



The Role of Innovation Spaces towards the Youth's Engagement in Entrepreneurship; A Case of Innovation Spaces in the Iringa Region

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Authors' contributions

This work was carried out in collaboration among all authors. Author AFA designed the study, performed the statistical and thematic analyses, wrote the protocol, and wrote the first draft of the manuscript. Author BK HN supervised the analyses of the study. All authors read and approved the final manuscript.

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ABSTRACT

Aims: This research carefully assessed the role of innovation spaces towards the youth's engagement in entrepreneurship, with independent variables; entrepreneurship training, funding, co-working space, and entrepreneurship competition.

Study Design: The design of this study is a convergent parallel design.

Place and Duration of Study: The study was carried out at the Kiota hub, Tatua hub, and Rlabs in the Iringa region, between November 2022 and September 2023.

Methodology: Data, both quantitative and qualitative, were collected from 90 respondents (87 youth entrepreneurs, 3 hub managers), utilizing closed-ended questionnaires and semi-structured

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interviews. Quantitative data underwent descriptive and inferential analyses whereas qualitative data were analyzed thematically.

Results: All 90 respondents participated successfully, hence a response rate of 100%. The correlation coefficient and *P*-values for the role of entrepreneurship training, funding, co-working space and entrepreneurship competition are (.703, *P*=.000), (.738, *P*=.000), (.511, *P*=.000) and (.698, *P*=.000) respectively, confirming their statistical significances towards the engagement of the youth in entrepreneurship. Also, thematic analysis results indicate that entrepreneurship training transforms mindsets and equips youths with entrepreneurial skills, funding is crucial for covering the startup costs, co-working spaces foster a co-creation culture and networking, and entrepreneurship competitions are natural motivators towards the youth's engagement in entrepreneurship.

Conclusion: Entrepreneurship training, funding, co-working space, and entrepreneurship competition play significant roles towards the youth's engagement in entrepreneurship. The findings of this research offer valuable insights for innovation spaces to work on the factors that truly contribute towards youths' entrepreneurship engagement; educational institutions to design learning models that inspire the application of knowledge and establish innovation spaces to promote youth entrepreneurship; and the government to review policies that hinder the engagement of the youth in entrepreneurship.

Keywords: Innovation; innovation spaces; youth entrepreneurship; hub; entrepreneurship.

1. INTRODUCTION

Innovation spaces have evolved from the preoccupation with style to be "slick or cool" to the singular ambition of helping youths flourish [1]. They are platforms where youth creativity and innovation flourish [2]. Also, youths obtain and share knowledge, skills, and resources to effectively engage in entrepreneurship [3]. They also provide youths with very low-cost office spaces, networking opportunities, and business advice for them to engage in entrepreneurship successfully. In the last decade, innovation spaces have aroused increasing interest in both industry and academia, triggering their establishment around the world [4]. Example, in the United States, Singapore, and Spain [1]; in Nigeria, Egypt, Botswana, and South Africa, due to the high-speed emergence of technology and growth in entrepreneurship [5]; also, in Tanzania, Kenya, and Uganda due to technological and entrepreneurial growth and innovation-friendly environments created by government [6]. Moreover, Tanzania had one innovation space in 1997 [7], to three innovation spaces in 2013 [8]. They have grown to over forty active innovation spaces in 2018, and the number is still increasing [7].

Tanzania recognizes innovation and entrepreneurship as key factors in supporting socioeconomic development as part of the realization of the Development Vision 2025 [5]. That is why it has been supporting the establishment of innovation spaces through several initiatives such as Dar Teknohama

Business Incubator (DTBi), established in 2011 as a public-private partnership between InfoDev and the Commission for Science and Technology (COSTECH), Kinu hub, Buni hub and several living labs which were established during Tanzania Information and Communication Technology (TANZICT) project [5,8]. Private institutions have also realized the role of innovation spaces in the youth's engagement in entrepreneurship. That's why private universities like the University of Iringa, through the TANZICT project, established the Kiota hub to help youths engage in entrepreneurship.

Fundamentally, innovation spaces are established to help youths obtain and share knowledge, skills, and resources to engage in entrepreneurship [8,3]. Also, they support co-working, facilitate networking, and are platforms for mentorship to support youths' startups through the tricky early stages [5]. However, many innovation spaces in Tanzania have not been performing well in terms of helping youths to effectively engage in entrepreneurship as youth unemployment remains a major challenge in the country. Because our innovation ecosystem is still fragmented and dysfunctional. Many innovation spaces are still financially struggling to run their operations [6,8]. This fundamental challenge was yet to be addressed, and if it continued, Tanzania would remain one of the world's poorest countries in terms of per capita income and continue facing an increasing rate of youth unemployment [9]. Moreover, most Tanzanian youths are not even aware of their existence and others have negative mindsets

towards these spaces [10]. Those who know about them, don't know the proper and effective usage of these spaces [8]. Therefore, this research was necessary to narrow the knowledge gap by assessing the role of innovation spaces towards the youth's engagement in entrepreneurship, using innovation spaces in the Iringa region as a case.

This research aims to assess the role of innovation spaces towards the youth's engagement in entrepreneurship, investigating four factors namely, entrepreneurship training, funding, co-working space, and entrepreneurship competition. It used the Iringa region as an area of the research to easily access data as the region has the advantage of having three active innovation spaces: the Kiota hub, Rlabs, and Tatua hub. It employed a mixed-methods approach, utilizing semi-structured interviews and closed-ended questionnaires with 90 respondents to collect both quantitative and qualitative data. Quantitative data underwent descriptive and inferential analyses, whereas qualitative data were analysed thematically.

Nnachi [11] states that entrepreneurship training equips youths with adequate soft skills and vocational skills required to become entrepreneurs and make employment opportunities for other youths. Yin & Wang [12] strongly defend that college students' entrepreneurial capabilities improve as a result of strengthening entrepreneurship education. Also, Din et al. [13] assert that entrepreneurship programs are very effective in enhancing students' entrepreneurial skills and reducing the level of unemployment. Mohamed [14] provides a strong argument by asserting that entrepreneurship training is a key necessity for the growth of entrepreneurship because it changes attitudes and equips youths with skills to engage in entrepreneurship. Waweru [15] further reveals that access to entrepreneurship education helps many youths engage in entrepreneurship successfully.

Agnes [16] claims that capital in money form is crucial for entrepreneurship development. Mohamed [14] adds that the lack of adequate start-up finance is one of the most prominent impediments to youths seeking to create businesses. Moreover, Waweru [15] reveals that poor funding access faced by most youths hinders their engagement in entrepreneurship, suggesting that easy access to funds plays a major role towards the youth's engagement in entrepreneurship.

Muth & Rauscher [17] reveal that co-working spaces help youth entrepreneurs feel more socially integrated and get social and professional support in their entrepreneurship activities. Moreover, the introduction of co-working spaces stimulates many youths to become entrepreneurs, because co-working spaces act as places for the communication of professionals and the training of venerable experts for the creation of collaborations and entrepreneurship start-ups [18]. Fuzi et al. [2] further reveal that in recent years, co-working spaces have been successfully developed in many areas, encouraging the establishment of business startups.

Entrepreneurship competitions stimulate the youth's engagement in entrepreneurship [19]. They also increase youths' awareness of business ideas detection and development. Many youths consider that their participation in entrepreneurship competitions has a significant role towards improving their business plans which are powerful forces in driving entrepreneurial activities in different parts of the world (Gaspar, 2008).

2. METHODOLOGY

2.1 Area of the Research

Iringa region is geographically located in the southern part of Tanzania. It has a population size of 1,192,728 (574,313 males, 618,415 females), with 619,013 youths aged between 10 and 39 years, accounting for 51.9% of the total population [20]. It is one of the regions with most of its youths engaged in tomatoes and chili processing, milk processing and grain milling as their main entrepreneurial activities. Also, the region has the advantage of having the Kiota hub, Tatua hub, and Rlabs which are used by these youths for different entrepreneurial purposes. Therefore, the researcher selected the Iringa region as an ideal area for this research as it helped the researcher get the answers to research questions and meet research objectives.

2.2 Research Approach

The researcher adopted a mixed methods approach which allowed the merging of quantitative and qualitative data collection and analysis methods to get a unified understanding of the role of innovation spaces towards the youth's engagement in entrepreneurship [21].

2.3 Research Design

The researcher used a convergent parallel research design that helped him to concurrently use semi-structured interviews and closed-ended questionnaires to collect data. Both methods were weighed equally, and the data obtained were analysed separately, however, the results were interpreted together [22].

2.4 Population and Sampling Procedures

2.4.1 Population

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate [23]. Youth entrepreneurs and innovation space managers were an ideal population for this research as they had valid data on stated factors contributing to engagement in entrepreneurship. This research targeted 100 active innovation space users and managers from the Kiota hub, Rlabs and Tatua hub in the Iringa region.

2.4.2 Sampling strategies

A parallel sampling strategy was adopted, which enabled the researcher to select two research samples for qualitative and quantitative research phases but both samples were drawn from the same population [24]. Simple-random sampling was effectively employed to select a quantitative sample, while non-probability sampling, specifically purposive sampling was used to select a qualitative sample [25].

2.4.3 Sampling frame

Sekaran [23] defines a sampling frame as a listing of all the elements in the population from which the sample would be drawn. This research sampling frame comprised a list of all active innovation space users and innovation space managers from the Kiota hub, Tatua hub, and Rlabs and was obtained from these spaces' user databases provided by their managers.

2.4.4 Sample size

A sample is a subset of the population (Sekaran, 2003). This research had two sample sizes; a quantitative sample comprised of 80 active innovation space users obtained by using the following: $n = N / 1 + N(e)^2$, where n: quantitative sample size, N: population size (100), and e: acceptable sampling error (0.05). Thus, $n = 100 /$

$1 + 100(0.05)^2 = 80$. The qualitative sample size was 10 (7 innovation space users, 3 innovation space managers). Hence, the total sample size was 90.

2.5 Types of Data

Data are facts to be collected in the fulfilment of research objectives. (Sekaran, 2003; Zohrabi, 2013). This research used both primary and secondary data. Primary data were collected through semi-structured interviews and closed-ended questionnaires. Secondary data were collected from published papers, articles, journals, textbooks and government reports accessed online and from the University of Iringa's library.

2.6 Data Collection Methods

There are several data collection methods, depending on the nature of the research (Sekaran, 2003; Zohrabi, 2013). The researcher self-administered closed-ended questionnaires to 80 youth entrepreneurs and interviewed 7 youth entrepreneurs and 3 innovation space managers from the Kiota hub, Rlabs, and Tatua hub.

2.7 Data Analysis

Data should be analysed according to the outline laid down during research plan development [26]. The researcher analysed data separately; quantitative data were analysed using a Statistical Package for Social Sciences V.20, both descriptively and inferentially [23]; qualitative data were analysed thematically using Braun and Clarke's guide [27].

2.8 Validity Analysis

Validity is concerned with whether the research is believable and true and whether it has evaluated what it was supposed to evaluate [28,29] In this mixed-methods research, the validity of qualitative data was measured in terms of content, and internal, and external validity [29]. Also, the validity of quantitative data was measured through factor analysis by Kaiser-Meyer-Olkin (KMO) and Bartlett's Test as shown in Table 1.

The KMO and Bartlett's Test of Sphericity indicate that data variables obtained after the data reduction process were significant (.000) to measure the dependent variable as the *P*-value is less than 0.05. Furthermore, the KMO value

(0.887) is meritorious (excellent). Additionally, after removing less than 0.50-factor loading variables, the research model remained with 25 variables extracted to 5 factors as shown in

Table 2. This means that Principal Component Analysis was appropriate. Hence, this research's findings truly represent what was supposed to be measured.

Table 1. KMO and Bartlett's test

| | | |
|---|---------------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .887 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 978.653 |
| | Df | 300 |
| | Sig. | .000 |

Source: Researcher (2023)

Table 2. Rotated component matrix

| Rotated Component Matrix | | | | | |
|---------------------------------|------------------|-----------|-----------|-----------|------------|
| | Component | | | | |
| | ET | FU | CS | EC | YEE |
| ET1 | .573 | | | | |
| ET2 | .573 | | | | |
| ET3 | .516 | | | | |
| ET4 | .805 | | | | |
| ET5 | .756 | | | | |
| FU1 | | .584 | | | |
| FU2 | | .783 | | | |
| FU3 | | .781 | | | |
| FU4 | | .840 | | | |
| FU5 | | .818 | | | |
| CS1 | | | .576 | | |
| CS2 | | | .528 | | |
| CS3 | | | .558 | | |
| CS4 | | | .614 | | |
| CS5 | | | .642 | | |
| EC1 | | | | .584 | |
| EC2 | | | | .787 | |
| EC3 | | | | .792 | |
| EC4 | | | | .762 | |
| EC5 | | | | .741 | |
| YEE1 | | | | | .704 |
| YEE2 | | | | | .743 |
| YEE3 | | | | | .735 |
| YEE4 | | | | | .534 |
| YEE5 | | | | | .699 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 12 iterations.

Source: Researcher (2023)

Note: ET: Entrepreneurship Training, FU: Funding, CS: Co-working Space, EC: Entrepreneurship Competition, YEE: Youth Engagement in Entrepreneurship.

2.8.1 Content Validity

Content validity measures different elements, skills, and behaviours of research samples [29]. The researcher consulted his supervisors to review data collection tools, revised all unclear questions and reworded all complex items, as per their comments [29]. Also, the questions used to collect data were face-validated by supervisors [29]. Therefore, content validity was enhanced.

2.8.2 Internal Validity

Internal validity is concerned with the congruence of the research findings with reality [29]. The researcher applied several methods recommended by Merriam [30] to boost internal validity. He collected data using closed-ended questionnaires and semi-structured interviews.

Results were taken back to the participants to be validated [29]. Also, the researcher visited the Kiota hub, Rlabs, and Tatua hub several times to get the intended information. The research data and findings were carefully reviewed by the supervisors. The researcher involved most of this research’s participants in doing this research [29]. Moreover, the researcher collected, analysed, and interpreted data fairly, openly and faithfully and reported the findings honestly [29].

2.8.3 External Validity

External validity is concerned with the applicability of the findings in other settings and with other respondents (Zohrabi, 2013). The whole research process was carefully observed as detailed in this methodology section. Also, two sampling strategies were applied to enhance external validity.

Table 3. Reliability statistics for all variables in quantitative data

| Reliability Statistics | | |
|------------------------|--|------------|
| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
| .863 | .878 | 25 |

Source: Researcher (2023)

Table 4. Cronbach’s Alpha Reliability Test Result for each Variable

| Factors | Measured Variables | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted | Number of Items |
|--------------------------------------|--------------------|----------------------------------|----------------------------------|-----------------|
| Entrepreneurship Training | ET1 | .691 | .859 | 5 |
| | ET2 | .798 | .857 | |
| | ET3 | .542 | .855 | |
| | ET4 | .695 | .855 | |
| | ET5 | .685 | .853 | |
| Funding | FU1 | .620 | .858 | 5 |
| | FU2 | .604 | .874 | |
| | FU3 | .648 | .860 | |
| | FU4 | .566 | .867 | |
| | FU5 | .531 | .870 | |
| Co-working Space | CS1 | .610 | .852 | 5 |
| | CS2 | .594 | .852 | |
| | CS3 | .505 | .855 | |
| | CS4 | .575 | .853 | |
| | CS5 | .652 | .850 | |
| Entrepreneurship Competition | EC1 | .688 | .849 | 5 |
| | EC2 | .569 | .856 | |
| | EC3 | .575 | .856 | |
| | EC4 | .586 | .861 | |
| | EC5 | .582 | .859 | |
| Youth Engagement in Entrepreneurship | YEE1 | .650 | .852 | 5 |
| | YEE2 | .581 | .857 | |
| | YEE3 | .730 | .861 | |
| | YEE4 | .601 | .858 | |
| | YEE5 | .732 | .860 | |

Source: Researcher (2023); Note: ET: Entrepreneurship Training, FU: Funding, CS: Co-working Space, EC: Entrepreneurship Competition, YEE: Youth Engagement in Entrepreneurship

2.9 Reliability Analysis

Reliability deals with the consistency, dependability and replicability of results obtained from the research [29]. In this mixed methods research, the reliability of qualitative data was carefully measured as follows; the researcher explained this research's processes; used closed-ended questionnaires and semi-structured interviews to collect data and conducted an audit trail describing in detail how data were collected, analysed, themes were derived, and results were obtained [29]. The reliability of quantitative data was measured using Cronbach's Alpha Coefficient test [31], yielding a strong Cronbach's Alpha Coefficient value of 0.863 as shown in Table 3. Table 4 shows Cronbach's Alpha Coefficient test results after being calculated for each of the composite variable's stem, in which Cronbach's Alpha Coefficients for all factors are above 0.7 (showing strong reliability) and all Corrected Item-Total Correlation Coefficients are above 0.3. Hence, the results of this research are strongly consistent, dependable, and replicable [32].

3. RESULTS AND DISCUSSION

3.1 Results

3.1.1 Response Rate

In this research, a sample size of 90 was used; a quantitative sample size of 80 and a qualitative sample size of 10. All 90 respondents responded positively and agreed to be involved in collecting

data. Hence, the overall response rate was 100% as shown in Table 5.

Table 5. Response rates of both qualitative and quantitative research samples

| Sample Size Expected | Sample Size Responded | Response Rate |
|----------------------|-----------------------|---------------|
| 90 | 90 | 100% |

Source: Field data (2023)

3.1.2 Demographic results of the respondents

3.1.2.1 Gender

The researcher successfully collected data from 30 female and 60 male youth entrepreneurs and innovation space managers from the Kiota hub, Rlabs, and Tatua hub as shown in Table 6. Results reveal that more male youths are engaged in entrepreneurship than female youths. This suggests that gender may play a significant role in youths' entrepreneurship engagement.

3.1.2.2 Ages

Data were collected from youths within the age groups of 18-23, 24-29 and 30-35 years. Table 7 shows the percentage distribution of the respondents' age groups. Results show that youths aged between 18 and 23 years engage more in entrepreneurship than youths aged between 30 and 35 years, suggesting that age is a significant factor towards the youth's engagement in entrepreneurship.

Table 6. Gender of research respondents

| | | Gender | | | |
|-------|--------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 60 | 66.7 | 66.7 | 66.7 |
| | Female | 30 | 33.3 | 33.3 | 100.0 |
| | Total | 90 | 100.0 | 100.0 | |

Source: Field data (2023)

Table 7. Age of research respondents

| | | Age | | | |
|-------|-------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 18-23 | 73 | 81.1 | 81.1 | 81.1 |
| | 24-29 | 14 | 15.6 | 15.6 | 96.7 |
| | 30-35 | 3 | 3.3 | 3.3 | 100.0 |
| | Total | 90 | 100.0 | 100.0 | |

Source: Field data (2023)

3.1.2.3 Education

The researcher collected data from youth entrepreneurs and innovation space managers with different education levels. Table 8 clearly shows the percentage distribution of the respondents' education levels. The research found that youths with higher education levels from diploma and above were more likely to engage in entrepreneurship activities than those with secondary education and those who didn't go to school. These findings suggest that education level may be a determinant of the youth's engagement in entrepreneurship.

3.1.2.4 Districts

The researcher collected data from respondents from rural, peri-urban, and urban areas of the Iringa region. Table 9 clearly shows the percentage distribution of respondents' locations. This research revealed that youths living in urban

areas of the Iringa region, particularly the Iringa Municipal, are engaged more in entrepreneurship than those from rural and peri-urban. These findings suggest that access to entrepreneurship training, funding opportunities, co-working spaces, and entrepreneurship competitions may be more readily available in urban areas, as most innovation spaces like the Kiota hub, Rlabs, and Tatua hub are established in urban areas, particularly in the Iringa Municipal.

3.2 Discussion

The researcher presents the findings on the bivariate relationship between each independent variable: entrepreneurship training, funding, co-working space, entrepreneurship competition and the dependent variable: youth engagement in entrepreneurship, adhering to rules of thumb (Table 10) using Pearson's Correlation Coefficient test results as shown in Table 11 and results produced by thematic analysis.

Table 8. Education levels of the research respondents

| Education levels of the Respondents | | | | | |
|-------------------------------------|---------------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Didn't go to school | 5 | 5.6 | 5.6 | 5.6 |
| | Secondary | 5 | 5.6 | 5.6 | 11.2 |
| | Diploma | 13 | 14.4 | 14.4 | 25.6 |
| | Degree | 46 | 51.1 | 51.1 | 76.7 |
| | Masters | 19 | 21.1 | 21.1 | 97.8 |
| | PhD | 2 | 2.2 | 2.2 | 100.0 |
| | Total | 90 | 100.0 | 100.0 | |

Source: Field data (2023)

Table 9. Districts of residency of the research respondents

| Location of Respondent | | | | | |
|------------------------|------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Urban | 72 | 80.0 | 80.0 | 80.0 |
| | Peri-urban | 3 | 3.3 | 3.3 | 83.3 |
| | Rural | 15 | 16.7 | 16.7 | 100.0 |
| | Total | 90 | 100.0 | 100.0 | |

Source: Field data (2023)

Table 10. Rules of thumb about correlation coefficient

| Coefficient Range | Strength of Association |
|-------------------|-----------------------------------|
| ± 0.91 to ± 1.00 | Very Strong |
| ± 0.71 to ± 0.90 | High |
| ± 0.41 to ± 0.70 | Moderate |
| ± 0.21 to ± 0.40 | A small but definite relationship |
| ± 0.00 to ± 0.20 | Slight, almost negligible |

Source: Hair, J., Money, A., Samuel, P., & Page, M. (2007). *Research methods for business*, New York: John Wiley & Sons, Inc

Table 11. Pearson’s correlation coefficient test results

| | | Correlations | | | | |
|--------------------------------------|---------------------|--------------|--------|--------|--------|-----|
| | | ET | FU | CS | EC | YEE |
| Entrepreneurship Training | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| | N | 80 | | | | |
| Funding | Pearson Correlation | .599** | 1 | | | |
| | Sig. (2-tailed) | .000 | | | | |
| | N | 80 | 80 | | | |
| Co-working Space | Pearson Correlation | .292** | .389** | 1 | | |
| | Sig. (2-tailed) | .009 | .000 | | | |
| | N | 80 | 80 | 80 | | |
| Entrepreneurship Competition | Pearson Correlation | .467** | .536** | .311** | 1 | |
| | Sig. (2-tailed) | .000 | .000 | .005 | | |
| | N | 80 | 80 | 80 | 80 | |
| Youth Engagement in Entrepreneurship | Pearson Correlation | .703** | .738** | .511** | .698** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
| | N | 80 | 80 | 80 | 80 | 80 |

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Field data (2023)

Note: ET: Entrepreneurship Training, FU: Funding, CS: Co-working Space, EC: Entrepreneurship Competition, YEE: Youth Engagement in Entrepreneurship.

3.2.1 Entrepreneurship training and youth's engagement in entrepreneurship

Entrepreneurship training plays a moderately significant role towards the youth's engagement in entrepreneurship as their correlation coefficient value is .703, and $P=.000$. Also, thematic analysis results reveal that youths are likely to engage in entrepreneurship after they have been trained by innovation spaces. This is also revealed in data collected during interviews from the Kiota hub, RLabs, and Tatua hub as shown in Table 12. The present findings show that entrepreneurship training offered by these spaces inspires youths' mindset transformation and equips them with knowledge and skills to successfully engage in entrepreneurship. Mohamed [14] strongly supports these findings in that entrepreneurship training is crucial for entrepreneurship growth and an important tool for changing attitudes and transferring skills to youths. Also, Din et al. [13] strongly support the present findings that the entrepreneurship

program offered by Universiti Utara Malaysia was very effective in enhancing the students' entrepreneurial skills and reducing youth unemployment. Also, Yin and Wang [12] support these findings in that college students' entrepreneurial capabilities were improved because of strengthening entrepreneurship education. They are, furthermore, supported by Waweru [15] who found that access to entrepreneurship education during startup and growth phases positively affected many young entrepreneurs. They are also supported by Nnachi [11] who found that the youth's entrepreneurship training programs allowed youths to explore the options to be empowered and break the cycle of poverty and unemployment. More so, the youth entrepreneurship training program was able to equip the youths with adequate soft skills and vocational skills required to become entrepreneurs and make employment opportunities for other youths.

Table 12. Entrepreneurship training data of kiota hub, RLabs, and tatua hub

| Name of Innovation Space | Number of Trainings Organized | Average Youth Participation /Training | Hours/ Training | Startup Founded / Training Cohort | Average Number of Active Startups |
|--------------------------|-------------------------------|---------------------------------------|-----------------|-----------------------------------|-----------------------------------|
| Kiota Hub | 21 | 350 | 8 | 280 | 170 |
| RLabs | 35 | 500 | 6 | 350 | 220 |
| Tatua Hub | 15 | 130 | 3 | 80 | 55 |

Source: Field data (2023)

3.2.2 Funding and the youth's engagement in entrepreneurship

Funding plays a highly significant role towards the youth's engagement in entrepreneurship as their correlation coefficient value is .738, and $P=.000$). Also, thematic analysis results reveal that youths are more likely to successfully engage in entrepreneurship activities when they are provided with financial resources (funds) in different forms such as loans, angel money, seed funds and/or grants through entrepreneurship projects organized by innovation spaces. This is also shown in data collected during interviews from the Kiota hub and Rlabs (the Tatua hub doesn't provide funding) as shown in Table 13. The present findings clearly show that funding accessed through innovation spaces' projects plays a very huge role towards the youth's engagement in entrepreneurship by covering key costs incurred in establishing and running entrepreneurship ventures. Agnes [16] supports the present findings in that funding influences the youth's participation in entrepreneurship. Also, they are strongly supported by Mohamed [14] who found that funding is an important factor in influencing youths to engage in entrepreneurship. Moreover, they are supported by Waweru [15] who found that most youths had poor funding access, mainly from financial institutions which hindered their engagement in entrepreneurship, suggesting that funding plays a major role towards the youth's engagement in entrepreneurship.

3.2.3 Co-working space and the youth's engagement in entrepreneurship

Co-working space plays a moderately significant role towards the youth's engagement in entrepreneurship as their correlation coefficient value is .511, and $P=0.000$. Also, thematic analysis results show that youths are likely to engage in entrepreneurship activities when they have access to innovation spaces where they can meet with their fellows to brainstorm and ideate innovative solutions to solve existing challenges in their societies. Also, they can be used as offices for lower costs or for free. This is also shown in data collected during interviews from the Kiota hub, Rlabs and Tatua hub as shown in Table 14. The present findings reveal that co-working spaces provide youths with a conducive environment for them to create a culture of collaboration and flourish in their entrepreneurship activities. These findings are supported by Fuzi et al. [2] who found that in

recent years co-working spaces have been successfully developed in many areas, encouraging the establishment of entrepreneurship startups. They are also supported by Muth and Rauscher [17] who found that co-working spaces help youth entrepreneurs feel more socially integrated and get social and professional support in their entrepreneurship activities. Furthermore, they are supported by Gazetov [18] in that the introduction of co-working spaces in Russian towns, which was due to the development of high technologies, stimulated many youths to become entrepreneurs.

3.2.4 Entrepreneurship competition and youth's engagement in entrepreneurship

Entrepreneurship competition plays a moderately significant role towards the youth's engagement in entrepreneurship as their correlation coefficient value is .698, and $P=0.000$. Also, thematic analysis results reveal that youths are likely to engage in entrepreneurship when they are motivated to win a certain prize which can potentially boost them in their entrepreneurship activities. In turn, these entrepreneurship competitions boost the confidence levels of youth entrepreneurs which can help them to dare for more opportunities like seeking funds, pitching to investors and/or engaging with their customers and partners. Moreover, they provide youth entrepreneurs with networking opportunities as they tend to bring together mentors, judges, and many potential investors. Furthermore, entrepreneurship competitions stimulate youths to come up with unique ideas so that they can win competitions and learn how to practically write winning business plans. This is also shown in data collected during interviews from the Kiota hub, Rlabs and Tatua hub as shown in Table 15. The present findings reveal that entrepreneurship competitions motivate and provide youths with skills to excel in entrepreneurship. Gaspar (2008) strongly supports these findings in that entrepreneurship competitions have a natural affection on youths' attitudes towards entrepreneurship. Also, they increase youths' awareness of business ideas detection and development. These findings are supported by Wang et al. [19] who found that entrepreneurship competitions had a significant positive predictive effect on entrepreneurship competencies, leading to the successful engagement of the youths in entrepreneurship.

Table 13. Funds disbursed to the youths entrepreneurs by kiota hub and rlabs

| Name of Innovation Space | Total Funds Disbursed to Youth Entrepreneurs (TZS) | Number of Youths Given Funds | Type of Fund |
|--------------------------|--|------------------------------|--------------|
| Kiota Hub | 170,000,000/= | 135 | Grant |
| RLabs | 22,176,000/= | 75 | Grant |

Source: Field data (2023)

Table 14. Co-working space data of kiota hub, rlabs, and tatua hub

| Name of Innovation Space | Number of Youths Using it as a Co-working Space | Type of Support Provided/Amenities | Usage Rate |
|--------------------------|---|--|-------------|
| Kiota Hub | 25 | Facilitation, Wi-Fi, Stationery, Meetings, Games, and Books. | Daily Basis |
| RLabs | 40 | Tea, Facilitation, Wi-Fi, Stationeries, Meetings, and Books. | Daily Basis |
| Tatua Hub | 15 | Coffee, Facilitation, Wi-Fi, Stationery, Meetings, Books, and Games. | Daily Basis |

Source: Field data (2023)

Table 15. Entrepreneurship competitions data of kiota Hub, RLabs, and tatua hub

| Name of Innovation Space | Number of Entrepreneurship Competition | Type of Entrepreneurship Competition | Prize | Type of Prize | Number of Youths Participated |
|--------------------------|--|--------------------------------------|-------------|---------------|-------------------------------|
| Kiota Hub | 8 | Pitching, Birth-giving | Cash | Grant | 750 |
| RLabs | 10 | Idea Challenge | Certificate | | 250 |
| Tatua Hub | 10 | Pitching | Cash | Grant | 340 |

Source: Field data (2023)

4. CONCLUSION

This research concludes that entrepreneurship training plays a moderately significant role towards the youth's engagement in entrepreneurship, as it helps youths learn business development skills and transform their mindsets towards engagement in entrepreneurship. Also, it concludes that funding plays a highly significant role towards the youth's engagement in entrepreneurship, as most youths consider it a crucial factor when starting and running entrepreneurship ventures. This research further concludes that co-working space plays a moderately significant role towards the youth's engagement in entrepreneurship, as it inspires a co-creation culture and networking among youths and exposes them to potential networking opportunities that play a vital role in their entrepreneurship activities. It finally concludes that entrepreneurship competition plays a moderately significant role towards youths' entrepreneurship engagement, motivating them to win prizes that help them commercialize their creative entrepreneurship ideas.

This research's findings imply that innovation spaces still need to understand and work on factors that play significant roles towards the youth's engagement in entrepreneurship. Also, educational institutions such as universities and schools need to redesign learning models that will challenge students to apply their knowledge to real-world situations. Moreover, they should build co-working spaces to inspire a co-creation culture, have innovation departments that will conduct entrepreneurship training and competitions and provide funding to youths. Also, it is time now for the government to review the policies that do not challenge and inspire the youth's engagement in entrepreneurship.

This research only investigated the four factors while there are many others which were not included, for example, the research didn't assess the role of mentorship programs towards the youth's engagement in entrepreneurship. Therefore, the researcher suggests further research to be carried out around factors like this one to provide a broader view and understanding of the role of innovation spaces towards the youth's engagement in entrepreneurship.

The research was conducted in just 1 region out of 31 regions in Tanzania. This is a small area of research, therefore, even if significant, the results may not be generalized to all regions in Tanzania. Therefore, a researcher suggests that further research should be done in other regions. Moreover, this research was a mixed-methods research which employed only purposive sampling and simple random sampling. The researcher suggests further research to be done employing other sampling strategies to reduce bias.

CONSENT AND ETHICAL APPROVAL

The researcher carefully considered the ethical principles to guide the research in navigating some ethical dilemmas likely to be of research concerns to research participants, whereby several ethical principles were considered during the entire process of conducting this research as follows: the researcher avoided plagiarism by providing references to all sources of information used in the research as a way to acknowledge their works [33]. The researcher ensured that participants in this research were not connected to the research or identifiable by name, address, or birthdate [11]. The researcher took time to fully inform the respondents about this research before they agreed to participate. This included information about the purpose of this research, procedures involved, risks and benefits of participating, and their rights to withdraw from this research at any time without a penalty [33]. All potential respondents were free to decide whether to take part or not and those who agreed were free to withdraw from this research at any time without penalty [11]. Moreover, the researcher adhered to the ethical and truthful collection of reliable data; the ownership and responsibility of collected data; and retained data and protected the privacy of participants by taking steps to ensure that their personal information was kept confidential, as in, the researcher used secure data storage methods and avoided sharing of personal information with unauthorized individuals [33]. Finally, the researcher avoided any conflicts of interest that would have led to bias in the findings of this research, for example, disclosing any financial or personal interests that could affect the outcome of this research [33].

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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