

# Perceived university entrepreneurship support services and entrepreneurial intentions: experiences from the University of Dodoma's graduates

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## Abstract

*Entrepreneurship plays a pivotal role in economic growth for developing countries, including Tanzania. Unfortunately, the number of entrepreneurs in Tanzania is still lagging behind other East African countries. The emergence of knowledge-based entrepreneurship programs makes universities one of the vital supply sources for creating entrepreneurs. Even though it has institutional support from the government, entrepreneurship is still not considered a promising alternative career choice. Thus, we investigated the influence of perceived university support services on building entrepreneurial intention from the perspective of the University of Dodoma's graduates. In this cross-sectional research study, a sample size of 120 is drawn from the business graduates of the University of Dodoma who have received entrepreneurship support services using two-stage random sampling, of which females were 37.5% and males were 62.5%. The data were analysed using multiple regressions. The study found that most of the respondents do not intend to own businesses. The study further found that perceived entrepreneurship education and business development support services have a positive and significant influence on the odds of graduates becoming entrepreneurs. However, concept development support has a positive but insignificant influence on graduates' entrepreneurial intentions. Thus, we draw a number of recommendations for the theory, future research, and practice of university entrepreneurship support services.*

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## 1. Introduction

Tanzania has the second-largest economy in the East African Community and the tenth-largest in Africa (Nandonde & Malaki, 2020). It is largely dependent on agriculture for employment, accounting for about half of the employed workforce. The economy has been transitioning from a command economy to a market economy since 1985 [National Bureau of statistics (NBS, 2016)]. Working poverty and underemployment are key challenges facing the Tanzanian economy [International Labour Organization (ILO, 2022)]. The country also has a rapidly growing population, with more than two-thirds under the age of 25, and a quarter of all 15- to 34-year-olds are underemployed (ILO, 2022). Unemployment refers to the proportion of the labour force that is unemployed but available for and seeking work (Clarke, 2018). Tanzania's unemployment rate in 2021 was 2.65 percent, a 0.12 percent increase from the previous year (ILO, 2022). Hahn et al. (2022) and Taneja (2022) reported that one solution to unemployment is for young people to work for themselves.

However, according to Newbold (2014) and Liu et al. (2022), in order to work for oneself, one must have an entrepreneurial spirit that is either inborn or instilled through education. According to the literature, entrepreneurship is a key driver of job creation and economic growth (Decker et al., 2014; Urbano et al., 2020). Not only that, it has been reported that one of the reasons for the increased unemployment rate is the lack of entrepreneurial intent among young people after they complete their studies (Lestari et al., 2022; Nsereko et al., 2021). Entrepreneurship drives economic productivity growth by transferring knowledge and innovation in the creation of marketable products, methods, and production (Doran et al., 2018). Entrepreneurship has been identified as a critical pillar in achieving Sustainable Development Goals (SDGs) generally and Tanzania's Development Vision of 2025 in particular, which outlines the country's long-term goals, including employment (Hahn et al., 2022).

The Tanzania Commission for Universities reported that there are about 55,000 students who graduated in 2020, and out of those 28,225 of them are from the University of Dodoma (Joseph, 2022; TCU, 2022). Most of these students who graduate are young people who are expected to express their entrepreneurial intentions developed at the university (Kumar & Borbora, 2016). Entrepreneurial intents can be defined as behaviors, attitudes, perceptions, and social norms that determine the degree of entrepreneurial entry (Cui and Bell 2022; Nowiński et al. 2020). Nonetheless, there are several important impediments to developing entrepreneurial intentions in students (Nsereko et al., 2021; Shi et al., 2019).

Examples include unfavourable legal and regulatory environments, underdeveloped infrastructure, regulatory burden, rule of law, inadequate entrepreneurship development services, social cognitive traits, government policies, restricted access to financing, formal institutions, political empowerment, culture, institutional environment, gender disparity, and an inefficient and disjointed institutional support framework (Akhtar et al., 2022; Cui and Bell, 2022; Dai and Si, 2018; Fritsch and Wyrwich, 2018; Kumar and Borbora, 2016; Lee et al., 2011; Levie & Autio, 2011; Liñán, et al., 2013; Liu et al., 2022; Makuya & Changalima, 2024; Naudé, 2013; Salinas et al., 2019). These factors may impact the entrepreneurial intentions of graduates. Therefore, it is imperative for both the government and researchers to tackle these constraints. It is this motivation that drove the researchers to recognize the significance of composing this research paper in order to effectively address these impediments.

Identifying and addressing impediments to entrepreneurial intent is crucial to the effectiveness of efforts to encourage and assist new generations of entrepreneurs (Van Praag & Van Stel, 2013). Ajzen's (1991), Marmat (2021), Sampene et al. (2023), and Su et al. (2021) explained the popular theory of planned behaviour (TPB), which states that entrepreneurial intentions influence entrepreneurial behaviour, and that entrepreneurial support services such as education and experience can solve several impediments and shape entrepreneurial intentions. In essence, the TPB contends that an individual's intentions determine whether a person has the intention of engaging in an entrepreneurial venture (Su et al., 2021).

Drucker (1985) and later Lestari et al. (2022), argued that entrepreneurship can be studied as a discipline. As a result, universities have become a source of knowledge as well as one of the bases for expanding business actors (Campos et al., 2021). Instead of sticking with conventional academic curricula that provide little room for innovation and creativity, universities in developing countries have been advised to incorporate entrepreneurial support services into their curricula so as to build entrepreneurial intention in their graduates (Kigotho, 2022). Through entrepreneurship education, concept creation, and business development as support services, academic institutions may give students the knowledge and abilities they need to gain the intention of launching firms (Liu et al., 2022; Rocha et al., 2022). Additionally, Martins et al. (2022) and Eniola and Osigwe (2021) added that entrepreneurship education in universities can foster the ability and awareness to see commercial opportunities, handle finances, oversee personnel, cultivate emotional intelligence, and impart inventive thinking abilities.

Furthermore, universities are considered natural incubators that create new ideas and technologies, promote the creation of new businesses, and offer various resources and capabilities essential to creating a sustainable competitive advantage (Anjum et al., 2021; Guerrero & Urbano, 2013). Thus, the previous studies indicate that perceived university support services in the form of perceived educational support, perceived concept development support, and perceived business development support services might directly or indirectly affect entrepreneurial intentions among students (Bazkiaei et al., 2020; Nasiru et al., 2015; Saeed et al., 2015). Thus, it is important to come up with findings that might conclude this controversy.

Most of the research in sub-Saharan Africa mainly focused on the effect of entrepreneurial education (Kalimasi, 2013; Shi et al., 2019) and institutional and self-efficacy (Lestari et al., 2022) on entrepreneurial intention, leaving concept development and business development, which according to Saeed et al. (2015) are important support services in building graduates' entrepreneurial intention. The concept development has much to do with behaviour change (through idea generation, creation, and implementation), and business development is important in building a new entrepreneurial experience for the student (Saeed et al., 2015). Subsequently, Su et al. (2021) proclaimed that perceived university education support should be assessed in a particular place instead of depending on industrial estimates due to differences in the nature of university education across the world.

Another limitation of previous studies on entrepreneurial intention is that most studies are focused on continuing students instead of graduates (Lu et al., 2021; Sampene et al., 2023). Entrepreneurial intention is best seen when the student has already been subjected to all the interventions, including the perceived entrepreneurship support services, and not during the process (Martins et al., 2022). It is like assessing the food while it is still cooking. The food has to be cooked, then tested to see if it smells nice, tastes good, and is attractive to the eyes. Similarly, entrepreneurial intention has to be assessed after the student graduates from their studies. For the context of sub-Saharan African countries, the findings related to the influence of entrepreneurial education on entrepreneurship intentions also show inconsistent results (Eniola & Osigwe, 2021; Setiawan & Lestari, 2021).

Furthermore, many studies focus on single perceived entrepreneurship support services or combine them with other factors but fail to address perceived university support services comprehensively (Nasiru et al., 2015; Shi et al., 2019; Su et al., 2021; Tessema, 2012). The current study aims to address this gap

by focusing specifically on the three perceived entrepreneurship support services offered by universities. By examining these services in combination, we hope to uncover their composite influence on the entrepreneurial intentions of graduates. This approach could provide a more nuanced understanding of how universities can support and encourage entrepreneurship among their students in the sub-Saharan African context and encourage their entrepreneurial intentions after graduation.

Moreover, it is not known if there is a single study in Tanzania that has done research on the influence of entrepreneurship support services on entrepreneurial intention, either separately or in a composite manner. Thus, a study of perceived entrepreneurship support services contributes to reducing the impediments surrounding the ability of graduates to acquire entrepreneurial intentions. Moreover, perceived entrepreneurship support services from universities can quickly foster the ability and awareness to see commercial opportunities, handle finances, oversee personnel, cultivate emotional intelligence, and impart inventive thinking abilities, thus fostering entrepreneurial intention. Thus, the study contributes to a better understanding of the role of these universities in achieving graduates' entrepreneurial intentions. Universities can be seen as knowledge providers as well as enablers in stimulating entrepreneurial intentions in youth, thus eliminating poverty among graduates.

The purpose of this study is to assess the influence of perceived entrepreneurship support services on the entrepreneurial intentions of university graduates. Specifically, the study determines the influence of perceived entrepreneurship education support services on the entrepreneurial intention of university graduates, examines the influence of perceived concept development support services on the entrepreneurial intention of university graduates, and assesses the influence of perceived business development support services on the entrepreneurial intention of university graduates.

The remaining parts of the work are structured as follows: Section 2 focuses on the empirical literature review, hypothesis development, conceptual framework and theoretical framework. Section 3 addresses the issue of research methodology adopted. Section 4 focuses on empirical results and discussion of findings, while the summary and conclusion form the basis of Section 5.

## 2. Literature review

### 2.1 Theoretical framework

The study is underpinned by TPB. The TPB is a widely recognized psychological model used to understand human behaviour. It suggests that a person's intentions are the primary determinant of their behaviour. Research in the field of entrepreneurship has extensively explored the relationship between entrepreneurship support services in universities and the TPB. According to TPB, intentions are influenced by three main factors: attitude toward entrepreneurship, subjective norms regarding entrepreneurship, and perceived behavioural control in entrepreneurship (Ajzen, 1991). These are behaviours that are formed when entrepreneurship support services are imparted to students. Entrepreneurship support services provided by universities can significantly influence entrepreneurial intentions and behaviours among students, and their relationship can be understood through the lens of the TPB.

Universities often offer entrepreneurship education and concept development through various entrepreneurship courses, workshops, and business experience programs aimed at fostering positive attitudes toward entrepreneurship. By exposing students to successful entrepreneurial role models, real-world case studies, and practical skills development, these services can shape students' attitudes toward entrepreneurship, making it seem more desirable and feasible. Encouraging students to participate in entrepreneurship competitions, start-up incubators, and networking events can further enhance their attitudes by providing tangible examples of entrepreneurial success and creating a supportive entrepreneurial ecosystem within the university. Fayolle et al. (2006) evaluated the impact of entrepreneurship education programs using TPB, a common form of entrepreneurship support service offered by universities on students' entrepreneurial intentions and behaviours. The findings indicated that such programs positively influenced students' attitudes toward entrepreneurship and perceived behavioural control, consequently enhancing their intentions to start a business.

Entrepreneurship support services through business development in universities can influence subjective norms by creating a social environment that values and promotes entrepreneurship. By organizing events where successful entrepreneurs share their experiences and mentors provide guidance, universities can shape students' perceptions of entrepreneurship as a socially desirable and acceptable career path. Liñán and Chen (2009) show the applicability of TPB in developing a specific instrument to measure entrepreneurial intentions and testing it across different cultural contexts. Their findings supported the applicability of TPB in predicting entrepreneurial intentions across diverse populations, emphasizing the importance of attitudes, subjective norms, and perceived behavioural control. By connecting students with mentors, investors, and other stakeholders who endorse and encourage

entrepreneurial activities, universities develop business experience for students, which results in entrepreneurial intention after graduation.

Universities can enhance graduates' perceived behavioural control by providing them with resources, support, and opportunities through entrepreneurship support services to develop entrepreneurial skills and pursue entrepreneurial ventures. This may include access to start-up funding, co-working spaces, legal and business advisory services, and networking opportunities. Krueger and Carsrud (1993) applied the TPB theory to study entrepreneurial intentions. They found that attitudes toward entrepreneurship, subjective norms, and perceived behavioural control significantly influenced individuals' intentions to start a business. Entrepreneurship support services can also help students identify and overcome perceived barriers to entrepreneurship, such as a lack of experience, funding, or business knowledge. By offering tailored training programs, mentorship schemes, and entrepreneurial support networks, universities can empower students to feel more confident in their ability to start and manage a business. Peterman and Kennedy (2003) examined the effect of entrepreneurship education on students' perceptions of entrepreneurship using TPB as a theoretical framework. They found that entrepreneurship education positively influenced students' attitudes toward entrepreneurship, subjective norms, and perceived behavioural control, leading to increased entrepreneurial intentions.

Thus, entrepreneurship support services in universities play a crucial role in shaping students' attitudes, subjective norms, and perceived behavioural control regarding entrepreneurship, all of which are key components of the TPB. By providing education, resources, and networking opportunities, universities can help students develop the intentions and capabilities necessary to pursue entrepreneurial endeavours successfully. The seminal and recent studies demonstrate the relevance of the TPB in understanding the relationship between entrepreneurship support services in universities and entrepreneurial intentions. They highlight the role of attitudes, subjective norms, and perceived behavioural control in shaping students' intentions to engage in entrepreneurial activities, thereby contributing to the advancement of entrepreneurship education and research.

## *2.2 The role of perceived university support services on entrepreneurial intention*

The term "perceived university support services" in this study refers to three distinct but interconnected services: perceived university educational support services, perceived concept development support services, and perceived business development support services (Bazkiaei et al., 2020; Li & Horta, 2021; Saeed et al., 2015). These services have been suggested to be fundamental in promoting entrepreneurial activities for continuing students in various countries (Sendra-Pons et al., 2022). However, various educational programs can provide graduates with the knowledge, skills, internships, and networking opportunities they need to develop their embryonic ideas into workable concepts (Colombo & Piva, 2020). So, it might work for graduates too. Supporting this, it is argued that universities can increase graduates' entrepreneurial awareness and motivation by providing perceived concept development support services, particularly during the early stages of the entrepreneurial process, when opportunities are identified and developed into business ideas (Li & Horta, 2021; Nowiński et al., 2020). A supportive university environment for entrepreneurship, in general, can increase graduates' interest in entrepreneurship and their eligibility to pursue self-employment (Hassan et al., 2021).

Assessing the effectiveness of education support is complex due to the lack of standardized tools across programs. Various studies discuss the content of entrepreneurship education (Colombo & Piva, 2020; Lestari et al., 2022). This study examines perceived education support at Dodoma University, including skills like idea generation and financial management. Su et al. (2021) advised that assessing entrepreneurship support should be location-specific. Planned behaviour theory guides exploration of education's influence on entrepreneurial intention. Graduates' support for developed ideas is crucial. Entrepreneurs identify value in unconventional places (Martins et al., 2022). This study includes assessing the ability to generate and discuss business ideas. Knowledge is key to entrepreneurial opportunities (Yi, 2020).

Thus, entrepreneurial support in universities fosters knowledge and entrepreneurial values. Perceived business development support is determined by the support given by the university in expressing graduate business aspirations, the ability to determine opportunities for new or expanding businesses, the ability to start and expand businesses, and the ability to deal with the challenges of business management (Ayodele et al., 2020; Chen et al., 2023). Measuring entrepreneurial intention is a bit complex (Sampene et al., 2023). Lee et al. (2011) measured entrepreneurship development around the world. Newbold (2014) measured the entrepreneurial development of graduates using means from the Likert scale responses. Lestari et al. (2022) used means from the responses to create a structural equation model for assessing the impact of perceived university support self-efficacy and proactive personality on the

entrepreneurial intentions of students in Indonesia. Thus, the current study used the means of responses to determine entrepreneurial intention, which is expected to raise the interest of students and make them establish or expand their business ventures.

### 2.3 Hypotheses development

Perceived university entrepreneurship education, concept development, and business development can play crucial roles in fostering entrepreneurial intentions among students.

#### 2.3.1 Perceived university entrepreneurship education support services

Entrepreneurship education programs offered by universities provide students with theoretical knowledge, practical skills, and experiential learning opportunities related to entrepreneurship (Sampene et al., 2023). These programs expose students to entrepreneurial concepts, strategies, and best practices, thereby shaping their understanding of entrepreneurship and its potential as a career path. Entrepreneurship education can positively influence students' attitudes toward entrepreneurship by highlighting the benefits, opportunities, and challenges associated with starting and managing a business (Peterman and Kennedy, 2003; Tessema, 2012). By learning about successful entrepreneurial ventures and studying real-world case studies, students may develop a more positive perception of entrepreneurship as a viable career option (Liñán & Chen, 2009). Entrepreneurship education often involves interactions with successful entrepreneurs, industry experts, and mentors who serve as role models.

These interactions can shape students' subjective norms by providing social validation and support for entrepreneurial endeavours. Additionally, group projects, networking events, and entrepreneurship competitions foster a collaborative and supportive environment that reinforces the importance of entrepreneurship within the university community. Entrepreneurship education equips students with the knowledge, skills, and resources necessary to pursue entrepreneurial ventures (Eniola & Osigwe, 2021). Through courses on business planning, marketing, finance, and innovation, students gain confidence in their ability to identify opportunities, develop viable business ideas, and navigate the challenges of entrepreneurship. Eniola and Osigwe (2021) assert that practical experiences, such as internships, start-up accelerators, and incubator programs, further enhance graduates' perceived behavioural control by providing hands-on learning and mentorship. This means the education support services received from the university help graduates meet their educational and social challenges in their venture intentions. Furthermore, Taneja (2022) found that the university environment and anything that comes with it influence the intention of graduates to do something. Thus, we can postulate that entrepreneurial education can influence entrepreneurial intention.

H1: Perceived entrepreneurship education support services influence positively and significantly the entrepreneurial intentions of graduates.

#### 2.3.2 Perceived concept development support services

Concept development refers to the process of generating, refining, and evaluating business ideas or concepts (Fayolle et al., 2006). Universities facilitate concept development through various activities, including brainstorming sessions, ideation workshops, business model competitions, and incubation programs. These initiatives encourage students to explore entrepreneurial opportunities, identify unmet needs or market gaps, and develop innovative solutions or business concepts. Doran et al. (2018) argued that students' entrepreneurial activities facilitate their later economic activities after graduation. Salamzadeh et al. (2022) proclaimed that concept development activities stimulate graduates' creativity and innovation by encouraging them to think critically, explore alternative solutions, and challenge conventional thinking.

By engaging in iterative processes of ideation and prototyping, graduates learn to generate and refine business ideas, ultimately fostering a mindset of innovation and entrepreneurship. Through concept development, graduates gain practical experience in assessing the feasibility and viability of business ideas. By conducting market research, feasibility studies, and validation experiments, students develop a deeper understanding of market dynamics, customer needs, and competitive landscapes (Salamzadeh et al., 2022). This process helps graduates evaluate the potential risks and rewards associated with entrepreneurial ventures, thereby increasing their perceived feasibility and confidence in the intention of pursuing entrepreneurship. Thus, it is fair to hypothesize that:

H2: Perceived concept development support services influence positively and significantly the entrepreneurial intentions of graduates.

### 2.3.3 Perceived business development support services

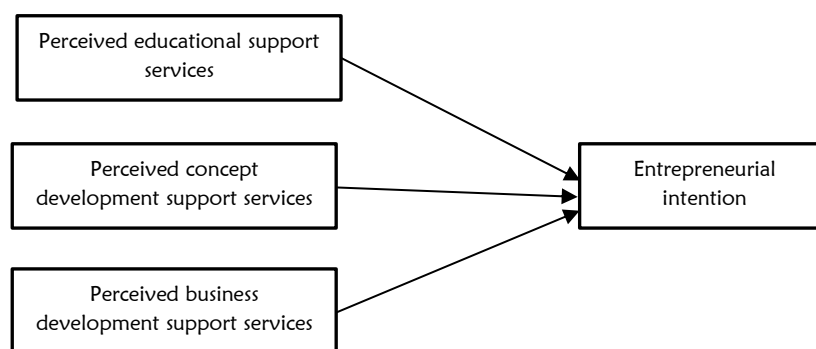
Perceived business development encompasses activities aimed at transforming a business idea into a viable and scalable venture. Universities support business development through entrepreneurship centres, incubators, accelerators, and mentorship programs that provide students with guidance, resources, and support to launch and grow their ventures (Marmat, 2021). Perceived business development initiatives help graduates translate their entrepreneurial intentions into action by providing practical guidance and support throughout the start-up journey. By offering access to funding, legal assistance, workspace, and mentorship, universities empower students to overcome barriers and navigate the complexities of their intention of starting and scaling a business after graduation. Engaging in business development activities reinforces graduates' perceived control over their entrepreneurial endeavours (Martins et al., 2022). By experiencing first-hand the process of developing a business plan, securing funding, acquiring customers, and managing operations, graduates gain confidence in their ability to execute their entrepreneurial vision (Kumar & Borbora, 2016). This sense of control strengthens their entrepreneurial intentions and commitment to pursuing entrepreneurship as a career path.

H3: Perceived business development support services influence positively and significantly the entrepreneurial intentions of graduates.

Perceived university entrepreneurship education, concept development, and business development support services can play synergistic roles in building entrepreneurial intentions among graduates. By fostering positive attitudes toward entrepreneurship, shaping subjective norms, enhancing perceived behavioural control, inspiring creativity and innovation, increasing perceived feasibility, facilitating implementation, and reinforcing perceived control, these initiatives contribute to the cultivation of an entrepreneurial mindset and the empowerment of future entrepreneurs.

## 2.4 The conceptual framework

Based on the hypotheses of this study, perceived university support services can play an essential role in ensuring that its graduates have entrepreneurial intentions, as illustrated in Figure 1.



**Figure 1.** The conceptual framework

**Source:** Constructed and modified from Bazkiaei et al. (2020), Li and Horta (2021), and Saeed et al. (2015)

## 3. Methods

### 3.1 Study area

The study was conducted using graduates from the University of Dodoma in Tanzania. The university was chosen for two reasons: first, it contributes about 50% of the total graduate's production in Tanzania every year (TCU, 2022); second, in 2020, it is reported (through a qualitative exploratory study) that most graduates from the university have not established businesses and are considered to have significantly affected the employment status of the youth in the country (UN, 2017; UDOM, 2022). The university has entrepreneurship support programs, with more than 90% of them designed to create entrepreneurial intentions in students.

### 3.2 Population, sampling, sample size, and data

A cross-sectional survey was conducted with fresh graduates (graduates who were direct from school at the time of their admission) from the University of Dodoma (UDOM). A two-stage random sampling was employed. In the first stage, regions were selected by probability proportional to size sampling, whereby large regions in terms of graduate population had an equal chance of being included in the sample as small ones. This sampling method was used since it tends to take into account the varying size of each item within the population. It is most useful when the sampling units vary considerably in size because it assures that those in larger units have the same probability of getting into the sample as those in smaller units, and vice versa, thus reducing bias.

The snowball sampling method is a type of sampling where the first available primary data source will be used for the research and provide contact information for the next respondent. This technique was used to select the available graduates, as in some regions, UDOM graduates were non-existent and their information was not registered anywhere. We have selected cities since they have the highest number of graduates from UDOM to form the population of the study, which was 4000 (TCU, 2022). Due to the scattered and homogeneous nature of the respondents and financial resources, 20 respondents were randomly selected from each of the 6 regions, such as Dar es Salaam, Mwanza, Arusha, Mbeya, Dodoma, and Tanga, giving a total of 120 graduates as the only sample size present during data collection time.

According to the population stated above and with reference to the sample size formula by Cochran (1963), the sample size is determined as follows:

$$n = \frac{N}{1+N(e)^2} \dots \dots \dots (1)$$

Where;                      N = Population Size  
                                   n = Sample Size  
                                   e = Error term = 9% (0.09)

When this formula is applied to the above population,

$$n = \frac{4000}{1+4000(0.09)^2} = 119.7 \text{ approximately } 120$$

Therefore, the sample size for this study was 120.

Structured questionnaires designed as Google Forms were sent to the respondents, and key informant interviews were used in primary data collection. Questions in the questionnaire were adopted from Newbold (2014) and GEI (2019) with some modifications. The pattern correlation matrix revealed numerous coefficients of 0.48 and above. As a further examination, we conducted the Kaiser-Meyer-Olkin (KMO) test, which determines if there are enough items to predict each factor. The KMO value for each of the measures in the EFA was greater than the recommended value of 0.60 (Lestari et al., 2022).

### 3.3 Analytical framework

The data were analysed using Statistical Package for Social Sciences (SPSS) version 21. A descriptive analysis was done to find the frequency of business ownership status among the graduates. As indicated in the analytical framework below, multiple regression analysis was done to determine the influence of perceived university entrepreneurship support services on the entrepreneurial intentions of graduates from UDOM.

### 3.4. Variables' measurements

Entrepreneurial intention was measured by using means from the Likert scale responses of graduates, as used by Newbold (2014). Perceived education support service indicators used by Lestari et al. (2022) were applied. Perceived concept development support services were indicated by the support of ideas and concepts developed by the graduates during their studies at the university (Sendra-Pons et al., 2022). Perceived business development support services indicators come from Ayodele et al. (2020) and Chen et al. (2023). A Likert scale of 1 (very untrue) to 5 (very true) was used to determine the entrepreneurial intention levels of graduates. Then an average was found for each construct to get a single answer. For scale reliability, the Alpha value is found to be 0.769 overall, which is within the range of good scale reliability (Mohajan, 2017).

### 3.5 Model specification

The study investigated factors that affect whether perceived university entrepreneurship support is truly contributing to entrepreneurial intention. A multiple-regression model was used to analyse the data. The

model was used because the responses in the dependent variable give a single possible answer since the average mean for each variable was used as a proxy indicator.

The generic form of the linear regression model as presented is as follows:

$$Y_i = \beta_0 + \sum \beta_i X_i + \mu \dots \dots \dots (2)$$

Where;

$Y_i$  = Dependent variable

$X_i$  = Independent variable

$\beta_0$  = Constant

$\beta_i$  = regression coefficient for independent variables

$\mu$  = error term

The multiple regression model in this study can therefore be specified as:

$$Y = \beta_0 + \beta_1(\text{PEE}) + \beta_2(\text{PCD}) + \beta_3(\text{PBD}) + \mu \dots \dots \dots (3)$$

Where:  $Y$  = Entrepreneurial intention

PEE = Perceived entrepreneurship education support

PCD = Perceived concept development support

PBD = Perceived business development support

## 4. Findings and discussion

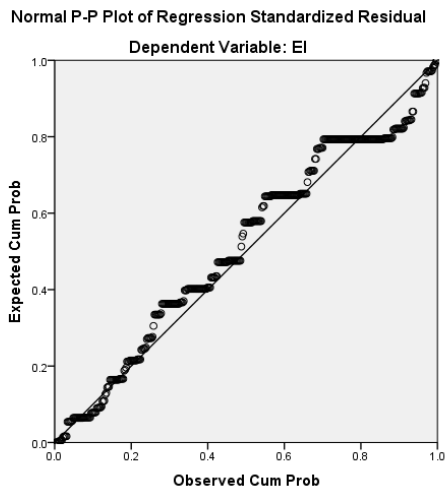
### 4.1 Preliminary findings for the model

Before continuing to specific results, it is important to note the fit and adherence to the assumptions of the linear regression model of the results. In regression analysis, R-squared measures the proportion of variability in the dependent variable that is explained by the independent variables in the model. A higher R-squared value indicates a better fit of the model to the data, although it does not necessarily imply causation. In this case, the coefficient of determination was found to have a value of a value of 29.4%, indicating that the model provides a moderate level of explanatory power, but that doesn't mean there is no causality (Table 1).

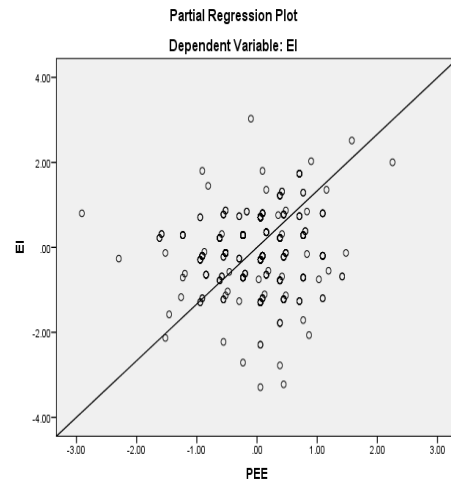
The assumptions for the linear regression model were also tested. Most of the regression assumptions are met (Mohajan, 2017). A normal P-P regression standardised residual plot was used, and it shows normal patterns (Figure 2). Partial regression plots (also known as added variable plots or component-plus-residual plots) show the relationship between the dependent variable and one independent variable while controlling for the effects of other independent variables in the model (Draper & Smith, 1998). The authors emphasized that, the plots help identify any nonlinear relationships between individual independent variables and the dependent variable. The display of the partial regression plots shows a linear pattern in the relationship between dependent and independent variables under study (Figures 3, 4, & 5). That is, the linearity assumption was met.

The variance inflation factor (VIF) was tested to measure the existence of multicollinearity, which is another assumption of the linear regression model (Mohajan, 2017). Specifically, VIF measures how much the variance of the coefficient for a particular independent variable is inflated by considering the correlation with other independent variables, and VIF values greater than 10 are often considered indicative of multicollinearity (Basias & Pollalis, 2018). In this case, the VIF values for the independent variables are less than 10, which implies there is no multicollinearity. Another assumption is the independence of errors (Mohajan, 2017). The author asserts that independence of errors in a linear regression model means that the residuals (errors) from the model are not correlated with each other. In other words, the error terms are independent across observations. To assess the independence of errors, the Durbin-Watson test was done. The threshold for this test ranges from 0 to 4, and values closer to 2 mean there is no correlation between errors in the model (Mohajan, 2017). In this study, the Durbin-Watson value is 1.960, which is closer to 2. Meaning that there is independence of error in the model.

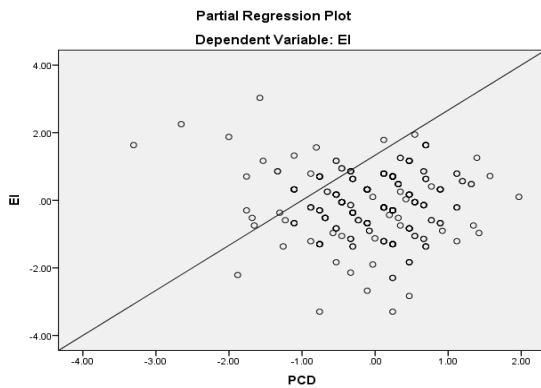




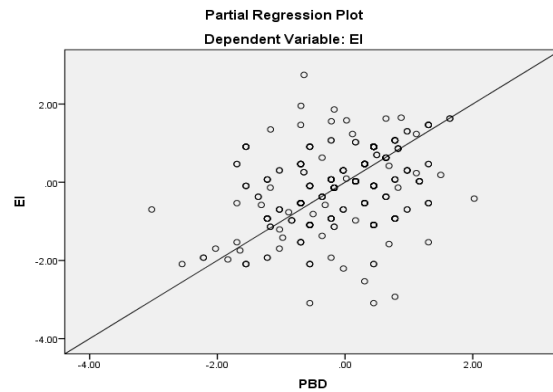
**Figure 2.** P-P plots for the model  
 Source: Figure by authors



**Figure 3.** PEE and EI  
 Source: Figure by authors



**Figure 4.** PCD and EI  
 Source: Figure by authors



**Figure 5.** PBD and EI  
 Source: Figure by authors

#### 4.2 Business ownership status of the graduates

Entrepreneurial intention is imparted to students so that when they graduate, we expect them to have an interest in establishing businesses. Thus, the end result is business establishment intention. This analysis was done so as to see the number of graduates from UDOM who have the intention of establishing businesses. The study findings revealed that most of the respondents, which is equivalent to 65 percent, do not own businesses, and 15 percent are business owners. However, 20 percent are working in either family or other people's businesses. These results are similar to previous research ones (Joseph 2022; UDOM 2022).

These findings imply that either the university's entrepreneurship support services might not be well designed, taught, and practiced, or there are other factors that might trigger the graduate's intention to become an entrepreneur. Findings have shown that most university graduates do not own businesses. This is in contradiction with Nandonde and Malaki (2020), who reported that the majority of businesses are owned by young people. This implies that the young people reported might not necessarily be university graduates. As to the reason for not owning businesses, previous studies revealed that students' personal and family needs and/or motivators are not considered in the entrepreneurship support services provided by the universities (Bouhaleb, 2020; Maleki et al., 2023).

An individual's decision to become an entrepreneur is frequently the result of weighing opportunities, their costs (such as working for someone else versus working for oneself), and risk-reward correlations (what is at stake) (OECD, 2010). This is corroborated by Möbius and Wünsch (2022), who reported that for universities to foster an entrepreneurial culture, there must be a shift in society and student attitudes. The idea that university students are expected to learn entrepreneurship while ignoring their personal and family requirements, can be irrelevant in the sense that a university's job is to develop and promote entrepreneurship as a career option (Pinheiro et al., 2023). Students are therefore exposed to

entrepreneurial support services in conjunction with each student's bachelor degree specialization in order to develop entrepreneurial behaviour and have more options (Nowiński et al., 2020).

The idea can also be particularly essential because each student has unique needs, both personally and in terms of what their family needs from them (Bazkiaei et al., 2020). Moreover, not everyone who has been exposed to entrepreneurship support services is expected to be an entrepreneur, just like in any other learning program. We agree with the fact that the expectation is to get as many entrepreneurs as possible so that a large number of people in the community can be able to shift economic resources into areas that yield higher productivity and returns as entrepreneurs do and thus help to solve critical problems like unemployment (Urbano et al., 2020).

#### 4.3 Perceived university entrepreneurship support services and entrepreneurial intention

In this section, predictors, which are perceived entrepreneurship education support services, perceived concept development support services, and perceived business development support services, were analysed against entrepreneurial intention, which was considered a dependent variable.

**Table 1.** Influence of perceived university entrepreneurship support services on Entrepreneurial Intention

Variable	Beta	Std error	T	Sig.	VIF	Cronbach's alpha
Constant, (EI)		0.251	4.711	0.000		0.844
PEE	0.124	0.070	2.169	0.031	1.855	0.791
PCD	0.007	0.067	0.120	0.905	1.667	0.685
PBD	0.455	0.055	8.383	0.000	1.678	0.785
R	R-square	Adjusted square	R-Std estimate	error of Durbin-Watson		
0542	0.294	0.289	0.85556	1.960		

**Source:** Table by authors

The findings presented in Table 1 demonstrate that perceived entrepreneurship education support services exert a significant influence on the entrepreneurial intentions of graduates ( $p < 0.05$ ). These results corroborate hypothesis H1, suggesting that perceived entrepreneurship education support services play a crucial role in shaping students' interest in entrepreneurship. This finding aligns with the work of Tessema (2012), who similarly observed a significant relationship between entrepreneurship education and the entrepreneurial intentions of business and engineering students in Ethiopia.

Furthermore, the positive and significant relationship observed between perceived entrepreneurship education support services and entrepreneurial intention ( $\beta_1 = 0.124$ ;  $p < 0.05$ ) suggests that graduates exposed to entrepreneurship education are more likely to embark on entrepreneurial endeavours compared to their counterparts who have not had such exposure. This implies that these graduates can approach life with greater confidence, knowing they have opportunities to pursue. By equipping graduates with entrepreneurial skills and nurturing their entrepreneurial intentions through university entrepreneurship education support services, they are more likely to feel optimistic about their future prospects.

It's worth noting the study by Kühner et al. (2021), which highlights how educational attainment influences the self-reported happiness of graduates, as they seek economic relief. Thus, entrepreneurship support services provided by universities are likely to stimulate graduates' entrepreneurial abilities. Similarly, Taneja (2022) found that the university environment significantly influences graduate entrepreneurship. Moreover, the stronger the perceived entrepreneurship educational support services provided by the university, the higher the likelihood of graduates possessing entrepreneurial intentions, as noted by Liu et al. (2022) and Nguyen and Duong (2021). This supports the TPB theory wherein perceived behavioural control, shaped by the education acquired by graduates, positively influences their intention to become nascent entrepreneurs, as observed by Su et al. (2021).

However, the findings (Table 1) indicate that perceived concept development support was a positive and insignificant predictor when analysed alongside other factors, which do not support the hypothesis (H2) that perceived concept development support services influence positively and significantly the entrepreneurial intention of graduates ( $\beta_2 = 0.007$ ;  $p > 0.05$ ). These results are opposite to those obtained by Anjum et al. (2023), where entrepreneurship concept development was found to be a significant influencer of entrepreneurial intention among business students when analysed alone. This suggests that while concept development support services alone may significantly influence entrepreneurial intention, their efficacy might be hindered when combined with other entrepreneurship support services, as noted by Anjum et al. (2023), Kiani et al. (2022), Kalimasi (2013), and Pinheiro et al. (2023). Despite the fact that the perceived concept development support services was not significant, its direction is positive. This

means that an increase in the concept development support services leads to an increase in entrepreneurial intention, although insignificantly.

Moreover, the finding that UDOM's perceived concept development support has insignificant influence on the entrepreneurial intentions of graduates underscores the need to reassess and potentially enhance the university's approach to concept development (Marmat, 2021). Additionally, variations in the abilities of graduates from different universities may indicate the importance of tailored support services. Furthermore, as graduates' transition from the university environment to facing various life challenges, their perceptions of the importance of concept development acquired during their university years may evolve. This highlights the dynamic nature of entrepreneurial intention and the need for ongoing research to understand its determinants in diverse contexts (Salamzadeh et al., 2022). Generally, university entrepreneurship support services, regardless of country or university contextual differences, are important in sparking student interest and fostering confidence in establishing businesses, as we have found positive relationships between perceived university entrepreneurship support services and entrepreneurial intention.

However, the stage context in which the student is in their university life can influence the findings, as in the case of perceived concept development support services (Marmat, 2021). The stage context of a student's university life can significantly influence the findings, particularly regarding perceived concept development support services, since each stage has varying exposure to and engagement with concept development initiatives. Therefore, accounting for the stage context of students' university experiences is essential for interpreting the impact of concept development support services on entrepreneurial intention accurately. The inclusion of perceived business development support services significantly improved the predictability of entrepreneurial intention among university graduates (Chen et al., 2023; Saeed et al., 2015; Taneja, 2022). Moreover, findings revealed that business development support services significantly improved the intention of graduates to become entrepreneurs ( $\beta_3=0.455$ ;  $p<0.05$ ) (Table 1). These findings proved the hypothesis (H3) that perceived business development support services significantly influence the entrepreneurial intentions of graduates. These results are also supported by past studies (Arnim et al., 2020; Ayodele et al., 2020; Liu et al., 2022); however, they are based on continuing students.

Of course, a good university education should serve a greater purpose by giving students the complex and varied skills and tools they need to successfully navigate our increasingly globalized society, and thus it should not just prepare them for their chosen job (OECD, 2010; Nguyen & Duong, 2021). Not only is the world changing quickly, but the new information economy also requires successful individuals to constantly change and learn in order to stay abreast of emerging trends, ideas, and practices (Hortopp, 2013; Yi, 2020). Therefore, excellent university programs should provide much more than just vocational training; they should also teach essential abilities like creativity, innovation, critical thinking and problem-solving, communication, teamwork, leadership, and an understanding of international socio-political realities (Kigotho, 2022). These abilities are central to the entrepreneurship support services that have been practiced in universities (Schimperna et al., 2021). Moreover, all university degrees are not created equal (Shi et al., 2019). Quality in university support services is imperative, as are factors such as flexible modes of study, new learning technologies, and cutting-edge curricula, which include good entrepreneurship support services (Hughes, 2018). This is also supported by Hassan et al. (2021), who state that everyone has their own driving motivators. Also, Maslow was more interested in learning about what makes people happy and what they do to achieve that aim (Kühner et al., 2021). Cruz-Ros (2017), Li and Horta (2020), and Nsereko et al. (2021) also support these results by showing that motivations have an influence on career choice and entrepreneurial intention. So, people should determine what they need so as to reach their life goals. Universities are urged to consider students' needs and driving motivators when designing entrepreneurship support services (Hassan et al., 2021).

## 5. Conclusion and implications

### 5.1 Conclusion

The study has focused on the role of university entrepreneurship support services on the entrepreneurial intentions of graduates of UDOM, Tanzania. The study has been able to prove that few graduates' own businesses and quantify the percentage of graduates who own businesses, and it has been suggested to consider students' needs and motivations during the design and provision of entrepreneurship education, concept, and business development support services. Also, the study has been successful in shedding light on how the students should be imparted with entrepreneurial intentions. The study has shown that exposing students to entrepreneurship education, concept development, and business development support services concurrently may hamper their grasping of concept development skills. Thus, the study

suggests that the concept development support services should be provided either separately, redesigned, or controlled with the motivation of students to capture its effectiveness well. This acknowledgement underscores the need for nuanced analyses that consider the dynamic nature of students' educational journeys and their implications for entrepreneurial outcomes.

The positive relationship between perceived university entrepreneurship support services and entrepreneurial intention contributes to our understanding of the role of higher education institutions in fostering entrepreneurial aspirations. It highlights the significance of university support services in shaping students' entrepreneurial intentions, suggesting that effective support programs can serve as catalysts for entrepreneurial pursuits among graduates. This underscores the importance of investing in entrepreneurship education and other support services within university settings to nurture a culture of innovation and entrepreneurship among future generations of professionals. Additionally, it provides empirical evidence that universities play a crucial role in equipping graduates with the skills, resources, and mindset needed to pursue entrepreneurial endeavours, ultimately contributing to employment, economic growth, and development.

### *5.2 Theoretical implications*

The results align closely with the TPB, which posits that an individual's intention to engage in behaviour is influenced by their attitudes, subjective norms, and perceived behavioural control. In the context of entrepreneurship, perceived entrepreneurship education and perceived business development support services can affect entrepreneurial intention through these TPB constructs. Perceived entrepreneurship education and business development support services may shape individuals' attitudes toward entrepreneurship by providing them with knowledge, skills, and resources necessary for starting and growing a business. Positive attitudes towards entrepreneurship are likely to increase the intention to pursue entrepreneurial activities as they encourage hope for a promising future. Entrepreneurship education and business development support services can enhance individuals' perceived ability to successfully start and manage a business by providing them with the necessary knowledge, skills, and resources. As a result, individuals may feel more confident in their ability to overcome barriers and challenges associated with entrepreneurship, thus increasing their perceived behavioural control and intention to pursue entrepreneurial endeavours.

### *5.3 Policy implications*

The government and policymakers can use these results to design and implement policies that support entrepreneurship development. This may include funding initiatives to expand access to entrepreneurship education, concept development, and business development support services; creating incentives for educational institutions to offer comprehensive entrepreneurship programs; and facilitating partnerships between educational institutions, government agencies, and private sector organizations to deliver effective support services to aspiring entrepreneurs.

### *5.4 Practical implications*

Institutions offering entrepreneurship education, such as universities, colleges, and vocational schools, can use these findings to enhance their curriculum and programs. They can prioritize developing and delivering high-quality entrepreneurship education that provides practical knowledge, skills, and resources to aspiring entrepreneurs. Additionally, they can focus on promoting awareness of the benefits of entrepreneurship education among students and encouraging their participation in such programs. Organizations dedicated to supporting entrepreneurs, such as business incubators, accelerators, and entrepreneurship centres, can leverage these findings to enhance their services. They can focus on providing tailored support programs that address the specific needs and preferences of aspiring entrepreneurs, including access to education, mentorship, networking opportunities, and financial resources. By offering comprehensive support services that encompass entrepreneurship education and business development assistance, these organizations can effectively nurture entrepreneurial talent and foster the growth of successful ventures. Exposing students to these support services concurrently might hamper the effectiveness of the entrepreneurial intention sought, but also the students might not be able to grasp them well especially when considering the current design. Established businesses and industry associations can play a role in supporting entrepreneurship by collaborating with educational institutions and entrepreneurship support organizations. They can contribute expertise, resources, and mentorship to aspiring entrepreneurs, facilitate access to markets and networks, and promote a culture of entrepreneurship within their industries. By actively engaging with the entrepreneurial ecosystem,

businesses can foster innovation, create new opportunities for collaboration and growth, and contribute to employment and, thus, economic development.

### 5.5 Study limitations/Future Research

The scattered nature of the respondents could have encouraged bias; however, simple random and snowball sampling methods should have addressed this. Entrepreneurship support services and universities are many, and the study could not cover all of them (it only covered perceived education, perceived concept development, and perceived business development support services from UDOM). Thus, future studies should explore additional factors that may significantly influence entrepreneurial intention when used in conjunction with perceived entrepreneurship education and perceived business development support services; this could have expanded the scope and scale of the study. Thus, future research should compare the influence of entrepreneurship support services from more than one university, adding other entrepreneurship support services such as internship programs, incubators, and entrepreneurial hub services and the effect they have on building entrepreneurship intention, or even using data from different countries to improve the validity and reliability of the study.

The study also recommends that future research incorporate the following factors as control variables when examining the influence of university entrepreneurship support services on entrepreneurial intention: legal and regulatory environments, infrastructure, regulatory burden, rule of law, social cognitive traits, government policies, restricted access to financing, formal institutions, political empowerment, culture, institutional environment, gender disparity, and an inefficient and disjointed institutional support framework. These factors could potentially have varying impacts on the relationship between university entrepreneurship support services and entrepreneurial intention, thus warranting their inclusion in future studies for a more comprehensive understanding. Future research is also needed to consider the mediating role of personal and family needs or motivations in the influence of university entrepreneurial support services on entrepreneurial intention in Tanzania so as to improve the chance of becoming a nascent entrepreneur, as suggested by the graduates during interviews. Moreover, Kiani et al. (2022) suggested the same thing by proposing that personal entrepreneurial intention is not necessarily influenced only by the training skills or the career plan but is also closely related to other elements such as personal passion for a certain field, previous experience in a job, or experience of life. Thus, the additional use of McLeland and Maslow hierarchy needs theories is suggested for future entrepreneurship research.

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