions of student entrepreneurs (Section D compared to section C).

Constructs	Correlations	p-value	Decision
The absence of a supportive community or network of fellow student entrepreneurs impacts my motivations and intentions to engage in entrepreneurship ↔ Cultural or societal stigma surrounding entrepreneurship deters students from engaging in entrepreneurial endeavors.	0.451	<0.001*	Supportive
The absence of a supportive community or network of fellow student entrepreneurs impacts my motivations and intentions to engage in entrepreneurship ↔ The lack of institutional support or recognition for entrepreneurial ventures is a barrier for student entrepreneurs.	0.457	<0.001*	Supportive
The absence of a supportive community or network of fellow student entrepreneurs impacts my motivations and intentions to engage in entrepreneurship ↔ Inadequate access to funding or resources for product development and prototyping hinders student entrepreneurs.	0.192	0.096	Not supportive
The absence of a supportive community or network of fellow student entrepreneurs impacts my motivations and intentions to engage in entrepreneurship ↔ Difficulty in finding suitable business partners or collaborators poses obstacles for student entrepreneurs.	0.286	0.012*	Supportive
The absence of a supportive community or network of fellow student entrepreneurs impacts my motivations and intentions to engage in entrepreneurship ↔ Balancing academic commitments with entrepreneurial pursuits presents challenges for students.	-0.045	0.701	Not supportive

Table 4 examines the relationships between the lack of a supportive community or network and various entrepreneurial challenges, focusing on their effects on students' motivations and intentions to pursue entrepreneurship. The analysis employs Spearman's rho to assess these correlations, with significance set at the 0.05 level. A moderate positive correlation ($\rho = 0.451$, $p < 0.001$) was identified between the absence of a supportive community and the influence of cultural or societal stigma on student entrepreneurial motivations and aspirations. This noteworthy correlation underscores the notion that cultural or societal stigma may intensify difficulties for students who do not have a supportive network. According to Bate [42] cultures characterized by high uncertainty avoidance or low entrepreneurial orientation may dissuade risk-taking and innovation, thereby exacerbating the challenges arising from a weak community network and diminishing entrepreneurial intentions. Additionally, a significant correlation was observed between the lack of community support and

institutional barriers ($\rho = 0.457$, $p < 0.001$). This moderate positive correlation indicates that insufficient institutional recognition and support for entrepreneurial initiatives intensifies the difficulties faced by students lacking a supportive network. As outlined by Rosli and Cacciolatti [43] universities are pivotal in nurturing entrepreneurship by establishing strong ecosystems. The absence of institutional backing may discourage students, particularly when peer or mentor networks are also inadequate or unavailable.

In contrast, the correlation between the lack of community support and limited access to funding or resources was found to be weak and statistically insignificant ($\rho = 0.192$, $p = 0.096$). This finding implies that financial obstacles may function independently of community networks. Kantis, et al. [44] contend that access to funding is frequently influenced by broader structural and systemic factors, such as market dynamics or governmental policies, rather than by interpersonal networks. A weak-to-moderate positive correlation ($\rho = 0.286$, $p = 0.012$) was noticed between the lack of community support and challenges in locating suitable business partners or collaborators. This statistically significant relationship emphasizes the importance of networks in enabling collaborations and partnerships. Longva [45] highlights the role of networks in connecting individuals to various resources and opportunities. In the absence of such networks, students may find it challenging to identify potential collaborators, thereby hindering their entrepreneurial progress. Lastly, no significant correlation was found between the lack of a supportive community and challenges related to balancing academic obligations with entrepreneurial endeavors ($\rho = -0.045$, $p = 0.701$). This negligible and non-significant correlation suggests that academic pressures function independently of community or network dynamics. Maritz, et al. [46] posits that academic integration is a crucial determinant of student success, aligning with the notion that academic challenges are largely separate from entrepreneurial ecosystems. The analysis highlights the essential role of community support in alleviating challenges associated with cultural stigma, institutional barriers, and collaboration difficulties. However, issues related to funding and academic pressures seem to exist independently of community networks. These findings underscore the necessity for universities and policymakers to cultivate entrepreneurial ecosystems characterized by strong community networks, enhance institutional support for student initiatives, and address systemic challenges, including funding and time limitations, through targeted interventions.

Table 5.

Impact of entrepreneurial obstacles on the motivations and intentions of student entrepreneurs (Section D compared to section B).

Constructs	Correlations	p-value	Decision
Successfully surmounting entrepreneurial barriers reinforces my belief in my entrepreneurial capabilities - The pursuit of entrepreneurship resonates with my personal interests and passions.	0.243	0.035*	Supportive
Successfully surmounting entrepreneurial barriers reinforces my belief in my entrepreneurial capabilities - Successful entrepreneurs and their positive influence on society serve as a source of inspiration.	0.098	0.400*	Not supportive
Successfully surmounting entrepreneurial barriers reinforces my belief in my entrepreneurial capabilities - The yearning for creative autonomy and independence actuates my entrepreneurial aspirations.	0.254	0.027*	Supportive
Successfully surmounting entrepreneurial barriers reinforces my belief in my entrepreneurial capabilities - Recognition and achievements as an entrepreneur serve as driving forces for me.	0.105	0.366	Not supportive
Successfully surmounting entrepreneurial barriers reinforces my belief in my entrepreneurial capabilities - The challenge and excitement of establishing and expanding a business are motivating factors for me.	0.272	0.017*	Supportive

Table 5 presents an analysis of the relationship between overcoming entrepreneurial challenges and the various factors that influence the motivations and intentions of student entrepreneurs. Successfully

navigating obstacles enhances students' confidence in their entrepreneurial abilities, with a notable correlation to their personal interests and passions (correlation = 0.243, $p = 0.035$). This finding emphasizes the critical role of intrinsic motivations in fostering entrepreneurial intentions. Additionally, there is a significant positive relationship (correlation = 0.254, $p = 0.027$) between overcoming challenges and the aspiration for creative autonomy and independence, indicating that successfully addressing difficulties increases students' desire for independence and creative control. Furthermore, the inherent challenge and excitement associated with starting and growing a business also serve as significant motivating factors for students (correlation = 0.272, $p = 0.017$), highlighting the dynamic and experiential nature of entrepreneurship.

Conversely, the influence of external factors, such as being inspired by successful entrepreneurs (correlation = 0.098, $p = 0.400$) and receiving recognition or accolades (correlation = 0.105, $p = 0.366$), does not exhibit statistically significant relationships with the reinforcement of entrepreneurial self-belief. This indicates that while external validation and role models may have some impact, they are not as crucial for this group of students compared to intrinsic motivators such as passion, autonomy, and the excitement of engaging in entrepreneurial endeavors.

These findings are consistent with established theories in entrepreneurship. Self-determination theory Bilal, et al. [47] posits that intrinsic motivations, including passion and autonomy, are essential to entrepreneurial activities. Bandura [32] social cognitive theory highlights the importance of self-efficacy, which is reflected in the way overcoming obstacles boosts students' confidence in managing future challenges. Additionally, the significant correlation between overcoming barriers and the excitement of entrepreneurship aligns with experiential learning theory, which stresses the significance of active involvement and real-world experiences in achieving entrepreneurial success [48]. Collectively, these insights suggest that entrepreneurial education programs should prioritize the cultivation of intrinsic motivators, resilience, and practical experiences to enhance students' entrepreneurial intentions.

5. Conclusion

The findings from this analysis offer important insights into the demographic, motivational, and systemic factors that influence student entrepreneurship at DUT's Innobiz Centre. The demographic profile reveals a strong representation of Gen Z participants, significant female involvement, and a predominance of African students, reflecting the socio-economic landscape of South Africa. However, the limited diversity among faculty involvement and the engagement of first-year students indicate a need for broader inclusivity and earlier exposure to entrepreneurial activities. Correlational analyses highlight the importance of intrinsic motivators, such as personal interests, creative autonomy, and the excitement associated with entrepreneurship, in fostering entrepreneurial intentions. Overcoming barriers enhances students' self-belief, thereby further reinforcing their commitment to entrepreneurial endeavors. Conversely, external factors, such as recognition and societal inspiration, seem to play a lesser role. The presence of robust community and institutional support significantly mitigates cultural stigma, institutional barriers, and collaboration challenges, while obstacles like funding constraints and academic pressures operate independently of community networks.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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